

Permit

 ENTERED

STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT



IN THE MATTERS OF THE APPLICATION OF
THE UNITED STATES DEPARTMENT OF ENERGY
AND LOS ALAMOS NATIONAL SECURITY LLC
FOR A HAZARDOUS WASTE FACILITY PERMIT
FOR LOS ALAMOS NATIONAL LABORATORY
AND THE NOTICE OF INTENT TO DENY A PERMIT
FOR OPEN BURN UNITS TA-16-388 AND TA-16-399 FOR
LOS ALAMOS NATIONAL LABORATORY

HWB 09-37 (P)
HWB 10-04 (P)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing HEARING OFFICER'S REPORT
and Draft FINAL ORDER were sent via first-class mail on October 7, 2010 to the
following.

**Comments on the report may be submitted to the Hearing Clerk until close of
business on October 22, 2010.**

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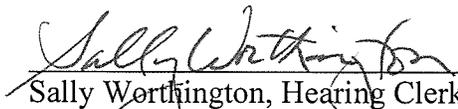
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No. HWB 09-37(P)
HWB 10-04(P)

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HEARING OFFICER'S REPORT

Pursuant to 20.1.4.500, C(1) NMAC, Hearing Officer the Honorable A. Joseph Alarid submits the following report in the above-captioned matter to the Secretary of the New Mexico environment Department:

I. INTRODUCTION

The United States Department of Energy (“DOE”) owner and operator of Los Alamos National Laboratory and Los Alamos National Security LLC (“LANS”) co-operator of the Laboratory (collectively “Applicants”) seek a permit from the New Mexico Environment Department (“Department”) to store and treat hazardous waste at the Laboratory under the New Mexico Hazardous Waste Act (“HWA”), NMSA 1978, §§74-4-1 to 74-4-17. On February 2, 2010, the Department issued a proposed hazardous waste facility permit (“Proposed Permit”) for the storage and treatment of hazardous waste at the Laboratory. On that date, the Department also issued a notice of intent to deny a permit (“Notice of Intent to Deny”) for the treatment by open burning of high explosive hazardous waste at the Laboratory. A hearing on the Proposed Permit and the Notice of Intent to Deny was held over a period of fifteen days between April 5, 2010 and May 7, 2010, in Santa Fe, Pojoaque, Espanola, Los Alamos, and Albuquerque, New Mexico.

FINDINGS OF FACT

I. BACKGROUND

A. THE LABORATORY

1. The Laboratory is a national research laboratory that conducts research on nuclear weapons and manages other national defense and civilian research programs, including nuclear physics, medium energy physics, space physics, hydrodynamics, conventional explosives, chemistry, metallurgy, radiochemistry, space nuclear systems, controlled thermonuclear fusion, laser technology, superconductivity, environmental technology, geothermal energy, solar energy, fossil fuel energy, carbon sequestration, nuclear safeguards, biomedicine, and health and biotechnology. NMED Ex. 1, Attachment B.¹

2. DOE owns the Laboratory and DOE and LANS both operate the Laboratory. NMED Ex. 48 at 2; Turner Test. Tr. vol. 1, at p. 128, lines 17-20.

3. DOE is a department of the Executive branch of the United States government. NMED Ex. 48 at 2.

4. LANS is a limited liability corporation organized under the laws of the State of Delaware. NMED Ex. 48 at 2.

5. The Laboratory is located in Los Alamos County, New Mexico, approximately 60 miles north-northeast of Albuquerque and 25 miles northwest of Santa Fe. The Laboratory occupies approximately 40 square miles. NMED Ex. 72 at 2.

6. The Laboratory is bounded by the Santa Fe National Forest, Bandalier National Monument, Los Alamos County, and San Ildefonso Pueblo. NMED Ex. 1, Attachment A, Fig. 2.

¹ All citations herein are in the form shown in the Department's List of Citations.

7. The Laboratory is situated on the Pajarito Plateau which consists of a series of finger-like mesas separated by deep east-west trending canyons. Ephemeral or intermittent streams lie at the bottoms of all the canyons. The mesa tops range in elevation from approximately 7,800 feet above mean sea level at the flank of the Jemez Mountains, located to the west of Los Alamos, to about 6,200 feet above mean sea level at their eastern extent where they terminate above the Rio Grande. NMED Ex. 72 at 2.

8. The Laboratory generates hazardous waste primarily from its general operations, research and development activities, environmental restoration activities, and decontamination and decommissioning projects. In 2006 the Laboratory generated approximately 330 different types of hazardous wastes or “waste streams.” Hazardous wastes that contain a radioactive component are referred to as “mixed waste.” Of the 330 different types of hazardous wastes that the Laboratory generates, approximately 55, or one-sixth, are mixed waste. In 2008 LANL generated approximately 255,000 pounds of hazardous wastes, of which 35,000 pounds were nonradioactive hazardous wastes, 107,000 pounds were mixed transuranic waste, and 14,000 pounds were mixed low level wastes. In 2008 remediation waste (wastes from cleanup activities) classified as hazardous wastes amounted to approximately 99,000 pounds. NMED Ex. 72 at 2.

9. The Laboratory is divided into smaller geographical areas known as technical areas or TA’s. There are approximately 70 technical areas at the Laboratory. NMED Ex. 72 at 2.

1. *Technical Area 3*

10. Technical Area 3 (“TA-3”) is located in the northern portion of the Laboratory on South Mesa, between Los Alamos Canyon to the north and Two Mile Canyon to the south. It is

the site of the Chemistry Metallurgy Research Building (“CMR” or “Building 29”). Building 29 is a three-story building containing offices and laboratories. NMED Ex. 1, Attachment A at 4.

11. One indoor hazardous waste container storage unit for which the Applicants seek a permit is located in the basement of Building 29. The unit consists of one room, Room 9010, and portions of two other rooms, Room 9020 and Room 9030. NMED Ex. 1, Attachment A at 4.

2. Technical Area 16

12. Technical Area 16 (“TA-16”) is located in the southwest quadrant of the Laboratory, at the west end of the Pajarito Plateau near the foothills of the Jemez Mountains. It is used for high explosives research. AR 31820, Attachment A at 6.

13. TA-16 includes two hazardous waste open burn units, the Flash Pad (“Structure 16-388”) and the Burn Tray (“Structure 16-399”), for which the Applicants seek a permit. The Applicants operate these units to burn off-specification and discarded high explosive wastes, and wastes contaminated with high explosives, in a raised steel pan or tray designed to withstand extremely high temperatures. NMED Ex. 72 at 31; *see* Applicants Ex. MM; Applicants Ex. NN.

3. Technical Area 50

14. Technical Area 50 (“TA-50”) is located at the intersection of Pajarito Drive and Pecos Road, on the mesa bounded by Mortandad Canyon to the north and Two-Mile Canyon to the south. It is the site of the Waste Characterization, Reduction, and Repackaging Facility (“Facility TA-50-69”), a single story building. Facility TA-50-69 is used to characterize waste before it is sent to the Waste Isolation Pilot Plant (“WIPP”), and to reduce the volume of large bulk waste items, such as glove boxes, and repack those items in standard containers for shipment to WIPP. NMED Ex. 1, Attachment A at 6-7.

15. TA-50 includes two hazardous waste container storage units for which the Applicants seek a permit. The first unit is an indoor unit consisting of two rooms, the main process room, Room 102; and the unloading area, Room 103. The second unit is an outdoor unit consisting of transportiners resting on an asphalt pad. NMED Ex. 1, Attachment A at 9-10.

4. *Technical Area 54*

16. Technical Area 54 (“TA-54”) is located on Mesita de Buey on the northeastern boundary of the Laboratory, just south of San Ildefonso Pueblo land. It encompasses 130 acres. TA-54 is the main storage area for hazardous waste and mixed waste generated throughout the Laboratory. TA-54 is divided into three active storage areas, Area G, Area L, and TA-54 West. NMED Ex. 1, Attachment A at 10.

17. Area G consists of nine hazardous waste container storage units for which the Applicants seek a permit. Most of the designated units are concrete pads that support waste storage structures. Pad 1 holds Domes 412 and 226; Pad 3 holds Dome 48; Pad 5 holds Domes 49 and 224; Pad 6 holds Domes 153 and 283; Pad 9 holds Domes 229, 230, 231, and 232; and Pad 11 holds Dome 375. The domes are constructed of an aluminum frame supporting a tensioned membrane. Pad 10 holds the transuranic waste characterization facilities and storage area. The other units are Storage Shed 8, a galvanized steel shed on a concrete foundation; and TA-54-33, a dome attached to a concrete building. NMED Ex. 1, Attachment A at 15-22.

18. Area L consists of one hazardous waste container storage unit for which the Applicants seek a permit. It includes two modular units (39 and 58), four storage sheds (31, 68, 69, and 70), two uncovered concrete pads (35 and 36), one concrete pad with a canopy (32), an asphaltic concrete pad with a canopy (216), and a dome (215). NMED Ex. 1, Attachment A at 10-14.

19. TA-54 West consists of two hazardous waste container storage units for which the Applicants seek a permit. The first unit is the TA-54 West Building, a concrete building designed for the loading of waste containers onto trucks headed for WIPP. The second unit is the TA-54 West Outdoor Pad, an asphalt pad and loading dock adjacent to the TA-54 West Building. NMED Ex. 1, Attachment A at 22-23.

20. TA-54 also includes three disposal areas where hazardous wastes were disposed in the past, Material Disposal Area G (“MDA G”), Material Disposal Area H (“MDA H”), and Material Disposal Area L (“MDA L”). Must be cleaned up under the Consent Order, in lieu of the closure requirements of the permit. NMED Ex. 3 at 51-53.

5. Technical Area 55

21. Technical Area 55 (“TA-55”) is located in the north-central area of the Laboratory, between a branch of Mortandad Canyon to the north and Two-Mile Canyon to the south, immediately to the west of TA-50. TA-55 is the Laboratory plutonium processing facility. NMED Ex. 1, Attachment A at 27.

22. TA-55 includes seven hazardous waste container storage units for which the Applicants seek a permit. Five of these units, designated B05, B40, B45, K13, and The Vault are rooms located in the basement of TA-55 Building 4. The sixth unit is a container storage pad, constructed of asphaltic concrete, located adjacent to Building 4. The seventh unit is TA-55 Building 185, a steel frame building on a concrete foundation. NMED Ex. 1, Attachment A at 27-29.

23. TA-55 includes one hazardous waste storage tank for which the Applicants seek a permit. The storage tank is comprised of two tank components, the evaporator glove box tank and the stabilization unit pencil tanks. The two tank components share a common piping and

pumping system, and are designated as one storage tank unit. Both tank components are located in TA-55 Building 4. NMED Ex. 1, Attachment A at 29-32.

24. TA-55 includes a hazardous waste treatment unit for which the Applicants seek a permit. The unit is a stabilization unit, which operates to treat liquid and solid mixed wastes generated primarily from research and development, processing, and recovery operations at TA-55 and at the CMR Building at TA-3. NMED Ex. 1, Attachment A at 29-32.

B. THE DEPARTMENT

25. The Department is a cabinet department of the executive branch of the State of New Mexico.

26. The United States Environmental Protection Agency (“EPA”) has authorized the State Of New Mexico to implement and enforce hazardous waste management requirements, including corrective action requirements, under its own hazardous waste management program. NMED Ex. 72 at 9.

C. PROCEDURAL HISTORY

1. *The 1989 Permit*

27. On August 13, 1980, the Applicants submitted to the United States Environmental Protection Agency (“EPA”) a “Notification of Hazardous Waste Activity” for the Laboratory, pursuant to the federal Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901 to 6992k. NMED Ex. 3 at 8; Bearzi Test. Tr. vol. 6, p. 1606, lines 17-25.

28. On November 19, 1980, the Applicants submitted to EPA Part A of the RCRA Permit Application for the Laboratory. The Applicants also sent a copy of the Part A application to the Environmental Improvement Division of the New Mexico Department of Health and Environment (“Division”), predecessor to the Department. The Part A Application covered

hazardous waste treatment, storage, and disposal activities and included approximately 130 hazardous waste streams. NMED Ex. 3 at 8; Bearzi Test. Tr. vol. 6, p. 1607, lines 10-12; AR 11194.

29. On April 30, 1985, the Applicants submitted to EPA Part B of the Permit Application for the Laboratory. NMED Ex. 3 at 8; Bearzi Test. Tr. vol. 6, p. 1607, lines 13-16; AR 14844.

30. On November 8, 1989, the Division issued a Hazardous Waste Facility Permit to the Applicants to operate a hazardous waste treatment and storage facility at the Laboratory. The permit was issued for a ten-year period. The permit covered hazardous waste container storage areas at TA-50 and TA-54, hazardous waste storage and treatment tanks at TA-54, and hazardous waste incinerators at TA-16 and TA-50. The tanks and incinerators were later closed. NMED Ex. 3 at 8; Bearzi Test. Tr. vol. 6, p. 1607, line 17 to p. 1608, line 4; AR 8662; AR 15027.

2. Application for Renewed Permit

31. In August 1996, the Applicants submitted to the Department a Permit Renewal Application. NMED Ex. 3 at 8-9; Bearzi Test. Tr. vol. 6, p. 1608, lines 13-14; Grieggs Test. Tr. vol. 1, p. 137, lines 7-9.

32. Although the 1989 Permit was due to expire in November 1999, submittal of the Permit Renewal Application automatically extended the permit under 40 C.F.R. § 270.51. The 1989 permit, as modified, remains in effect. NMED Ex. 3 at 8-9; Bearzi Test. Tr. vol. 6, p. 1608, lines 4-18; Turner Test. Tr. p. 129, lines 13-16; Grieggs Test. Tr. vol. 1, p. 137, lines 9-10.

33. In August 2003, the Applicants submitted their revised General Part B Permit Renewal Application, Revision 2.0, which addresses the proposed hazardous waste treatment and storage operations at the Laboratory for which they seek a permit. The Applicants also

submitted Part B applications for TA-specific hazardous waste management activities. On June 30, 2009, the Applicants submitted their revised Part A Permit, Revision 5.0, which lists hazardous waste management units to be permitted, the processes to be used at those units, and the EPA Hazardous Waste Numbers (*i.e.*, waste codes) designating wastes to be managed at those units. NMED Ex. 3 at 9; NMED Exhibit 5 (AR 4461; AR 5589; AR 8932; AR 11809; AR 16149; AR 31720).

34. After the Applicants submitted their August 2003 revised permit application, the Department sent the Applicants several requests for supplemental information, notices of deficiency, and other correspondence related to the application. The Applicants responded to this correspondence. Bearzi Test. Tr. vol. 6, p. 1608, line 24 to p. 1609, line 6.

3. “Listening Sessions”

35. From July 2008 to March 2009, the Department hosted a series of seven two-hour “Listening Sessions” to in different communities in northern New Mexico: Santa Fe (July 22, 2008), Española (September 30, 2008), Los Alamos (October 7, 2008), Taos (November 20, 2008), Española (December 2, 2008), Albuquerque (December 9, 2008), and Dixon (March 28, 2009). NMED Ex. 3 at 26-27; Bearzi Test. Tr. vol. 6, p. 1612, lines 4-11.

36. The purpose of the sessions was to provide members of the public an opportunity to express their views and concerns regarding the Laboratory and the Department’s regulation of the Laboratory, and thus to better inform the Department’s regulatory decisions including permitting decisions. The listening sessions were also intended to elicit feedback from the public on the draft permit for the Laboratory. NMED Ex. 3 at 26; NMED Ex. 128 at 2.

4. *The August 2007 Draft Permit*

37. On August 27, 2007, the Department released for public comment an initial draft of the renewed permit, based on then-current Part A and Part B Applications, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.A(1) NMAC. NMED Ex. 3 at 27; Bearzi Test. Tr. vol. 6, p. 1609, lines 17-19, 24-25; AR 31313.

38. On August 27, 2007, the Department also issued a Fact Sheet on the August 2007 draft permit, explaining the Department's intention to issue a hazardous waste facility permit to the Applicants under the HWA, and describing the hazardous waste activities to be permitted, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.D NMAC. NMED Ex. 3 at 27; Bearzi Test. Tr. vol. 6, p. 1609, lines 15-16; AR 31313.

39. The Department sent a copy of the Fact Sheet to the Applicants, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.A(2) NMAC. NMED Ex. 3 at 27.

40. The Department issued a notice announcing the availability of the draft permit and the Fact Sheet that it sent to the Applicants and all persons on the Department's list of persons interested in the Laboratory, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC. The notice stated, among other things, that members of the public could comment on the draft permit and request a hearing, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(4) NMAC. NMED Ex. 3 at 27; AR 31313.

41. The Department caused the notice of the availability of the draft permit to be published in the *Albuquerque Journal*, the *Santa Fe New Mexican*, the *Los Alamos Monitor*, and the *Rio Grande Sun*, and to be broadcast by KUNM and KANW radio stations, as required by

the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC. NMED Ex. 3 at 27; Bearzi Test. Tr. vol. 6, p. 1609, lines 9-16.

42. The Department allowed an initial comment period of 60 days until October 26, 2007. The Department later extended the comment period, in response to requests from the Applicants and other members of the public, by 75 days until January 11, 2008, and by another 20 days until February 1, 2008, pursuant to the Hazardous Waste Management Regulations at section 20.4.1.901.A(3) NMAC. NMED Ex. 3 at 27; Bearzi Test. Tr. vol. 6, p. 1609, line 17 to p. 1610, line 2.

43. During the comment period held from August 27, 2007 through February 1, 2008, the Department received comments on the draft permit from the Applicants, EPA, San Ildefonso Pueblo, Santa Clara Pueblo, Concerned Citizens for Nuclear Safety, Embudo Valley Environmental Monitoring Group, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center, among others. With the exception of EPA and San Ildefonso Pueblo, all these commenters also requested a public hearing on the proposed permit. NMED Ex. 3 at 27; AR 31313 at 2; AR 31351 at 13; AR 31352, AR 31345 at 1.

44. On July 15, 2008, in an attempt to resolve the issues giving rise to the opposition, and to resolve other issues, the Department invited the Applicants and those persons who had requested a hearing to participate in negotiations on the permit, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.A(4) NMAC. NMED Ex. 3 at 27; Bearzi Test. Tr. vol. 6, p. 1610, lines 3-18; AR 31403; AR 31404; AR 31405; AR 31406; AR 31407; AR 31408; AR 31409; AR 31410; AR 31411.

45. From August 2008 to June 2009, the Department convened more than thirty-five meetings with representatives of interested parties to discuss the draft permit. The Department met with the Applicants; the Santa Clara Pueblo and the San Ildefonso Pueblo; and citizen organizations including Concerned Citizens for Nuclear Safety, Embudo Valley Environmental Monitoring Group, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center. NMED Ex. 3 at 27-28; Bearzi Test. Tr. vol. 6, p. 1610, lines 11-18.

46. On June 26, 2007, several the participants in the discussions on the draft permit, including the Applicants, entered into a Stipulation on Permit Language (“First Stip.”). In the Stipulation, the stipulating parties agreed – with certain exceptions – that if the Department released for public comment the draft permit with substantive terms identical to those in the revised draft permit attached thereto, they would not appeal the permit. Each of the stipulating parties attached, as an exhibit, a list of those permit terms to which it objected and reserved its right to appeal. NMED Ex. 3 at 28; Bearzi Test. Tr. vol. 6, p. 1611, lines 3-11; Stipulation on Permit Language (June 26, 2007), AR 31724 (“First Stip.”).

5. The July 2009 Revised Draft Permit

47. On July 6, 2009, the Department released for public comment a revised draft of the permit. The revised draft permit was based in part on the public comments received and the discussions with interested parties. NMED Ex. 3 at 28; Bearzi Test. Tr. vol. 6, p. 1610, line 24 to p. 1611, line 2; AR 31820.

48. On July 6, 2009, the Department also released a revised Fact Sheet explaining the terms and conditions of the revised draft permit. NMED Ex. 3 at 28; NMED Ex. 72.

49. The Department sent a copy of the revised Fact Sheet to the Applicants, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.A(2) NMAC. NMED Ex. 3 at 28.

50. The Department issued a notice announcing the availability of the revised draft permit and the revised Fact Sheet that it sent to the Applicants and all persons on the Department's list of persons interested in the Laboratory, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC. The notice stated, among other things, that members of the public could comment on the revised draft permit and request a hearing, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(4) NMAC. NMED Ex. 3 at 28; AR 31766.

51. The Department caused the notice of the availability of the revised draft permit to be published in the *Albuquerque Journal*, the *Santa Fe New Mexican*, the *Los Alamos Monitor*, and the *Rio Grande Sun*, and to be broadcast by KUNM and KANW radio stations, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC. NMED Ex. 3 at 28.

52. On July 28, 2009, the Department held a public meeting on the revised draft permit at the Ohkay Casino Resort Conference Center, located north of Española at Ohkay Owingeh Pueblo. The Department received comment on the revised draft permit from members of the public during the meeting. Bearzi Test. Tr. vol. 6, p. 1612, lines 1-3; NMED Ex. 3 at 29.

53. The Department allowed public comment for a period of sixty days, until September 4, 2009. Bearzi Test. Tr. vol. 6, p. 1611, lines 12-13; NMED Ex. 3 at 28.

54. During the comment period, the Department received comments on the revised draft permit from more than 1,400 individuals and organizations. The Department also received

requests for a hearing from the Applicants, and from Citizen Action New Mexico, Citizens for Alternatives to Radioactive Dumping, Concerned Citizens for Nuclear Safety, Embudo Valley Environmental Monitoring Group, Robert Gilkeson; Nuclear Watch New Mexico, Natural Resources Defense Council, Southwest Research and Information Center, John Ahlquist, and Sharon Eklund. NMED Ex. 3 at 28; Bearzi Test. Tr. vol. 6, p. 1611, lines 13-19; AR 31981; AR 31993; AR 31991; AR 31989; AR 31986; AR 31997; AR 31975; AR 31999.

55. In September 2009 and thereafter, the Department continued the negotiations with the Applicants and some of the interested parties that had requested a hearing. NMED Ex. 3 at 28.

6. *The February 2010 Proposed Permit*

56. On February 2, 2010, the Department released for public comment the Proposed Permit. The Proposed Permit was based in part on the public comments received and the discussions with interested parties. NMED Ex. 3 at 10, 28; Bearzi Test. Tr. vol. 6, p. 1612, lines 12-25; NMED Ex. 1.

57. The Department caused the notice of the availability of the Proposed Permit to be published in the *Albuquerque Journal*, the *Santa Fe New Mexican*, the *Los Alamos Monitor*, and the *Rio Grande Sun*, and to be broadcast by KUNM and KANW radio stations, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC.

58. On May 7, 2010, several of the participants in the discussions on the draft permit, including the Applicants, entered into a Second Stipulation on Permit Language. In the Stipulation, the stipulating parties agreed – with certain exceptions – that if the Department Secretary approves the Proposed Permit with substantive terms identical to those in Exhibit 1 attached thereto, they would not appeal the permit. Each of the stipulating parties attached, as an

exhibit, a list of those permit terms to which it objected and reserved its right to appeal. Second Stipulation on Permit Language (May 7, 2010) (“Second Stip.”).

7. Notice of Intent to Deny Permit for Open Burning

59. On February 2, 2010, the Department released for public comment a Notice of Intent to Deny a permit for open burning of high explosive hazardous waste at TA-16. The decision was based in part on the public comments received and the discussions with interested parties. NMED Ex. 3 at 10.

60. On February 2, 2010, the Department released a Fact Sheet explaining the reasons for the intent to deny. NMED Ex. 3 at 10; NMED Ex. 2.

61. The February 2, 2010 Fact Sheet stated that the Department intended to deny the permit for open burning of hazardous waste at TA-16 because the risk assessment that the Applicants conducted showed that continued open burning of high explosive hazardous waste at TA-16 would result in an ecological risk; because approximately 1,400 individuals had expressed their opposition to continued open burning in comments submitted to the Department during the public comment period; and because the Department does not believe that the Applicants have adequately assessed alternatives to open burning. NMED Ex. 2 at 4-6.

D. THE PUBLIC HEARING

1. Notice of the Hearing

62. Because a timely request for a hearing on the draft permit was made, a public hearing is required under section 20.4.1.901.A(5)(b) NMAC. On September 30, 2009, the matter was docketed and set for hearing beginning on April 5, 2010. Notice of Docketing, No. HWB 09-37 (P) (filed Sept. 30, 2009); Order Establishing Hearing Date, No. HWB 09-37 (P) (filed Sept. 30, 2009).

63. On February 2, 2010, the Department Secretary determined that a hearing should be held on the notice of intent to deny the permit for open burning at TA-16 under section 20.4.1.901.A(5)(c) NMAC. On February 2, 2010, the matter was docketed and set for hearing beginning on April 5, 2010. The Secretary ordered that the hearing on the notice of intent to deny the permit for open burning be consolidated with the hearing on the draft permit. Notice of Docketing, No. HWB 10-04 (P) (filed Feb. 2, 2010); Order Scheduling Hearing, Nos. HWB 09-37 (P), HWB 10-04 (P) (filed Feb. 2, 2010).

64. On February 2, 2010, the Department issued a public notice, in both English and Spanish, announcing that the proposed permit is available for public comment; that the Department intends to deny the permit for open burning; that a public hearing will be held on the draft permit and the notice of intent to deny the permit for open burning; and that the closure plans for the TA-16 open burn units are also available for public comment, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.A(2) NMAC, and the Department's Permitting Procedures at section 20.1.4.200.C(2) NMAC. NMED Ex. 2; AR 33110.

65. The Department also sent a copy of the notice to 910 interested parties, including the Applicants, as required by the Hazardous Waste Management Regulations at section 20.4.1.901.C(3) NMAC, and the Department's Permitting Procedures at section 20.1.4.200.C(2)(b)(ii) NMAC. AR 33014.

66. The Department caused the notice to be published in the *Albuquerque Journal*, the *Santa Fe New Mexican*, the *Los Alamos Monitor*, and the *Rio Grande Sun*, and to be and broadcast by the KUNM and KANW radio stations, as required by the Hazardous Waste

Management Regulations at section 20.4.1.901.C(3) NMAC, and the Department's Permitting Procedures at section 20.1.4.200.C(2)(b)(i) NMAC.

67. The Department also posted the notice on its website.

2. Conduct of the Hearing

68. The hearing was held before the Department's Hearing Officer beginning on April 5, 2010 at Santa Fe Community College. The hearing continued from April 5, 2010 through April 9, 2010, from April 12, 2010 through April 16, 2010, on April 23, 2010, on April 26, 2010, and from May 5 through May 7, 2010. *Tr. passim.*

69. On April 5, 6, 7, 8, 9, 12, 14, and 15, 2010, the hearing was held at Santa Fe Community College in Santa Fe; on April 13, 2010, the hearing was held at the Ohkay Owingeh Casino Conference Facility in Española; on April 16, 2010, the hearing was held at the Cities of Gold Hotel Conference Facility in Pojoaque; on April 23, the hearing was held at the University of New Mexico Los Alamos in Los Alamos; on April 26, 2010, the hearing was held at the College of New Mexico Main Campus in Albuquerque; and on May 5, 6, and 7, 2010, the hearing was held at the Courtyard by Marriott in Santa Fe. *Tr. vol. 1, p. 1, vol. 2, p.286, vol. 3, p. 668, vol. 4, p. 857, vol. 5, p. 1071, vol. 6, p. 1380, vol. 7, p. 1705, vol. 8, p. 1985, vol. 9, p. 2240, vol. 10, p. 2485, vol. 11, p. 2727, vol. 12, p. 3063, vol. 13, p. 3384, vol. 14., p. 3694, vol. 15, p. 4027.*

70. Nine organizations or individuals participated as parties in the hearing: the Applicants, the Department, Citizen Action New Mexico, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Southwest Research and Information Center, Honor Our Pueblo Existence, John Ahlquist, and Robert Gilkeson.

71. Thirty-four witnesses presented sworn “technical” testimony at the hearing, either direct testimony, rebuttal testimony, or both. Fifteen witnesses presented direct testimony on behalf of the Applicants, nine witnesses presented direct testimony on behalf of the Department, two witnesses presented direct testimony on behalf of Citizen Action New Mexico, three witnesses presented direct testimony on behalf of Concerned Citizens for Nuclear Safety, two witnesses presented direct testimony on behalf of Honor Our Pueblo Existence, and John Ahlquist presented direct testimony on his own behalf. In addition, three witnesses presented rebuttal testimony on behalf of the Applicants, one witness presented rebuttal testimony on behalf of the Department, and one witness presented rebuttal testimony on behalf of Concerned Citizens for Nuclear Safety; two of the rebuttal witnesses had not previously given direct testimony. *Tr. passim.*

72. During the hearing, time was set aside each day for members of the public to present non-technical statements. Approximately 107 members of the public presented non-technical statements at the hearing, several of them on more than one occasion. *Tr. passim.*

3. Department Witnesses Testifying at the Hearing

a. James P. Bearzi

73. James Bearzi is Chief of the Department’s Hazardous Waste Bureau, a position he has held since May 1999, except for a 10-month temporary assignment to the Governor’s Office between July 2003 and May 2004. NMED Ex. 4; NMED Ex. 3 at 2; Bearzi Test. *Tr.* vol. 6, p. 1601, lines 12-13.

74. Mr. Bearzi holds a Bachelors of Science degree in geology and geography from Portland State University and a Master’s of Science degree in earth science from Montana State University. At Montana State University, he conducted and published original research on the

effects of post ice-age climate change and tectonism on river systems in southwest Montana. He was enrolled in the doctorate program at University of New Mexico and conducted research on effects of earthquakes and crustal deformation in desert landscapes in the southwestern United States. He has completed dozens of short courses related to hazardous waste management, public health, and management, including a short course in *Strategic Management of Regulatory and Enforcement Agencies* at Harvard's Kennedy School of Government in 2002. NMED Ex. 4; NMED Ex. 3 at 1-2; Bearzi Test. Tr. vol. 6, p. 1601, line 16 to p. 1602, line 10.

75. Mr. Bearzi has been employed with the Department (or its predecessor agency, the Environmental Improvement Division of the Health and Environment Department) since 1989, except for approximately one year. He began his career at the Department in the underground storage tank program, where his work was strictly technical. His responsibilities included desk work such as reviewing and analyzing reports of polluted sites and other scientific documents, and designing remediation systems. His responsibilities also included field work such as conducting soil vapor surveys, installing monitoring wells, logging monitoring wells, and collecting samples of environmental media. Since 1992, he has held management positions with the Department, serving as Chief of the Underground Storage Tank Bureau, Chief of the Community Services Bureau, and District Manager of the District II Office and, currently, Chief of the Hazardous Waste Bureau. These programs involve toxic contamination, releases from underground storage tanks, liquid waste disposal, public health, and drinking water supplies. He has testified in front of the state legislature dozens of times concerning topics in my areas of responsibility, including implementation of New Mexico's hazardous waste program. NMED Ex. 4; NMED Ex. 3 at 3; Bearzi Test. Tr. vol. 6, p. 1602, lines 11-23.

76. From 1990 through 1996, Mr. Bearzi was the president and principle scientist of Lassen Environmental Services, Inc. (dissolved in 1996), which specialized in hydrogeology, environmental assessment, and well testing for private clients. In the early 1990's, he worked for a small environmental consulting firm, Glorieta Geoscience, Inc., which conducted water supply work. NMED Ex. 4; NMED Ex. 3 at 3; Bearzi Test. Tr. vol. 6, p. 1604, lines 7-17.

77. As Chief of the Hazardous Waste Bureau, Mr. Bearzi oversees the State program for the regulation of the generation, transportation, storage, treatment, and disposal of hazardous wastes. He supervises approximately 50 professional and administrative staff, and administers an annual budget of approximately \$5.4 million. The Bureau regulates hazardous waste management facilities, including the operation, closure, and cleanup of such facilities. The Bureau has issued permits for approximately 20 facilities that treat, store, or dispose of hazardous waste, are subject to closure or post-closure requirements, or both. The Bureau also regulates approximately 1,700 generators and transporters of hazardous waste that are subject to regulatory requirements, but not permitting. The Bureau regulates and directs corrective action (i.e., cleanup) activities at permitted facilities to ensure that the facilities do not pose a threat to human health and the environment. Mr. Bearzi has been the lead negotiator for all permits. The Bureau also conducts inspection and enforcement of regulated facilities. Mr. Bearzi participates in all enforcement actions that the Bureau initiates, and he is the lead negotiator for in settlement of these actions. He was lead negotiator of the March 1, 2005 Administrative Order on Consent for the comprehensive investigation and cleanup of environmental contamination at the Laboratory. NMED Ex. 4; NMED Ex. 3 at 2-3; Bearzi Test. Tr. vol. 6, p. 1602, line 24 to p. 1603, line 19.

78. Since 2008 Mr. Bearzi has served as adjunct faculty at the University of New Mexico – Los Alamos teaching college-level courses in physical science, environmental science, and physical geography. NMED Ex. 4; NMED Ex. 3 at 4.

b. Stephen D. Pullen

79. Stephen Pullen is an Environmental Specialist with the Permits Management Program of the Hazardous Waste Bureau of the Department. NMED Ex. 110; NMED Ex. 109 at 1; Pullen Test. Tr. vol. 7, p. 1924, lines 11-12.

80. Mr. Pullen holds a Bachelor of Science degree in Geology from the University of Texas (1983). NMED Ex. 110; NMED Ex. 109 at 1; Pullen Test. Tr. vol. 7, p. 1924, lines 15-17.

81. Mr. Pullen's has worked for the Hazardous Waste Bureau for approximately 16 years. He is project lead for the hazardous waste facility permits for Los Alamos National Laboratory and Triassic Park hazardous waste landfill. As lead for these permits, he drafts new and revised permit requirements and permit modifications, conducts facility inspections, monitors facilities for compliance, and assists enforcement actions for permit violations. As lead for the proposed renewed permit for the Laboratory, his responsibilities have included drafting the permit, issuing the draft permit for public comment, redrafting the permit, and coordinating and drafting the response to comments on the draft permit. Mr. Pullen is also project lead for hazardous waste characterization and land disposal restriction compliance at all permitted hazardous waste facilities. In this capacity he ensures consistency among the permit conditions governing waste characterization at different facilities, coordinating with the enforcement program in conducting facility inspections to ensure proper and consistent hazardous waste characterization, and evaluating compliance with the land disposal restriction. He has have worked on every federal facility hazardous waste permit in New Mexico, including the permits

for Sandia National Laboratories, Kirtland Air Force Base, Cannon Air Force Base, Holloman Air Force Base, White Sands Missile Range, Fort Bliss, and the NASA White Sands Test Facility. NMED Ex. 110; NMED Ex. 109 at 1-2; Pullen Test. Tr. vol. 7, p. 1924, line 21 to p. 1625, line 15.

82. Prior to working for Hazardous Waste Bureau, Mr. Pullen worked for the Department's Underground Storage Tank Bureau for approximately two years. He performed soil and groundwater sampling, hydrocarbon characterization, aquifer testing, and design, installation and operation of remediation systems. He acted as program lead at the Baca Street groundwater contamination site in Santa Fe, among other sites, overseeing remediation contractors. NMED Ex. 110; NMED Ex. 109 at 3.

83. Prior to working for the Department, Mr. Pullen was employed for approximately three years by International Technology Corporation, an environmental consulting firm in Austin, Texas specializing in on-site environmental investigations. He acted as field geologist, drilling supervisor, and remediation engineer at more than seventy facilities throughout the country, including many RCRA facilities. NMED Ex. 110; NMED Ex. 109 at 3.

c. Rebecca J. Cram

84. Rebecca Cram is an Environmental Scientist and Specialist with the Hazardous Waste Bureau of the Department. NMED Ex. 129 at 1; NMED Ex. 128 at 2; Cram Test. Tr., vol. 9, p. 2418, lines 19-21.

85. Ms. Cram holds a Bachelor of Science degree in Fisheries and Wildlife Biology from the University of Massachusetts, Amherst. She has completed the course work for a master of science degree in environmental science and policy, and is currently completing her thesis, at Clark University in Worcester, Massachusetts. Cram Test. Tr. vol. 9, p. 2419, lines 7-16.

86. Ms. Cram has been an Environmental Scientist and Specialist with the Hazardous Waste Bureau since December 4, 2006. In this position, she is one of the lead authors of the permit for the Laboratory. She drafted the permit requirements for the closure of hazardous waste management units at the Laboratory. She also drafted the original conditions for the treatment of hazardous waste by open burning in earlier drafts of the permit. In addition, Ms. Cram organized the seven listening sessions that the Department held regarding regulation of the Laboratory including the draft permit. Ms. Cram also works as a hazardous waste inspector in the Bureau's compliance program. She conducts hazardous waste inspections at various facilities throughout the state to ensure compliance with state hazardous waste regulations. Her duties as inspector include touring facilities noting potential violations, preparing compliance evaluation inspection reports, and providing regulatory guidance and suggestions to facility owners for better management practices. She has led ten inspections and has assisted with eight others. NMED Ex. 129 at 1; NMED Ex. 128 at 2-3; Cram Test. Tr. vol. 9, p. 2420, line 1 to p. 2421, line 6.

d. Paige Walton

87. Paige Walton is a Senior Scientist and Program Manager with AQS, Inc., an independent environmental consulting company. NMED Ex. 175 at 2; NMED Ex. 174 at 1; Walton Test. Tr. vol. 11, p. 2740, line 25 to page 2741, line 2.

88. Ms. Walton holds a Bachelor of Science degree from Auburn University in Auburn, Alabama. She was enrolled in the Masters Program, in Environmental Science and Engineering at Colorado School of Mines in Golden Colorado from 1992 to 1994. Her graduate research focused on the toxicology and mitigation of effects of acid mine drainage on aquatic

species. NMED Ex. 175 at 1; NMED Ex. 174 at 2; Walton Test. Tr. vol. 11, p. 2741, lines 13-21.

89. Ms. Walton is a certified Professional Geologist in Utah. NMED Ex. 175 at 1; NMED Ex. 174 at 2; Walton Test. Tr. vol. 11, p. 2741, lines 15-16.

90. Ms. Walton's area of specialization is risk assessment. Walton Test. Tr. vol. 11, p. 2741, line 4; *see also* NMED Ex. 175 at 1.

91. Ms. Walton has worked as an environmental consultant for over 16 years. She has provided technical support for permits issued under the Resource Conservation and Recovery Act (RCRA), corrective action investigations, and human health and ecological risk assessments. She has written or reviewed over 300 human health and ecological risk assessments, including those for chemical, radiological, and mixed waste sites. Human receptors in those risk assessments have included residents, various types of on-site industrial workers, construction workers, persons engaged in recreation, subsistence farmers, fishermen, and hunters. Ecological receptors in those risk assessments have included both protected and non-protected terrestrial, avian, and aquatic species. Ms. Walton also has developed and reviewed risk assessment guidance for State and Federal programs, developed soil and groundwater screening levels for states and territories (such as Puerto Rico), and conducted numerous risk assessment workshops and training classes. Her clients have included federal regulatory agencies, state regulatory agencies, federal facilities, and private industry. NMED Ex. 175; NMED Ex. 174 at 2; Walton Test. Tr. vol. 11, p. 2741, line 22 to p. 2743, line 6.

92. Approximately 30 percent of the risk assessment consulting work that Ms. Walton has done was on behalf of parties seeking a permit. Walton Test. Tr. vol. 11, p. 2756, lines 12-30.

e. Mohamed Nur

93. Mohamed Nur is a Senior Engineer with TechLaw, Inc. NMED Ex. 188 at 1.

94. Mr. Nur holds a Bachelor of Science degree, with Honors, in Civil Engineering from Lafayette College, which he received in 1990, and a Master of Science degree in Civil Engineering from Virginia Polytechnic Institute and State University, which he received in 1992. NMED Ex. 189 at 1; NMED Ex. 188 at 2.

95. Mr. Nur has worked for TechLaw in various capacities for approximately 13 years. He has been Regional Manager, Program Manager, Director of Engineering and Director of a Regional Oversight Contract. As a consultant with TechLaw, he has reviewed or prepared more than two dozen engineering cost estimates for unit corrective measures studies under the Resource Conservation and Recovery Act (RCRA) and numerous environmental remediation projects under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). He has written and evaluated more than a dozen engineering evaluation and cost analyses for CERCLA remedial actions. He has also evaluated and written more than two dozen RCRA Part B Permit Applications for EPA and for private industry. As a program manager, he has prepared more than half a dozen multi-million dollar cost estimates in response to requests for proposals. NMED Ex. 188 at 1-2; *see also* NMED Ex. 189.

96. Prior to employment with TechLaw, Mr. Nur worked for A.T. Kearney as a consulting engineer for 6 years. NMED Ex. 188 at 2; NMED Ex. 189 at 8.

f. James D. Werner

97. James Werner is Special Assistant for Policy and Emerging Issues in the Office of the Secretary of the Delaware Department of Natural Resources and Environmental Control. NMED Ex. 192 at 1; NMED Ex. 191 at 1; Werner Test. Tr. vol. 11, p. 2943, lines 9-12.

98. Mr. Werner holds a Bachelor's Degree in Biology and Geography from the University of Delaware, which he received in 1980, and a Master of Science degree in Environmental Engineering from the Johns Hopkins University, which he received in 1986. NMED Ex. 192 at 6; NMED Ex. 191 at 2; Werner Test. Tr. vol. 11, p. 2944, lines 4-6.

99. Mr. Werner passed the Engineer Training Examination in 1992. He is a Certified Hazardous Materials Manager (No.15271). NMED Ex. 191 at 2; Werner Test. Tr. vol. 11, p. 2944, lines 1-3.

100. Mr. Werner has more than 30 years of experience in environmental engineering and management. NMED Ex. 191 at 2; Werner Test. Tr. vol. 11, p. 2944, lines 2-3.

101. Mr. Werner has focused on environmental cleanup of DOE facilities for much of his career. From 1986 to 1989, he worked as a consultant to DOE while employed as an Environmental Engineer at ICF Technology. From 1989 to 1993, he worked as a Senior Environmental Engineer at the Natural Resources Defense Council focusing on DOE cleanup issues. From 1993 to 2001 he worked in the DOE Office of Environmental Management at headquarters as the Director of the Office of Strategic Planning and Analysis, and later as the founding Director of the Office of Long-term Stewardship. NMED Ex. 192 at 2-5; NMED Ex. 191 at 2; Werner Test. Tr. vol. 11, p. 2944, line 7 to p. 2945, line 1.

102. Among Mr. Werner's responsibilities at DOE was the annual preparation, presentation, and defense of the budget to the White House Office of Management and Budget and to the United States Congress, particularly the House and Senate Appropriations Committee Subcommittees on Energy and Water Development, and Armed Services Committees. While at DOE, he served in 1996 on a temporary assignment at the White House Council on

Environmental Quality analyzing environmental budgets across various federal agencies. NMED Ex. 191 at 2.

103. From February 2001 to August 2002, Mr. Werner provided consulting services to the States of Missouri and Washington, addressing DOE budget and financial assurance issues. NMED Ex. 192 at 2; NMED Ex. 191 at 2; Werner Test. Tr. vol. 11, p. 2945, lines 2-6.

104. In August 2002, Mr. Werner was appointed by Missouri Governor Robert Holden to serve as the Director of the Missouri Air and Land Protection Division in the Department of Natural Resources, which he did until January 2005. His duties included regulation of hazardous waste management and cleanup oversight at DOE sites, such as the Weldon Spring site, the Kansas City Plant, and numerous former nuclear weapons production sites around St. Louis. One of these sites was the Mallinckrodt Destrehan Street Site, where the uranium was produced for Enrico Fermi's first man-made nuclear reactor at the University of Chicago. NMED Ex. 192 at 1; NMED Ex. 191 at 2-3; Werner Test. Tr. vol. 11, p. 2945, lines 7-11.

105. In March 2005, Mr. Werner was appointed by Delaware Governor Ruth Ann Minner to serve as the Director of the Delaware Division of Air and Waste Management. In August 2009, he moved to serve as the Special Assistant for Policy and Emerging Issues in the Office of the Secretary, focusing on energy efficiency and renewable energy. NMED Ex. 192 at 1; NMED Ex. 191 at 3; Werner Test. Tr. vol. 11, p. 2945, lines 12-16.

106. As consultant to the State of Washington, and as Director of the Air and Land Protection Division in the Missouri Department of Natural Resources, Mr. Werner has worked on the issue of financial assurance at DOE facilities. Werner Test. Tr. vol. 11, p. 2949, lines 15-25.

107. From August 1982 to March 1984, Mr. Werner worked as a Staff Environmental Scientist at the Environmental Law Institute, where he researched and wrote detailed case studies of remedial actions at hazardous waste sites. From April 1984 to January 1989, Mr. Werner worked as a Research Analyst and Environmental Engineer at ICF Technology, Inc., partly as a consultant to EPA, where he assisted with the development of various RCRA and CERCLA regulations, including financial assurance regulations, and performed training of state officials on new RCRA regulations following the enactment of the Hazardous and Solid Waste Amendments of 1984. NMED Ex. 192 at 4-5; NMED Ex. 191 at 3; Werner Test. Tr. vol. 11, p. 2945, lines 18-23.

g. David Cobrain

108. David Cobrain is Staff Manager with the Department's Hazardous Waste Bureau, Permits Management Program. NMED Ex. 133; NMED Ex. 132 at 1; Cobrain Test. Tr. vol. 12, p. 3158, lines 2-3.

109. Mr. Cobrain holds a Bachelor of Science degree in economics from Utah State University and a Master of Science degree in geology from the University of North Carolina at Chapel Hill. NMED Ex. 133; NMED Ex. 132 at 2; Cobrain Test. Tr. vol. 12, p. 3158, lines 13-15.

110. Mr. Cobrain is a Registered Professional Geologist in Oregon and Wyoming. NMED Ex. 133; NMED Ex. 132 at 2; Cobrain Test. Tr. vol. 12, p. 3159, lines 20-21.

111. Mr. Cobrain has worked for the Department's Hazardous Waste Bureau for approximately 11 years. He is responsible for the preparation, issuance, and enforcement of operating permits, post-closure care permits, and corrective action orders for ten hazardous waste facilities in the State, including the Laboratory, military bases and testing facilities, petroleum

refineries, the NASA White Sands Test Facility, and formerly used defense sites. Mr. Cobrain and his staff have prepared four hazardous waste permits and two cleanup orders, each containing provisions that are similar or identical to those in Section 11 of this Permit. Mr. Cobrain drafted the cleanup provisions of the March 1, 2005 Compliance Order on Consent (Consent Order) (NMED Ex. 26) for investigation and cleanup of environmental contamination at the Laboratory, as well as the November 26, 2002 imminent hazard order on which the Consent Order was based. He has been directly responsible for implementation of the Consent Order since it went into effect. NMED Ex. 133; NMED Ex. 132 at 1-2; Cobrain Test. Tr. vol. 12, p. 3159, lines 15-19.

112. Prior to working for the Department, Mr. Cobrain had ten years experience as a consulting geologist working for environmental and engineering firms located in Oregon and Wyoming. He conducted environmental site investigations and remediation projects at industrial and commercial sites for private clients and state and municipal agencies. He conducted all phases of site investigation and remediation at contaminated sites, including sampling of soil, water, and air for field and laboratory analyses, installation of monitoring wells, implementation of pilot tests to evaluate remediation systems, direction of remediation projects, and arrangement for the management and disposal of waste generated during remediation. He directed remediation projects ranging from simple source removal to the design, installation, and monitoring of groundwater remediation systems at sites ranging from service stations and dry cleaners to petroleum refineries. NMED Ex. 133; NMED Ex. 132 at 2; Cobrain Test. Tr. vol. 12, p. 3158, line 16 to p. 1159, line 14.

h. Jerzy Kulis

113. Jerzy Kulis is an Environmental Scientist in the Permits Management Program of the Hazardous Waste Bureau. NMED Ex. 169 at 1; NMED Ex. 168 at 1; Kulis Test. Tr. vol. 13, p. 3455, lines 2-4.

114. Mr. Kulis holds a degree of Bachelor of Science in Liberal Studies, with concentration in physics and geology, from Regents College in Albany, New York, which he received in 1994, and a degree of Master of Science in Geochemistry from New Mexico Institute of Mining and Technology, which he received in 1999. His graduate school coursework included geochemistry, groundwater hydrology, environmental chemistry, soil and groundwater remediation, and radioactive waste management. He also did undergraduate-level course work in nuclear engineering and mining engineering between 1980 and 1989 at Akademia Gorniczo-Hutnicza (Academy of Mining and Metallurgy) in Krakow, Poland. NMED Ex. 169 at 2-3; NMED Ex. 168 at 1; Kulis Test. Tr. vol. 13, p. 3455, lines 2-4.

115. Mr. Kulis has been working for the Hazardous Waste Bureau as an Environmental Scientist, with emphasis on groundwater protection, since 2008. In particular, he has worked as a hydrologist and groundwater protection specialist on issues related to groundwater monitoring and groundwater contamination, primarily at the Laboratory. His responsibilities include the review of drilling work plans, groundwater investigation work plans, groundwater monitoring plans, and other technical documents submitted to the Bureau to determine their technical feasibility and compliance with regulations. He also reviews groundwater monitoring reports, well completion reports, investigation reports, and other technical reports for completeness and to identify potential effects on groundwater quality. NMED Ex. 169 at 1; NMED Ex. 168 at 2; Kulis Test. Tr. vol. 13, p. 3456, lines 10-17.

116. From 2006 to 2008 Mr. Kulis worked as a geoscientist for the Department's Ground Water Quality Bureau, and from 2000 to 2006 he worked as a hydrologist for the Department's Solid Waste Bureau. At the Ground Water Quality Bureau, he was responsible for ensuring regulatory compliance for over 60 groundwater discharge permits. At the Solid Waste Bureau he had similar responsibilities for over 20 solid waste permits. These responsibilities included analysis and interpretation of environmental data, approval of location and construction of groundwater monitoring wells, review of permit applications and other documents, field inspections, and enforcement actions. NMED Ex. 169 at 1-2; NMED Ex. 168 at 2; Kulis Test. Tr. vol. 13, p. 3455, line 21 to p. 3456, line 4.

117. Throughout his tenure with the Department, Mr. Kulis has served as an in-house expert in the areas of hydrogeology, groundwater contamination, and groundwater monitoring, including design and installation of monitoring wells. He has testified on behalf of the Department as an expert witness in hydrogeology and groundwater protection at six public hearings on solid waste permit applications. NMED Ex. 169 at 1-2; NMED Ex. 168 at 2.

i. Kathryn Roberts

118. Kathryn Roberts is Environmental Specialist and Supervisor with the Department Hazardous Waste Bureau, Permits Management Program. NMED Ex. 183; NMED Ex. 182 at 1; Roberts Test. Tr. vol. 13, p. 3612, lines 9-11.

119. Ms. Roberts holds the degree of Bachelor of Arts in Environmental Geography from Colgate University, which she received in 2001. Ms. Roberts is currently working toward a Master of Science in Environmental Management from Duke University, which she anticipates receiving in May 2011. NMED Ex. 183; NMED Ex. 182 at 2-3; Roberts Test. Tr. vol. 13, p. 3612, lines 14-19.

120. Ms. Roberts has worked for the Hazardous Waste Bureau for approximately six years as a project leader for regulation of the Laboratory. Her responsibilities include supervising three or four employees on corrective action and permitting activities for the Laboratory and for the U.S. Army White Sands Missile Range. She reviews permit applications, corrective action work plans, corrective action reports, and other technical reports and plans that DOE and LANS submit to the Department and evaluates those documents for technical adequacy. NMED Ex. 183; NMED Ex. 182 at 1-2; Roberts Test. Tr. vol. 13, p. 3612, line 21 to p. 3613, line 1.

121. From to Ms. Roberts worked as an environmental geotechnical specialist for Hawk Engineering, P.C., an environmental engineering firm in Binghamton, New York. Her responsibilities included completing environmental assessment forms, preparing draft environmental impact statements, conducting phase 1 environmental site assessments, completing injection well closure plans for submittal to EPA, and inspecting landfills undergoing post-closure care activities. She supervised drilling and installation of groundwater monitoring wells, conducted field testing and groundwater sampling of monitoring wells, and evaluated soil samples. NMED Ex. 183; NMED Ex. 182 at 2; Roberts Test. Tr. vol. 13, p. 3613, lines 2-13.

4. APPLICANTS WITNESSES AND QUALIFICATIONS

a. WITNESS PANELS

122. The Applicants offered technical testimony through a series of witness panels.

b. WITNESS PANEL 1

123. Witness Panel 1, which provided introductory information, included Mr. Gene Turner and Mr. Anthony Grieggs. Both Mr. Turner and Mr. Grieggs submitted pre-filed direct testimony and presented oral testimony at the hearing. Mr. Turner's written testimony was

moved into evidence during the hearing as Applicants Exhibit C. Mr. Grieggs' written testimony was moved into evidence during the hearing as Applicants Exhibit L.

c. WITNESS PANEL 2

124. Witness Panel 2, which provided testimony on Parts 1 and 2 of the Proposed Permit and on the RCRA seismic requirements, included Gian Bacigalupa, James Streit, Anthony Stanford and Emily Schultz-Fellenz. Each of the witnesses submitted pre-filed direct testimony and presented oral testimony at the hearing. Mr. Bacigalupa's written testimony was moved into evidence during the hearing as Applicants Exhibit N. Mr. Streit's written testimony was moved into evidence during the hearing as Applicants Exhibit S. Mr. Stanford's written testimony was moved into evidence during the hearing as Applicants Exhibit R. Ms. Schultz-Fellenz's written testimony was moved into evidence during the hearing as Applicants Exhibit T.

d. WITNESS PANEL 3

125. Witness Panel 3, which provided testimony on Parts 3 and 4 of the Proposed Permit, included Gian Bacigalupa, Jim Blankenhorn and Anthony Grieggs. Each of the witnesses submitted pre-filed direct testimony and presented oral testimony at the hearing. Mr. Grieggs also offered rebuttal testimony. Mr. Blankenhorn's written testimony was moved into evidence during the hearing as Applicants Exhibit Q.

e. WITNESS PANEL 4

126. Witness Panel 4, which provided testimony on Parts 9, 10 and 11 of the Proposed Permit, included Gian Bacigalupa, David McInroy and Danny Katzman. Each of the witnesses submitted pre-filed direct testimony and presented oral testimony at the hearing. Mr. McInroy's written testimony was moved into evidence during the hearing as Applicants Exhibit DD. Mr.

Katzman's written testimony was moved into evidence during the hearing as Applicants Exhibit X.

f. WITNESS PANEL 5

127. Witness Panel 5, which provided testimony in opposition to the financial assurance requirements in the Proposed Permit, included Gene Turner, Dennis Ritschel and Roger Snyder. Each of the witnesses submitted pre-filed direct testimony and presented oral testimony at the hearing. Mr. Ritschel's written testimony was moved into evidence during the hearing as Applicants Exhibit II. Mr. Snyder's written testimony was moved into evidence during the hearing as Applicants Exhibit HH.

g. INDIVIDUAL WITNESSES FOR APPLICANT

128. Based on his knowledge and experience, Mr. Turner is qualified to offer technical and expert testimony. (Applicants Exhibit C, Testimony of Gene Turner; TR Vol. 1, testimony of Gene Turner, at 128/lns4-13).

129. Based on his knowledge and experience, Mr. Grieggs is qualified to offer technical and expert testimony. (Applicants Exhibit L, Testimony of Anthony Grieggs; TR Vol. 1, testimony of Anthony Grieggs, at 132/l12 to 133/l18).

130. Based on his knowledge and experience, Mr. Bacigalupa is qualified to offer technical and expert testimony. (Applicants Exhibit N, Testimony of Gian Bacigalupa; TR Vol. 1, testimony of Gian Bacigalupa, at 175/l17 to 176/l13).

131. Based on his knowledge and experience, Mr. Streit is qualified to offer technical and expert testimony. (Applicants Exhibit S, Testimony of Jim Streit; TR Vol. 1, testimony of Jim Streit, at 213/l12 to 214/l9).

132. Based on his knowledge and experience, Mr. Stanford is qualified to offer technical and expert testimony. (Applicants Exhibit R, Testimony of Tony Stanford; TR Vol. 1, testimony of Tony Stanford, at 207/ln9 to 208/ln24).

133. Based on her knowledge and experience, Ms. Schultz-Fellenz is qualified to offer technical and expert testimony. (Applicants Exhibit T, Testimony of Emily Schultz-Fellenz; TR Vol. 1, testimony of Emily Schultz-Fellenz, at 216/ln9 to 217/ln4).

134. Based on his knowledge and experience, Mr. Blankenhorn is qualified to offer technical and expert testimony. (Applicants Exhibit Q, Testimony of Jim Blankenhorn; TR Vol. 2, testimony of Jim Blankenhorn, at 430/ln13 to 433/ln4).

135. Based on his knowledge and experience, Mr. McInroy is qualified to offer technical and expert testimony. (Applicants Exhibit DD, Testimony of David McInroy; TR Vol. 3, testimony of David McInroy, at 673/ln25 to 675/ln6).

136. Based on his knowledge and experience, Mr. Katzman is qualified to offer technical and expert testimony. (Applicants Exhibit X, Testimony of Danny Katzman; TR Vol. 3, testimony of Danny Katzman, at 701/ln11 to 702/ln22).

137. Based on his knowledge and experience, Mr. Ritschel is qualified to offer technical and expert testimony. (Applicants Exhibit II, Testimony of Dennis Ritschel ; TR Vol. 5, testimony of Dennis Ritschel, at 1088/ln22-25).

138. Based on his knowledge and experience, Mr. Snyder is qualified to offer technical and expert testimony. (Applicants Exhibit HH, Testimony of Roger Snyder; TR Vol. 5, testimony of Roger Snyder, at 1091/ln21 to 1092/ln7).

5. CONCERNED CITIZENS FOR NUCLEAR SAFETY (CCNS)

a. Joni Arends

139. Joni Arends offered direct testimony on behalf of CCNS. (TR Vol. 14, testimony of Joni Arends, at 3719/ln8 to 3748/ln25).

b. Michael Barcelona, PhD.

140. Michael Barcelona offered direct testimony on behalf of CCNS. (TR Vol. 8, testimony of Michael Barcelona, at 2090/ln21 to 2137/ln21).

c. George Rice

141. George Rice offered direct testimony on behalf of CCNS. (TR Vol. 8, testimony of George Rice, at 2184/lns24 to 2201/ln13).

6. HONOR OUR PUEBLO EXISTANCE (HOPE)

a. Marian Naranjo

142. Marian Naranjo offered direct testimony on behalf of HOPE. (TR Vol. 7, testimony of Marian Naranjo, at 1759/ln5 to 1768/ln12).

b. Sofia Martinez

143. Sofia Martinez offered direct testimony on behalf of HOPE. (TR. Vol. 7, testimony of Sofia Martinez, at 1769/ln12 to 1782/ln19).

7. CITIZEN ACTION NEW MEXICO

144. David McCoy offered direct testimony on behalf of NM Citizen Action. (TR Vol. 13, testimony of David McCoy, at 3635/ln7 to 3655/ln12).

8. MR. JOHN ALQUIST

145. John Alquist offered direct testimony on his own behalf. (TR. Vol. 9, testimony of John Alquist, at 2389/ln18 to 2414/ln7).

II. THE PROPOSED PERMIT

A. INTRODUCTION

146. The Proposed Permit would establish the requirements that the Applicants (or “Permittees”) must follow to comply with the HWA and RCRA, and the implementing regulations. NMED Ex. 109 at 3.

147. The Proposed Permit includes the specific conditions necessary to ensure that the Applicants’ hazardous waste management activities are in compliance with 40 C.F.R. Parts 264 and 268, as required by 40 C.F.R. § 270.32(b)(1). NMED Ex. 109 at 3-4.

148. Conditions in the Proposed Permit are written to be protective of human health and the environment. NMED Ex. 109 at 4.

149. Conditions in the Proposed Permit are written to be clear, unambiguous, and specific, and therefore enforceable. NMED Ex. 109 at 4.

150. Many of the conditions in the Proposed Permit were proposed by the Applicants. NMED Ex. 109 at 4; *see also* NMED Ex. 5.

151. Most of the conditions in the Proposed Permit have been agreed to by most of the parties to this proceeding. *See* Second Stipulation on Permit Language (filed May 7, 2010).

B. PART 1 OF THE PROPOSED PERMIT

152. Part 1 of the Proposed Permit (General Permit Conditions) contains general permit conditions common to most hazardous waste facility permits. Most of these permit conditions are based on mandatory conditions set forth in 40 C.F.R. § 270.30. Part I also contains definitions and specific requirements regarding community involvement and procedures for dispute resolution. Many of the provisions in Part 1 follow EPA’s model RCRA permit and

many provisions are similar to those in the Applicants' current hazardous waste permit. NMED Ex. 109 at 6; *see also* NMED Ex. 112; NMED Ex. 111.

153. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Part 1 of the Proposed Permit in its entirety. Second Stip.

154. The Applicants stipulate that they agree to the terms of Part 1 of the Proposed Permit except Sections 1.4.1, 1.8 (definitions of "Hazardous Waste Management Unit" and "Permitted Unit"), and 1.17. Second Stip. Ex. 2.

1. Section 1.1 Authority

155. Section 1.1 of the Proposed Permit (Authority) identifies the legal authority under which the permit would be issued. NMED Ex. 1 at 13; NMED Ex. 109 at 7.

2. Section 1.2 Permittees and Permitted Activity

156. Section 1.2 of the Proposed Permit (Permittees and Permitted Activity) identifies the Permittees as DOE and LANS. It also identifies the permitted activities as hazardous waste storage and treatment, and closure and post-closure care of hazardous waste management units. NMED Ex. 1 at 13; NMED Ex. 109 at 7.

3. Section 1.3 Citations

157. Section 1.3 of the Proposed Permit (Citations) explains the Proposed Permit's system for references to regulations. NMED Ex. 1 at 13; NMED Ex. 109 at 7.

4. Section 1.4 Effect of Permit

158. Section 1.4 of the Proposed Permit (Effect of Permit) provides that compliance with the Permit constitutes compliance with the HWA, RCRA and the implementing regulations as to those activities specifically authorized or addressed by the permit, except for requirements

becoming effective by statute after the permit is issued. The section further provides, however, that compliance with the permit is not a defense to any action requiring the Applicants to clean up or mitigate the effects of hazardous waste, hazardous constituents, or hazardous substances released into the environment, or otherwise for protection of health or the environment. This provision is based on 40 C.F.R. § 270.4, and is in accordance with EPA's interpretation of 40 C.F.R. § 270.4. NMED Ex. 1 at 14; NMED Ex. 109 at 7-8; *see also* NMED Ex. 112; NMED Ex. 113.

159. Section 1.4.1 of the Proposed Permit (Effect of Permit on Interim Status Units) addresses those hazardous waste management units that will remain in interim status after the permit becomes effective. For those units, it requires the Applicants to submit to the Department either a notice of intent to close or a revised closure plan within 180 days of the effective date of the permit. NMED Ex. 1 at 14; NMED Ex. 109 at 8-9.

5. Section 1.5 Effect of Inaccuracies in Permit Application

160. Section 1.5 of the Proposed Permit (Effect of Inaccuracies in Permit Application) provides that the permit is based upon information in the permit applications and that any inaccuracies may be grounds for termination, revocation and reissuance or modification of the Permit. It requires the Permittees to inform the Department of any deviations from or changes in the information contained in the application. This provision is based on 40 C.F.R. §§ 270.30(l)(11), and 270.41 through 270.43. NMED Ex. 1 at 14-15; NMED Ex. 109 at 9.

161. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.5 of the Proposed Permit. Second Stip.

6. Section 1.6 Permit Actions

162. Section 1.6.1 of the Proposed Permit (Duration of Permit) provides that the Permit is effective for a fixed term of ten years. This provision is based on 40 C.F.R. § 270.50(a). NMED Ex. 1 at 15; NMED Ex. 109 at 9.

163. Section 1.6.2 of the Proposed Permit (Permit Modification) provides that the permit may be modified in accordance with the regulations at 40 C.F.R. §§ 270.41 through 270.43. NMED Ex. 1 at 15; NMED Ex. 109 at 9.

164. Section 1.6.3 of the Proposed Permit is reserved. NMED Ex. 1 at 16.

165. Section 1.6.4 of the Proposed Permit (Permit Suspension, Termination, and Revocation and Re-Issuance) provides that the permit may be suspended, terminated, or revoked and re-issued for cause in accordance with the regulations at 40 C.F.R. §§ 270.41 and 270.43. NMED Ex. 1 at 16; NMED Ex. 109 at 10.

166. Section 1.6.5 of the Proposed Permit (Permit Re-Application) requires the Permittees to submit a renewal application at least 180 days before the expiration date of the permit in accordance with the regulations at 40 C.F.R. § 270.10(h)(1). NMED Ex. 1 at 16; NMED Ex. 109 at 10.

167. Section 1.6.6 of the Proposed Permit (Continuation of Expiring Permit) provides that if the Permittees submit a timely and complete renewal application, the permit will remain in effect until a renewed permit is issued in accordance with the regulations at 40 C.F.R. § 270.51. NMED Ex. 1 at 16; NMED Ex. 109 at 10-11.

168. Section 1.6.7 of the Proposed Permit (Permit Review by the Department) provides that the Department will review the closure and post-closure requirements in the permit associated with the land disposal units (*i.e.*, closure of Material Disposal Areas (MDAs) G, H,

and L) five years after the effective date of the permit and may seek to modify it in accordance with the regulations at 40 C.F.R. § 270.50(d). NMED Ex. 1 at 16; NMED Ex. 109 at 11.

7. Section 1.7 Permit Construction

169. Section 1.7 of the Proposed Permit (Permit Construction) provides that if any permit provision is found invalid, the remainder shall not be affected. NMED Ex. 1 at 16; NMED Ex. 109 at 11.

8. Section 1.8 Definitions

170. Section 1.8 of the Proposed Permit (Definitions) defines certain terms that are used in the Proposed Permit. NMED Ex. 1 at 17-20; NMED Ex. 109 at 11-14.

9. Section 1.9 Duties and Requirements

171. Section 1.9.1 of the Proposed Permit (Duty to Comply) requires the Applicants to comply with permit terms. This provision is required by 40 C.F.R. § 270.30(a). NMED Ex. 1 at 20; NMED Ex. 109 at 14.

172. Section 1.9.2 of the Proposed Permit (Enforcement) states that violation of the terms and conditions of the permit may subject the Permittees to administrative or judicial enforcement actions requiring compliance, seeking injunctive relief, assessing civil penalties, or imposing criminal fines. NMED Ex. 1 at 20-21; NMED Ex. 109 at 14.

173. Section 1.9.3 of the Proposed Permit (Transfer of Permit) prohibits the Applicants from transferring the permit to any other person without the prior written approval of the Department. This provision is required by 40 C.F.R. § 270.30(1)(3). NMED Ex. 1 at 21; NMED Ex. 109 at 14.

174. Section 1.9.4 of the Proposed Permit (Need to Halt or Reduce Activity Not a Defense) provides that it is no defense to an enforcement action for violation of the permit that

the Permittees would need to reduce permitted activities to achieve compliance. NMED Ex. 1 at 21; NMED Ex. 109 at 14.

175. Section 1.9.5 of the Proposed Permit (Duty to Mitigate) requires the Permittees to take all reasonable steps to minimize releases of hazardous waste and hazardous constituents into the environment, and it requires the Permittees to conduct reasonable measures to prevent adverse effects on health and the environment. This provision is required by 40 C.F.R. § 270.30(d). NMED Ex. 1 at 21; NMED Ex. 109 at 15.

176. Section 1.9.6 of the Proposed Permit (Proper Operation and Maintenance) requires the Permittees to properly operate and maintain all facilities and systems of treatment and control used to achieve compliance with the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate staffing, training of operators and staff, and adequate laboratory and process controls. This provision is required by 40 C.F.R. § 270.30(e). NMED Ex. 1 at 21-22; NMED Ex. 109 at 15.

177. Section 1.9.7 of the Proposed Permit (Duty to Provide Information) requires the Permittees to furnish to the Department any relevant information that the Department may request to determine compliance with the permit, or to determine whether cause exists for modifying, suspending, terminating, or revoking the permit. This provision is required by 40 C.F.R. § 270.30(h). NMED Ex. 1 at 22; NMED Ex. 109 at 15.

178. Section 1.9.8 of the Proposed Permit (Inspection and Entry) requires the Permittees allow authorized representatives of the Department to enter the Laboratory premises; have access to, inspect, and photograph regulated facilities, equipment, and operations; have access to and copy records; and sample or monitor substances or other parameters. This provision is required by 40 C.F.R. § 270.30(i). NMED Ex. 1 at 22; NMED Ex. 109 at 15-16.

179. Department access to regulated facilities is subject to reasonable limitations based upon Laboratory security requirements. In this context, “security” restrictions mean actual classification under existing procedures. NMED Ex. 1 at 22; NMED Ex. 109 at 15-16.

180. Photographs taken by Laboratory personnel, as directed by Department representatives during an inspection, and provided to the Department within a reasonable time will generally satisfy the requirement to allow the Department to take photographs. NMED Ex. 109 at 16.

181. Section 1.9.9 of the Proposed Permit (Sampling and Records) provides that all samples and measurements taken by the Permittees under the permit shall be representative of the medium, waste, or material being sampled. This provision is required by 40 C.F.R. § 270.30(j)(1). NMED Ex. 1 at 23; NMED Ex. 109 at 16.

182. Section 1.9.10 of the Proposed Permit (Reporting Planned Changes) requires the Permittees to give written notice of planned changes to any permitted unit. This provision is required by 40 C.F.R. § 270.30(l)(1). NMED Ex. 1 at 23; NMED Ex. 109 at 16.

183. Section 1.9.11 of the Proposed Permit (Reporting Anticipated Noncompliance) requires the Permittees to give advance written notice of any planned changes or activity that may result in noncompliance with the Permit. This provision is required by 40 C.F.R. § 270.30(1)(2). NMED Ex. 1 at 23; NMED Ex. 109 at 16-17.

184. Section 1.9.12 of the Proposed Permit (Twenty Four Hour and Subsequent Reporting) requires the Permittees to report to the Department, orally and in writing, any noncompliance that may endanger human health or the environment, or that requires implementation of the Contingency Plan. An oral report is due within 24 hours, and a written

report is due in five days. This provision is required by 40 C.F.R. § 270.30(l)(6). NMED Ex. 1 at 23-24; NMED Ex. 109 at 17.

185. Section 1.9.13 of the Proposed Permit (Written Reporting of a Non-Threatening Release) requires the Permittees to report to the Department any release of hazardous waste or hazardous constituents that they do not deem to be a threat to human health or the environment. It is important that the Department be informed about the volume and frequency of releases at the Laboratory, in part so that the Department might verify that a release is non-threatening. This provision is required by 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 25; NMED Ex. 109 at 18.

186. Section 1.9.14 of the Proposed Permit (Other Noncompliance) requires the Permittees to submit to the Department an annual report of all instances of noncompliance not otherwise reported. This provision is required by 40 C.F.R. § 270.30(l)(10). NMED Ex. 1 at 25; NMED Ex. 109 at 18.

187. Section 1.9.15 of the Proposed Permit (Omissions or Misstatements in Applications or Other Reports) requires the Permittees to report promptly any failure to submit relevant facts or submission of incorrect information. This provision is required by 40 C.F.R. § 270.30(l)(11). NMED Ex. 1 at 25; NMED Ex. 109 at 18.

188. Section 1.9.16 of the Proposed Permit (Signatory Requirement) requires the Permittees to sign and certify all applications, reports, or information submitted to the Department. This provision is required by 40 C.F.R. §§ 270.11 and 270.30(k). NMED Ex. 1 at 25; NMED Ex. 109 at 18-19.

189. Section 1.9.17 of the Proposed Permit (Submissions to the New Mexico Environment Department) directs the Permittees to submit all reports, notifications, or other

submissions to the Chief of the Department's Hazardous Waste Bureau. NMED Ex. 1 at 26; NMED Ex. 109 at 19.

190. Section 1.9.18 of the Proposed Permit (Approval of Submittals) provides that documents prepared and submitted to the Department under the permit may be approved, approved with modifications or directions, disapproved, denied, or rejected. Upon the Department's written approval all submittals and associated schedules become enforceable as part of the permit based on the terms of the Department's written approval. NMED Ex. 1 at 26; NMED Ex. 109 at 19.

191. Section 1.9.19 of the Proposed Permit (Extensions of Time) provides that the Permittees may request an extension of time to perform a requirement of the permit, for good cause, by submitting a written request to the Department. NMED Ex. 1 at 26; NMED Ex. 109 at 19.

192. Section 1.9.20 of the Proposed Permit (Confidential Information) provides that the Permittees may claim that any information submitted to the Department is confidential and should not be made public. This provision is based on the HWA, NMSA 1978, § 74-4-4.3(D) and (F) and 40 C.F.R. §§ 260.2 and 270.12. NMED Ex. 1 at 27; NMED Ex. 109 at 20.

193. Section 1.9.21 of the Proposed Permit (New or Modified Permitted Units) prohibits the treatment or storage of hazardous waste in a new or modified permitted unit except in compliance with the rules for permit modification and for certification that construction has been completed as authorized. This provision is required by 40 C.F.R. § 270.30(1)(2)(i), and it is based on 40 C.F.R. § 270.42. NMED Ex. 1 at 27; NMED Ex. 109 at 20.

10. Section 1.10 Information Repository

194. Section 1.10 of the Proposed Permit (Information Repository) requires the Permittees to establish an electronic “information repository,” accessible through the internet and containing specific documents concerning the issuance and operation of the permit. Establishment of an information repository is not mandatory under the regulations, but is supported by 40 C.F.R. §§ 124.33(c) through (f), incorporated by 20.4.1.901.E NMAC, and 40 C.F.R. § 270.30(m), incorporated by 20.4.1.900 NMAC. NMED Ex. 1 at 27-29; NMED Ex. 3 at 31; Bearzi Test. Tr. vol. 7, p. 1740, line 25 to p. 1741, line 5, p. 1741, lines 12-16.

195. Section 1.10 of the Proposed Permit also lists the documents that must be included in the repository, which are documents associated with the permit. NMED Ex. 1 at 27; NMED Ex. 3 at 31-32; Bearzi Test. Tr. vol. 7, p. 1742, lines 5-9.

196. Section 1.10 of the Proposed Permit provides that the information repository must include an electronic index of the documents contained in the repository, and the index must identify all document titles, publications dates, authors, and Los Alamos Unrestricted Release (LAUR) numbers. Documents in the information repository must be searchable and printable. NMED Ex. 1 at 27-28; NMED Ex. 3 at 31-32; Bearzi Test. Tr. vol. 7, p. 1742, lines 10-13.

197. Section 1.10 of the Proposed Permit provides that the Permittees must add new documents to the information repository within ten days after they are submitted to, or received from, the Department. NMED Ex. 1 at 28; NMED Ex. 3 at 32; Bearzi Test. Tr. vol. 7, p. 1742, lines 14-15.

198. Section 1.10 of the Proposed Permit provides that the Permittees must inform the public of the existence of the information repository by sending a notice to persons on the facility

mailing list and by publishing a notice in newspapers and on the Laboratory website. NMED Ex. 1 at 28; NMED Ex. 3 at 31; Bearzi Test. Tr. vol. 7, p. 1742, line 18 to p. 1743, line 1.

199. Section 1.10 of the Proposed Permit provides that the Permittees must provide annual training to members of the public on use of the information repository. NMED Ex. 1 at 28; NMED Ex. 3 at 31; Bearzi Test. Tr. vol. 7, p. 1743, lines 2-8.

200. During the public comment period on the August 2007 draft permit and the July 2009 revised draft permit, some commenters advocated that a “physical” information repository be established containing paper copies of relevant documents. NMED Ex. 3 at 31; *see, e.g.*, AR 31980; AR 31989; AR 31998.

201. During the hearing, some of the parties and a substantial number of members of the public requested that a physical information repository be required in the permit. Naranjo Test. Tr. vol. 7, p. 1761, line 25 to p. 1768, line 11; Martinez Test. Tr. p. 1770, line 17 to p. 1782, line 18; HOPE Ex. 2; HOPE Ex. 3; HOPE Ex. 4; Statements of Penelope McMullen, Tr. vol. 5, p. 1211, line 3 to p. 1212, line 7; Camilla Bustamante, Tr. vol. 7, p. 1841, line 10 to p. 1843, line 4; Teresa Juarez, Tr. vol. 7, p. 1844, lines 8-24; Robert Collier, Tr. vol. 7, p. 1848, line 24 to p. 1851, line 14; Robert Chavez, Tr. vol. 7, p. 1867, line 21 to p. 1868, line 4; Yesca Sullivan, Tr. vol. 7, p. 1875, lines 3-8; Basia Miller, Tr. vol. 7, p. 1876, line 10 to p. 1877, line 5; Holly Beaumont, Tr. vol. 7, p. 1878, line 2 to p. 1881, line 4; Mitchell Stanfield, Tr. vol. 7, p. 1881, line 16 to p. 1882, line 20; Luis Pena, Tr. vol. 7, p. 1884, line 16 to p. 1885, line 9; Sherri Kotowski, Tr. vol. 7, p. 1894, line 20 to p. 1896, line 20; Clarissa Duran, Tr. vol., 7, p. 1902, line 15 to p. 1905, line 9; Beata Tsosie Pena, Tr. vol. 7, p. 1920, line 20 to p. 1922, line 17; Ken LaGattuta, Tr. vol. 10, p. 2593, line 20 to p. 2595, line 23; Kathy Wanpovia-Sanchez, Tr. vol. 10, p. 2629, line 25 to p. 2630, line 11..

202. During the hearing, the Interim President of Northern New Mexico College, David F. Trujillo, through Mitchell Stanfield, the Director of Public Affairs for the College, offered to host a physical information repository located on the college campus. Tr. vol. 7, p. 1881, line 13 to p. 1882, line 20.

203. The Department is not opposed to requiring a physical information repository in the permit. Bearzi Test. Tr. vol. 10, p. 2705, lines 7-11.

204. The Department has supported the concept of a physical repository, and has suggested that it could be arranged through a separate agreement apart from the permit process. Bearzi Test. Tr. vol. 10, p. 2705, line 12 to p. 2706, line 7.

205. In the event that the Hearing Officer recommends to the Secretary, or the Secretary adopts, a permit requirement for a physical information repository, the Department proposes specific revisions to the Proposed Permit set forth in NMED Exhibit 229. Bearzi Test. Tr. vol. 15, p. 4082, line 14 to p. 4086, line 22; *see* NMED Ex. 229.

11. Section 1.11 General Documents and Information to be Retained at the Facility

206. Section 1.11 of the Proposed Permit (General Documents and Information to be Retained at the Facility) requires the Permittees to maintain at the Laboratory copies of the permit, a topographic map of the Laboratory, the Waste Analysis Plan, the Inspection Plan; and emergency response agreements. NMED Ex. 1 at 28-29; NMED Ex. 109 at 21.

12. Section 1.12 Community Relations Plan

207. Section 1.12 of the Proposed Permit (Community Relations Plan) requires the Permittees to establish and carry out a community relations plan to inform nearby communities and members of the public of permit-related activities. NMED Ex. 1 at 29-30; NMED Ex. 3 at 33-34; Bearzi Test. Tr. vol. 6, p. 1620, line 10 to p. 1622, line 3.

13. *Section 1.13 Public Notification Via Electronic Mail*

208. Section 1.13 of the Proposed Permit (Public Notification Via Electronic Mail) requires the Permittees to issue notice via electronic mail (e-mail) of the submittal to the Department of specific documents of interest to the public. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 30; NMED Ex. 3 at 32-33; Bearzi Test. Tr. vol. 6, p. 1618, line 22 to p. 1620, line 3.

209. The hazardous waste permit for the Waste Isolation Pilot Plant has a similar e-mail notification provision. It has proven very effective in keeping the public informed. Bearzi Test. Tr. vol. 6, p. 1620, lines 4-9.

14. *Section 1.14 Dispute Resolution*

210. Section 1.14 of the Proposed Permit (Dispute Resolution) establishes a procedure for the resolution of disputes that arise under the permit. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 30-31; NMED Ex. 109 at 21-22.

15. *Section 1.15 Compliance Schedule*

211. Section 1.15 of the Proposed Permit (Compliance Schedule) requires the Permittees to submit documents and perform other actions under the permit according to the schedule in Attachment I of the Proposed Permit. The purpose of Attachment I is to enhance permit compliance and enforcement. The provision is based on 40 C.F.R. § 270.33(a). NMED Ex. 1 at 31; NMED Ex. 109 at 22.

16. *Section 1.16 Transfer of Land Ownership*

212. Section 1.16 of the Proposed Permit (Transfer of Land Ownership) governs the transfer of ownership of Laboratory property. It requires the Permittees to give the Department notice 120 days before the planned transfer. The notice must include specific information,

including a description of the property, identify the transferee, and a summary of remedial actions taken at the property. The Department will determine whether closure, post-closure care, or corrective action have been sufficiently protective of health and the environment given the intended use of the property and, if not, what further actions are needed. If no further actions are needed, DOE may transfer the property. NMED Ex. 1 at 33-34; NMED Ex. 109 at 23-24.

213. Section 1.16 of the Proposed Permit also provides that if corrective actions have achieved cleanup to less than residential-use levels, the Permittees must advise the transferee of any future obligations attached to the property. DOE must include a deed restriction to limit future use of the land to those uses consistent with its cleanup level. NMED Ex. 1 at 33; NMED Ex. 109 at 23.

214. The land transfer provision in Section 1.16 of the Proposed Permit is very similar to provision in section III.Y of the Compliance Order on Consent (March 1, 2005) for investigation and cleanup of environmental contamination at the Laboratory (“Consent Order”) (NMED Ex. 26). However, it applies only to transfers that take place after the Consent Order is terminated. This provision is based on 40 C.F.R. § 270.32(b)(2). It is based on section 120(h) of CERCLA, 42 U.S.C. § 9620(h). NMED Ex. 109 at 23-24; *compare* NMED Ex. 1 § 1.16 with NMED Ex. 26 § III.Y.

17. Section 1.17 Notice of Demolition Activities

215. Section 1.17 of the Proposed Permit (Notice of Demolition Activities) requires the Permittees, on or before September 30 of each year, to provide the Department with a notice in the form of a list of buildings and other fixed structures that may contain hazardous material scheduled to be demolished in the following federal fiscal year (October 1 to September 30). The notice must be provided at least thirty days prior to any demolition. Permit Section 1.17.1

specifies the information that must be included in this list. Permit Section 1.17.2 requires the Applicants to update the list every three months. Permit Section 1.17.3 further provides that for those buildings or structures that the Department identifies in writing, the Permittees must give the Department specific notice of the demolition thirty days in advance. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 34-35; NMED Ex. 182 at 3.

216. The purpose of Section 1.17 of the Proposed Permit is to give the Department the opportunity to review and evaluate, in advance, any scheduled demolition of a building or structure that may contain hazardous materials. NMED Ex. 182 at 3.

217. Section 1.17 of the Proposed Permit originated in a 2006 Department enforcement action. On October 25, 2006, the Department sent to DOE and LANS a Notice of Violation (NMED Ex. 18) for staging hazardous waste mixed with building demolition waste in an unapproved staging pile in violation of section 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.554(b)); and for placing hazardous waste mixed with building demolition waste in a land disposal unit without a permit and without meeting the treatment standards for land disposal of hazardous waste, in violation of the existing Laboratory permit. The parties entered into a Settlement Agreement and Stipulated Final Order (April 10, 2007) to resolve the violations (NMED Ex. 17). The Settlement Agreement contains a notice provision that is similar to that in Section 1.17 of the Proposed Permit. It requires DOE and LANS to give the Department notice by September 30 of demolitions scheduled to occur during the next federal fiscal year. NMED Ex. 182 at 3-5; *see* NMED Ex. 18; NMED Ex. 17.

218. Under the April 10, 2007 Settlement Agreement, the Department's opportunity to have thirty days advance notice of any demolition can be thwarted if DOE and LANS conduct demolitions in the month of October, the first month of the federal fiscal year. That situation

occurred in 2009. LANS first informed the Department by telephone on October 27, 2009 that Building 21-167 and Building 21-370 had been demolished earlier that month. NMED Ex. 182 at 5; AR 32114.

219. Section 1.17 of the Proposed Permit has been drafted to ensure that the Department has a minimum of thirty days notice of all demolitions. NMED Ex. 1 at 34; NMED Ex. 182 at 5.

220. During the hearing, the Department proposed revisions to Section 1.17 of the Proposed Permit, set forth in NMED Exhibit 228. The parties have agreed to these revisions. Roberts Test. Tr. vol. 13, p. 3613, line 23 to p. 3614, line 8; NMED Ex. 228.

C. PART 2 OF THE PROPOSED PERMIT

221. Part 2 of the Proposed Permit (General Facility Conditions) contains conditions for the operation of all hazardous waste management units at the Laboratory, as distinguished from Parts 3 and 4, which contain conditions specifically for container storage and tank storage units. Part 2 is based largely on 40 C.F.R. Part 264, Subparts B through E. Many of the provisions in Part 2 follow EPA's model RCRA permit and many are similar to conditions in the Applicants' current hazardous waste permit. NMED Ex. 109 at 24; *see also* NMED Ex. 112; NMED Ex. 111.

222. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Part 2 of the Proposed Permit in its entirety. However, Natural Resources Defense Council and Southwest Research and Information Center reserve their objection to certain provisions of the Cost Estimates for Financial Assurance (Proposed Permit Attachment M). Second Stip.

223. The Applicants stipulate that they agree to the terms of Part 2 of the Proposed Permit except Sections 2.4.6, 2.4.7, 2.4.9, 2.10.1, 2.12.2, 2.13, 2.14, 2.15, and 2.16. They also reserve their objection to the Cost Estimates for Financial Assurance (Proposed Permit Attachment M). Second Stip. Ex. 2.

1. Section 2.1 Design, Construction, Operation, and Maintenance of the Facility

224. Section 2.1 of the Proposed Permit (Design, Construction, Operation, and Maintenance of the Facility) requires the Permittees to design, construct, operate, and maintain the Laboratory to minimize the possibility of fire, explosion, or release of hazardous waste or hazardous constituents into the environment. This provision is based on 40 C.F.R. § 264.31. NMED Ex. 1 at 37; NMED Ex. 109 at 25.

2. Section 2.2 Authorized Wastes

225. Section 2.2 of the Proposed Permit (Authorized Wastes) allows the Permittees to store only those hazardous wastes that are identified in the Part A Permit Application (Attachment B to the Proposed Permit). This provision is based on 40 C.F.R. § 270.13(j). NMED Ex. 1 at 37; NMED Ex. 109 at 25.

226. Section 2.2.1 of the Proposed Permit (Authorized Waste from Off-Site Sources) allows the Permittees to store and treat at the Laboratory certain hazardous wastes that were generated off-site. Those wastes are specifically identified in Paragraphs 1 through 4 of Section 2.2.1. No other hazardous waste generated off-site may be stored or treated at the Laboratory. NMED Ex. 1 at 37-38; NMED Ex. 109 at 25-28.

227. Section 2.2.1, Paragraph 1, of the Proposed Permit allows the Permittees to store and treat at the Laboratory treatment-derived waste generated at the Laboratory, which may be returned from off-site. If an off-site disposal facility for such wastes exists, the waste may be

kept and the Laboratory for no more than sixty days. Treatment-derived wastes are hazardous or mixed wastes generated at the Laboratory that were sent off-site for treatment, such as stabilization of liquid wastes to a solid form. Often the off-site treatment facility has no option but to return the waste to the Laboratory because of the radioactive component of the waste, or because no disposal option exists. NMED Ex. 1 at 37; NMED Ex. 109 at 25-26.

228. Section 2.2.1, Paragraph 2, of the Proposed Permit allows the Permittees to store and treat at the Laboratory hazardous waste from the TA-57, the Fenton Hill site. TA-57 is a noncontiguous to the main portion of the Laboratory co-operated by LANS. TA-57 is used for geothermal energy experiments within the Jemez Caldera. It is more protective of health and the environment and more efficient for the Permittees store these wastes on site in permitted units rather than managing them at TA-57. NMED Ex. 1 at 38; NMED Ex. 109 at 26-27.

229. Section 2.2.1, Paragraph 3, of the Proposed Permit allows the Permittees to store and treat at the Laboratory hazardous waste generated by the Permittees during investigation or remediation of corrective action sites located outside the Facility boundary. Certain corrective action sites at the Laboratory are located outside the facility boundaries. Thus, waste generated at such sites is, by definition, generated off-site. Waste generated at such sites in implementing corrective action under the Permit and under the March 1, 2005 Consent Order could be stored at permitted storage units at the Laboratory. It is more protective of health and the environment and more efficient for the Permittees store these wastes on site in permitted units rather than managing them at various non-contiguous off-site locations. NMED Ex. 1 at 38; NMED Ex. 109 at 26-27.

230. Section 2.2.1, Paragraph 4, of the Proposed Permit allows the Permittees to store and treat at the Laboratory mixed waste in sealed sources from off-site. Sealed-source waste is

generally a small metal capsule that is permanently sealed and contains a specific amount of radioactive material used in various defense-related processes for measurement or calibration. Under federal law, the Applicants have been implementing an off-site source recovery program to recover and manage radioactive sealed sources from sites within and outside the country. Section 2.2.1, Paragraph 4, places several restrictions on the storage of such waste at the Laboratory. Such waste must be determined to have a national defense origin, and otherwise meet the criteria for disposal at the Waste Isolation Pilot Plant. Such waste must be limited in volume to two 55-gallon drums of waste in one of the first three years of the permit, and one 55-gallon drum in other years. The higher volume in one of the first three years is to address backlog of sealed source mixed waste currently stored at a commercial treatment, storage, or disposal facility. And such waste may not be stored at the Laboratory for more than one year. NMED Ex. 1 at 38; NMED Ex. 109 at 26-28; *see also* NMED Ex. 115.

231. The volume limitation on sealed sources stored at the Laboratory in Section 2.2.1, Paragraph 4, of the Proposed Permit is based on the volume that the Applicants requested in their permit application. Pullen Test. Tr. vol. 7, p. 1928, lines 4-6.

232. The Applicants have agreed to the volume limitation on sealed sources stored at the Laboratory in Section 2.2.1, Paragraph 4, of the Proposed Permit. Bacigalupa Test. Tr. vol. 1, p. 231, lines 7-17.

233. Section 2.2.2 of the Proposed Permit (Hazardous Waste from Foreign Sources) prohibits the Permittees from accepting, storing, treating, or otherwise managing hazardous waste from foreign sources at the Laboratory. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 38; NMED Ex. 109 at 28.

234. Wastes generated outside the United States may not be accurately characterized as the regulations require. Mischaracterized waste could be mishandled and lead to a dangerous situation. The State of New Mexico and possibly the federal government might not have the authority to require that the waste be returned, if necessary, to its country of origin. NMED Ex. 109 at 28.

235. The Applicants' permit application does not propose to receive wastes from a foreign source. NMED Ex. 109 at 28.

236. The Applicants do not object to the proposed ban on receipt of foreign waste contained in Proposed Permit Section 2.2.2. Bacigalupa Test. Tr. vol. 1, p. 232, lines 13-15.

237. Section 2.2.3 of the Proposed Permit (PCB-Contaminated Waste) prohibits the Permittees from storing waste containing polychlorinated biphenyls ("PCB's") at concentrations greater than or equal to 50 parts per million, except in compliance with 40 C.F.R. § 268.50(f). This provision is based on 40 C.F.R. § 268.50(f), which governs the storage of liquid hazardous wastes containing PCB's in such concentration, and 40 C.F.R. § 761.65(b), which governs facilities for the storage for disposal of PCB's in such concentration. NMED Ex. 1 at 38; NMED Ex. 109 at 28.

238. The Applicants' permit application does not propose to store PCB-contaminated wastes. NMED Ex. 109 at 28.

3. Section 2.3 Land Disposal Restrictions

239. Section 2.3 of the Proposed Permit (Land Disposal Restrictions) contains provisions to implement the land disposal restrictions requirements at 40 C.F.R. Part 268. The land disposal restrictions prohibit the disposal of hazardous waste in any land-based unit unless that waste has been treated to meet waste-specific treatment standards. These regulations

prohibit the dilution of hazardous waste as a means to meet the treatment standards. And to prevent the indefinite storage of hazardous waste, the regulations generally prohibit the storage of hazardous wastes for more than one year. NMED Ex. 109 at 29; *see* NMED Ex. 1 at 38-40.

240. Section 2.3.1 of the Proposed Permit (Hazardous Waste Storage), limits storage of hazardous waste at a permitted unit to one year, with certain exceptions. This provision is based on with 40 C.F.R. § 268.50(b). NMED Ex. 1 at 38-39; NMED Ex. 109 at 29-30.

241. Section 2.3.1, Paragraph 1, of the Proposed Permit provides an exception to the one-year limit for storage of waste to accumulate a quantity necessary for proper recovery, treatment, or disposal. This exception is based on 40 C.F.R. § 268.50(a). NMED Ex. 1 at 39; NMED Ex. 109 at 29.

242. Section 2.3.1, Paragraph 2, of the Proposed Permit provides an exception to the one-year limit for storage of waste meeting all treatment standards under the land disposal restrictions, as provided in 40 C.F.R. § 268.50(e). NMED Ex. 1 at 39; NMED Ex. 109 at 29.

243. Section 2.3.1, Paragraph 3, of the Proposed Permit provides an exception to the one-year limit for storage of waste for mixed waste identified on the Site Treatment Plan data base under the October 4, 1995 Federal Facility Compliance Order between the Department and the Applicants (AR 1759). This exception is based on the Federal Facility Compliance Act, 42 U.S.C. § 6961, which allows DOE to store mixed waste for more than one year provided that a site treatment plan and a federal facility compliance order implementing the plan have been approved and are in effect. NMED Ex. 1 at 39; NMED Ex. 109 at 29.

244. Section 2.3.2 of the Proposed Permit (Prohibition on Dilution), prohibits the dilution of waste that is subject to the land disposal restrictions as a substitute for treatment. This

provision is based on 40 C.F.R. § 268.3, which is incorporated into the permit by reference. NMED Ex. 1 at 39; NMED Ex. 109 at 30.

245. Section 2.3.3 of the Proposed Permit (Documentation of Exclusion or Exemption) requires that the Permittees place a one-time notice in the Operating Record for any wastes subject to the land disposal restrictions that the Permittees determine are excluded from the definition of hazardous or solid waste or exempted under 40 C.F.R. §§ 261.2 through 261.6. This provision is based on 40 C.F.R. § 268.7(a)(7). NMED Ex. 1 at 39-40; NMED Ex. 109 at 30-31.

246. The purpose of this provision is to ensure that the Permittees properly apply exemptions and exclusions, and that they accurately document the bases for applying exemptions and exclusions. NMED Ex. 109 at 30.

4. *Section 2.4 Waste Analysis*

247. Section 2.4 of the Proposed Permit (Waste Analysis) requires the Permittees to analyze and characterize waste generated at the Laboratory and waste received at the Laboratory from off-site. NMED Ex. 1 at 40-46; NMED Ex. 109 at 31-44.

248. Section 2.4.1 of the Proposed Permit (General Waste Characterization Requirements) provides that the Permittees may accept, store, treat, or otherwise manage at the Laboratory only those hazardous wastes that have been fully characterized based on 40 C.F.R. § 264.13, and the facility Waste Analysis Plan (Permit Attachment C). NMED Ex. 1 at 40-46; NMED Ex. 109 at 30.

249. Full characterization of hazardous waste is necessary to determine whether the waste is prohibited from land disposal. NMED Ex. 109 at 32.

250. Full characterization of hazardous waste is necessary to prevent mixing or placing of incompatible hazardous wastes in the same container or tank systems. NMED Ex. 109 at 32.

251. Full characterization of hazardous waste is necessary to prevent accidental ignition or reaction of ignitable or reactive wastes. NMED Ex. 109 at 32.

252. Full characterization of mixed waste is necessary to guard against radioactive hazards of mixed waste. NMED Ex. 109 at 32.

253. Section 2.4.1 of the Proposed Permit requires that all waste characterization information be kept in the Operating Record for the Laboratory. NMED Ex. 1 at 41.

254. Section 2.4.2 of the Proposed Permit (Sampling and Analysis for Hazardous Wastes) requires the Permittees to use sampling and analytical methods that have been approved by the Department. Approved methods include those described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (U.S. EPA Publication SW-846 (AR 7141)). The Permittees must ensure that samples collected are representative of the entire volume of the waste stream. This provision is based on at 40 C.F.R. § 264.13(a). NMED Ex. 1 at 41; NMED Ex. 109 at 34-35.

255. Section 2.4.2 of the Proposed Permit requires the Permittees to implement a quality assurance and quality control program to ensure that sample collection and analytical procedures used are technically accurate and statistically valid. NMED Ex. 1 at 41; NMED Ex. 109 at 34-35.

256. Section 2.4.2 of the Proposed Permit provides that the Permittees may propose an analytical method that differs from those previously approved, if they submit to the Department

for approval a written request with information supporting the method. The Permittees may not use such method until is approved by the Department. NMED Ex. 1 at 42; NMED Ex. 109 at 34.

257. Section 2.4.3 of the Proposed Permit (Acceptable Knowledge) allows the Permittees to rely on “acceptable knowledge” of the waste stream to characterize the waste in addition to, or in place of, sampling and analysis. This provision is based on 40 C.F.R. § 264.13. NMED Ex. 1 at 42-43; NMED Ex. 109 at 35-36.

258. Section 2.4.4 of the Proposed Permit (Waste Received from Off-Site) requires the Permittees to obtain from any off-site facility that sends treatment-derived waste or sealed source waste to the Laboratory a detailed characterization of a representative sample of the waste. This provision is based on 40 C.F.R. § 264.13(a)(1), (a)(4), (b)(5), and (c). NMED Ex. 1 at 43; NMED Ex. 109 at 36-37.

259. Section 2.4.5 of the Proposed Permit (Treatment-Derived Waste) requires the Permittees to characterize treatment-derived waste to determine whether treatment has attained the applicable land disposal restrictions treatment standards. This provision is based on 40 C.F.R. § 268.7(b). NMED Ex. 1 at 43; NMED Ex. 109 at 37-38.

260. Section 2.4.6 of the Proposed Permit is “reserved.”

261. Section 2.4.7 of the Proposed Permit (Waste Characterization Review) requires the Permittees to 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. This provision is based on 40 C.F.R. § 264.13(a)(3). NMED Ex. 1 at 43-44; NMED Ex. 109 at 38-40.

262. Section 2.4.8 of the Proposed Permit (Waste Characterization for Compliance with RCRA Air Emission Requirements) requires the Permittees to characterize wastes managed

in containers and tanks to determine the average concentration of volatile organic compounds to for purpose of compliance with the air emission requirements in 40 C.F.R. part 264, subpart CC. This provision is based on 40 C.F.R. part 264, subpart CC. NMED Ex. 1 at 44-45; NMED Ex. 109 at 40-41.

263. Section 2.4.9 of the Proposed Permit (Waste Characterization for Compliance with Land Disposal Restrictions) requires the Permittees to characterize wastes managed in permitted units to determine whether the wastes must be treated before they can be disposed on land based on the land disposal restrictions. This provision is based on 40 C.F.R. § 268.7(a). NMED Ex. 1 at 45; NMED Ex. 109 at 41.

264. Section 2.4.9 of the Proposed Permit requires the Permittees to characterize wastes designated to be disposed of at WIPP to determine whether the waste is subject to the land disposal restrictions. However, based on the WIPP Land Withdrawal Amendment Act, Pub. L. 104-201 (1996), which limits the applicability of the Land Disposal Restrictions at WIPP, the Proposed Permit does not require the Permittees to determine all applicable underlying hazardous constituents listed in 40 C.F.R. § 268.48. NMED Ex. 1 at 45; NMED Ex. 109 at 41-43.

265. Section 2.4.9 of the Proposed Permit further requires the Permittees, as part of waste characterization for purposes of the land disposal restrictions, to require the analytical laboratory to report results for all constituents that a particular analytical method is capable of measuring. This provision is based on 40 C.F.R. §§ 264.13(a)(1), 264.13(b)(6), and 270.32(b)(2). NMED Ex. 1 at 45; NMED Ex. 109 at 41-43.

266. The Applicants have often limited laboratory chemical analysis to a particular constituent or a limited number of constituents. NMED Ex. 109 at 44.

267. The requirement to report results for all constituents for a given analytical method will provide additional useful information on waste constituents without significant additional costs. The requirement may serve to verify the Permittees' claims of acceptable knowledge, may identify additional underlying hazardous constituents in conformance with 40 C.F.R. § 268.9, and may prevent unlawful waste disposal. NMED Ex. 109 at 44.

268. The Applicants continue to object to this provision.

269. Section 2.4.9 of the Proposed Permit further requires the Permittees, as part of waste characterization for purposes of the land disposal restrictions, to require the analytical laboratory to ensure that analytical method practical quantification limits are not higher than the applicable treatment standard. This provision is based on 31 40 C.F.R. § 270.32(b). NMED Ex. 1 at 45; NMED Ex. 109 at 42.

270. The purpose of this provision on quantification limits is to ensure that all waste samples that exceed applicable treatment standards are identified. NMED Ex. 109 at 44.

5. Section 2.5 Security

271. Section 2.5 of the Proposed Permit (Security) requires the Permittees to limit the unauthorized entry of persons or livestock onto the permitted units at the Laboratory through measures including 24-hour surveillance and controlled entry. This provision is based on 40 C.F.R. §§ 264.14 and 270.32(b)(2). NMED Ex. 1 at 46; NMED Ex. 109 at 44.

272. Section 2.5.1 of the Proposed Permit (Warning Signs) requires the Permittees to post warning signs in English, Spanish, and along the Pueblo border, in Tewa. This provision is based on 40 C.F.R. §§ 264.14(c) and 270.32(b)(2). NMED Ex. 1 at 46-47; NMED Ex. 109 at 44.

6. Section 2.6 General Inspection Requirements

273. Section 2.6 of the Proposed Permit (General Inspection Requirements) requires the Permittees to inspect all the permitted units for malfunctions, deterioration, operator errors, and discharges which may result in a release of hazardous constituents to the environment or a threat to human health. This provision is based on 40 C.F.R. §§ 264.15 and 270.32(b)(2). NMED Ex. 1 at 47; NMED Ex. 109 at 45.

274. Section 2.6 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 45; *see* NMED Ex. 112 § II.D.

275. Section 2.6 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 45; *see* NMED Ex. 111 § II.E.

276. Section 2.6.1 of the Proposed Permit (Inspection Schedule) requires the Permittees to conduct inspections of permitted units at the Laboratory according to the inspection schedule in Attachment E (Inspection Plan). The provision further requires the Permittees to inspect areas subject to spills daily. This provision is based on 40 C.F.R. §§ 264.15(b). NMED Ex. 1 at 47; NMED Ex. 109 at 45.

277. Section 2.6.2 of the Proposed Permit (Repair of Equipment and Structures) requires the Permittees to remedy any deterioration or malfunction of equipment or structures discovered during an inspection that may lead to an environmental or human health hazard, and to do so within 24 hours of discovery of the problem. This provision is based on 40 C.F.R. §§ 264.15(c) and 270.32(b)(2). The 24-hour requirement has been added for clarity and enforceability. NMED Ex. 1 at 47; NMED Ex. 109 at 45-46.

278. Section 2.6.3 of the Proposed Permit (Inspection Logs and Records) requires the Permittees to compile records and logs of inspections, and keep the records in the operating

record for the Laboratory. This provision is based on 40 C.F.R. §§ 264.15(d) and 270.32(b)(2). NMED Ex. 1 at 48; NMED Ex. 109 at 46.

7. Section 2.7 Personnel Training

279. Section 2.7 of the Proposed Permit (Personnel Training) requires the Permittees to ensure that all Laboratory personnel who are involved in hazardous waste management successfully complete required training programs. This provision is based on 40 C.F.R. §§ 264.16. NMED Ex. 1 at 48; NMED Ex. 109 at 46-47.

280. Section 2.7 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 47; *see* NMED Ex. 112 § II.G.

281. Section 2.7 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 47; *see* NMED Ex. 111 § II.F.

8. Section 2.8 Special Requirements for Ignitable, Reactive, or Incompatible Wastes

282. Section 2.8 of the Proposed Permit (Special Requirements for Ignitable, Reactive, or Incompatible Wastes) requires the Permittees to manage ignitable, reactive, and incompatible wastes properly and to take precautions to prevent the generation of extreme heat or pressure, fires, explosions, violent reactions, the generation of toxic fumes or mist, or damage to the structural integrity of the waste container or tank. The provision also requires the Permittees to keep such wastes at least fifteen meters from the facility boundary. This provision is based on 40 C.F.R. §§ 264.17, 264.176, 264.177, 264.198, and 264.199. NMED Ex. 1 at 49; NMED Ex. 109 at 47-48.

283. Section 2.8 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 47; *see* NMED Ex. 112 § II.I.

284. Section 2.8 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 47; *see* NMED Ex. 111 § II.G.

285. Section 2.8.1 of the Proposed Permit (Ignitable and Reactive Waste Precautions) requires the Permittees to take precautions to prevent the ignition or reaction of ignitable or reactive wastes, including ensuring that there are no nearby sources of fire or flame, that the wastes are protected from ignition sources, that fire hydrants are kept clear, that non-sparking tools are used, that lightning protection is used, and that smoking is restricted. This provision is based on 40 C.F.R. §§ 264.17 and 270.32(b)(2). NMED Ex. 1 at 49-50; NMED Ex. 109 at 48-49.

286. Section 2.8.2 of the Proposed Permit (Incompatible Waste Precautions) requires the Permittees to take precautions to ensure that incompatible wastes are kept separated, including by separate secondary containment structures. This provision is based on 40 C.F.R. §§ 264.177 and 270.32(b)(2). NMED Ex. 1 at 50-51; NMED Ex. 109 at 49.

287. Section 2.8.2 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 49; *see* NMED Ex. 112 § V.K.

9. Section 2.9 Waste Minimization

288. Section 2.9 of the Proposed Permit (Waste Minimization) requires the Permittees to implement and maintain a waste minimization program to reduce the volume and toxicity of hazardous wastes generated at the Laboratory. This provision is based on 40 C.F.R. §§ 264.73(b)(9) and 270.32(b)(2). NMED Ex. 1 at 51-52; NMED Ex. 109 at 49-50.

289. Section 2.9 of the Proposed Permit follows EPA's model HSWA permit. NMED Ex. 109 at 50; *see* NMED Ex. 114 § B.1.

10. Section 2.10 Preparedness and Prevention

290. Section 2.10 of the Proposed Permit (Preparedness and Prevention) requires the Permittees to maintain and operate the permitted units in a manner that minimizes the possibility of a fire, explosion, or release of hazardous constituent to the environment or that otherwise might threaten human health. This provision is based on 40 C.F.R. §§ 264.31 and 270.32(b)(1). NMED Ex. 1 at 52; NMED Ex. 109 at 50.

291. Section 2.10 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 50; *see* NMED Ex. 111 § II.H.

292. Section 2.10.1 of the Proposed Permit (Required Equipment) requires the Permittees to maintain emergency equipment including communication devices, alarm devices, fire control equipment, spill control equipment, and decontamination equipment. This provision requires the Permittees to maintain at each permitted unit fire water at an adequate pressure and volume. The provision requires the Permittees to operate and maintain a monitoring network to detect releases of hazardous constituents. The provision also requires the Permittees to maintain equipment to mitigate impacts of a power outage. This provision is based on 40 C.F.R. §§ 264.32, 270.14(b)(8)(iv), and 270.32(b)(2). NMED Ex. 1 at 52; NMED Ex. 109 at 50-52.

293. The Department proposes to amend Proposed Permit Section 2.10.1, as set forth in NMED Exhibit 230, to address the Applicants' objections. Bearzi Rebuttal Test. Tr. vol. 15, p. 4086, line 23 to p. 4089, line 6; NMED Ex. 230.

294. The Applicants have agreed to the amendment of Proposed Permit Section 2.10.1 as set forth in NMED Exhibit 230. Bearzi Rebuttal Test. Tr. vol. 15, p. 4095, lines 2-17.

295. Section 2.10.2 of the Proposed Permit (Testing and Maintenance of Equipment) requires the Permittees to test and maintain emergency equipment to ensure that it functions in

the event of an emergency. It also requires the Permittees to repair or replace malfunctioning emergency equipment. This provision is based on 40 C.F.R. §§ 264.15(c), 264.32 and 270.32(b)(1). NMED Ex. 1 at 53; NMED Ex. 109 at 52.

296. The Department has observed malfunctioning emergency equipment during hazardous waste inspections of the Laboratory in the past. NMED Ex. 109 at 52; *see* AR 16788.

297. Section 2.10.3 of the Proposed Permit (Access to Communications or Alarm System) requires the Permittees to ensure that all employees working at a regulated unit have immediate access to an alarm or emergency communication system. This provision is based on 40 C.F.R. §§ 264.34 and 270.32(b)(1). NMED Ex. 1 at 53; NMED Ex. 109 at 53.

298. Section 2.10.4 of the Proposed Permit (Spill Response) requires the Permittees to take certain measures to manage spills of hazardous waste, including isolation of the spill area, containment of the spill, definition of the nature and extent of the spilled waste, placement of the spilled waste and contaminated materials in containers, and decontamination. This provision is based on 40 C.F.R. §§ 264.31 and 270.32(b)(1). NMED Ex. 1 at 53-54; NMED Ex. 109 at 53-54.

299. Section 2.10.5 of the Proposed Permit (Arrangements with Local Authorities) requires the Permittees to maintain agreements with local emergency response authorities, including the Los Alamos County Emergency Management and Response Office, the Los Alamos Fire Department, the Los Alamos County Police Department, and the Los Alamos Medical Center. This provision is based on 40 C.F.R. §§ 264.37 and 270.32(b)(1). NMED Ex. 1 at 54; NMED Ex. 109 at 54.

11. Section 2.11 Contingency Plan

300. Section 2.11 of the Proposed Permit (Contingency Plan) requires the Permittees to maintain a contingency plan for the Laboratory. NMED Ex. 1 at 54-55; NMED Ex. 109 at 54; *see also* NMED Ex. 1 Attachment D.

301. The DOE Office of Inspector General concluded in September 2009 that “fire suppression and related services had not been assured through contractual arrangements with the County.” NMED Ex. 109 at 57-58; NMED Ex. 118.

302. The Laboratory has been deficient in fire protection in the past. Stanford Test. Tr. vol. 1, p. 244, line 8 to p. 250, line 20; NMED Ex. 218.

303. Section 2.11.1 of the Proposed Permit (Implementation of the Contingency Plan) requires the Permittees to implement the Contingency Plan if there is an incident, such as a fire, explosion, or release of hazardous waste, at a permitted unit that threatens human health or the environment. This provision is based on 40 C.F.R. § 264.51(b). NMED Ex. 1 at 54; NMED Ex. 109 at 54-55.

304. Section 2.11.2 of the Proposed Permit (Content of the Contingency Plan) provides that the Contingency Plan must contain, for each permitted unit, a description of actions to be taken in emergencies; a description of arrangements with emergency responders; a description of contracts with emergency response contractors; names and phone numbers of primary and alternate emergency managers; a list of all on-site emergency equipment; and an evacuation plan. This provision is based on 40 C.F.R. §§ 264.37(a)(3) and 264.52. NMED Ex. 1 at 55; NMED Ex. 109 at 55-56.

305. Section 2.11.3 of the Proposed Permit (Distribution) requires the Permittees to keep a copy of the Contingency Plan at appropriate locations at the Laboratory, and to distribute

copies of the Contingency Plan to State and local emergency response authorities. This provision is based on 40 C.F.R. §§ 264.53 and 270.32(b)(2). NMED Ex. 1 at 55-56; NMED Ex. 109 at 56-57.

306. Section 2.11.4 of the Proposed Permit (Amendments to Plan) requires the Permittees to review annually and, if necessary, amend the Contingency Plan whenever the permit is revised; the Emergency Management Plan or a Building Emergency Plan is revised; the Contingency Plan fails during a drill or an emergency; a permitted unit is modified; the list of emergency managers or emergency equipment changes; or the Permittees find deficiencies in their emergency response capabilities. This provision is based on 40 C.F.R. §§ 264.54 and 270.32(b)(2). NMED Ex. 1 at 56-57; NMED Ex. 109 at 57.

307. Section 2.11.5 of the Proposed Permit (Emergency Manager) requires the Permittees to designate an emergency manager or incident commander, on-call at all times, who is responsible for coordinating all emergency response measures related to the management of hazardous wastes. The provisions requires the Permittees to notify the Department of any change in the emergency managers. This provision is based on 40 C.F.R. §§ 264.52(d) and 264.55. NMED Ex. 1 at 57; NMED Ex. 109 at 58.

308. Section 2.11.6 of the Proposed Permit (Required Emergency Procedures) requires the Permittees to take immediate action in the event of an emergency situation. This provision further requires the Permittees to take action to respond to a fire, explosion, or release of a hazardous constituent. The provision requires the Permittees to report to the Department a fire, explosion, or release of a hazardous constituent. It requires the Permittees to take measures to mitigate the emergency. The provision requires the Permittees to monitor air emissions and other conditions resulting from a fire, explosion, or release of a hazardous constituent. This

provision is based on 40 C.F.R. §§ 264.56 and 270.32(b). NMED Ex. 1 at 57-58; NMED Ex. 109 at 58-60.

309. Section 2.11.7 of the Proposed Permit (Post-Emergency Procedures) requires the Permittees, after an emergency in which the Contingency Plan was implemented, to provide for the proper management of all wastes and contaminated material. This provision is based on 40 C.F.R. §§ 264.56(g) and (h). NMED Ex. 1 at 59; NMED Ex. 109 at 60.

310. Section 2.11.8 of the Proposed Permit (Need for Further Corrective Action) provides that the Permittees may be required to conduct further corrective action after a release of hazardous waste or hazardous constituents. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 59; NMED Ex. 109 at 60.

311. Section 2.11.9 of the Proposed Permit (Notification and Recordkeeping) requires the Permittees to notify the Department of implementation of the Contingency Plan, including a report within 24 hours and a written report within five days. This provision is based on 40 C.F.R. §§ 264.56(i) and 270.32(b)(2). NMED Ex. 1 at 59; NMED Ex. 109 at 60-61.

312. Section 2.11.9 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 17; *see* NMED Ex. 112.

12. Section 2.12 Recordkeeping and Reporting

313. Section 2.12 of the Proposed Permit (Recordkeeping and Reporting) requires the Permittees to comply with recordkeeping and reporting requirements. This provision is based on 40 C.F.R. § 264.73. NMED Ex. 1 at 59; NMED Ex. 109 at 61.

314. Section 2.12.1 of the Proposed Permit (Manifest Systems) requires the Permittees to comply with the hazardous waste manifest requirements of the regulations whenever a

shipment of hazardous waste is sent from or received at the Laboratory. This provision is based on 40 C.F.R. §§ 264.71, 264.72, and 264.76. NMED Ex. 1 at 60; NMED Ex. 109 at 61.

315. Section 2.12.2 of the Proposed Permit (Facility Operating Record) requires the Permittees to maintain a facility operating record for each permitted unit until the conclusion of closure or post-closure care. The provision requires that the operating record to include a description of each hazardous waste at the Laboratory; the location of each hazardous waste; waste analysis records; incident reports; inspection records; monitoring and analytical data; notices to off-site generators; closure cost estimates; annual certification of waste minimization; information on treated wastes for land disposal restrictions; information on stored wastes for land disposal restrictions; information on wastes left in place after closure; monitoring reports; documentation on distribution of the Contingency Plan; documentation on installation of secondary containment; personnel training records; documentation of alternate emergency equipment; and documentation of incidents of fire suppressants contacting a waste storage pad. This provision is based on 40 C.F.R. §§ 264.73(b) and 270.32(b)(2). NMED Ex. 1 at 60-62; NMED Ex. 109 at 61-62.

316. Section 2.12.3 of the Proposed Permit (Availability of Facility Operating Record) requires the Permittees to furnish and make available to Department representatives for inspection the facility operating record and other records required under the Permit. This provision is based on 40 C.F.R. § 264.74(a). NMED Ex. 1 at 62; NMED Ex. 109 at 62-63.

317. Section 2.12.4 of the Proposed Permit (Record Retention) requires the Permittees to retain any record required by the permit during the pendency of any unresolved enforcement action. This provision is based on 40 C.F.R. §§ 264.74(b). NMED Ex. 1 at 62; NMED Ex. 109 at 63.

318. Section 2.12.5 of the Proposed Permit (Biennial Report) requires the Permittees to submit to the Department a biennial report based on the regulations by March 1 of each even numbered year. This provision is based on 40 C.F.R. § 264.75. NMED Ex. 1 at 62; NMED Ex. 109 at 63.

13. Sections 2.13 through 2.16 – Financial Assurance

a. Background

319. Sections 2.13 through 2.16 of the Proposed Permit require LANS to comply with 40 CFR Part 264, Subpart H (Financial Requirements), including: §§ 264.142 (Cost estimate for closure), 264.143 (Financial assurance for closure), 264.144 (cost estimate for post-closure), 264.145 (Financial assurance for post-closure care), 264.147(a) and (b) (Liability requirements), and 264.148 (Incapacity of owners or operators, guarantors, or financial institutions). (Proposed Permit, at 62-64).

320. Attachment M of the Proposed Permit contains cost estimates for financial assurance for the closure of permitted units. The cost estimates were developed by the Bureau. (TR Vol. 6, Testimony of James Bearzi, at 1683/lns4-10).

321. Despite recognizing “[t]he regulations requiring financial assurance for closure and post closure care costs specifically exempt facilities owned and operated by State or Federal Government agencies,” the Bureau, without any citation to supporting authority, asserts that “[s]ince LANS is a private operator under contract with DOE, it must comply with financial assurance requirements.” (NMED Exhibit 72, July 6, 2009 Fact Sheet, at 67).

322. DOE is the owner and co-operator of LANL, a national research laboratory. LANS is co-operator of LANL. (Section 1.2 of the Proposed Permit; NMED Exhibit 72 at 2;

Applicants Exhibit C, Testimony of Gene Turner, at 1; Applicants Exhibit HH, Testimony of Roger Snyder, at 1-2).

323. LANL is a federal facility, has a federal mission, is located on federal property, is a Federally Funded Research and Development Center and is managed and operated pursuant to a federal contract. DOE owns all of the land and all of the facilities that comprise the Los Alamos National Laboratory. DOE is also responsible for all of the waste that has been generated at the Laboratory since operations began in 1943. (Applicants Exhibit HH at 1).

324. The National Nuclear Security Administration (NNSA) is a separately organized agency within DOE. NNSA responsibilities include the operation of several national laboratories, one of which is LANL. (Applicants Exhibit HH at 1).

325. DOE and NNSA have chosen to hire Management and Operating (M&O) contractors to manage and operate the national laboratories on behalf of the Federal Government. (Applicants Exhibit HH at 2).

326. LANS is a contractor to the Federal Government and manages and operates LANL, including hazardous waste management and legacy waste remediation at LANL. (Applicants Exhibit C at 1; Applicants Exhibit HH at 1-2).

327. . The M&O contract is a unique form of agreement that is used primarily by DOE and NNSA. Under the terms of the contract, DOE/NNSA direct all work done under the contract, including environmental work, and provide federal funds to accomplish that work. The Federal Government has established a letter of credit issued by the United States Treasury which LANS draws upon to pay for this work. All the funds in the letter of credit account remain federal funds until they are spent and none of the funds in that account are the property of the

M&O contractor. (Applicants Exhibit HH at 2-3; TR Vol. 5, testimony of Roger Snyder, at 1096/Ins5-21).

328. The financial responsibility for environmental management and remediation work at LANL resides with the Federal Government as landowner and owner and operator of LANL, rather than with a contractor who is managing and operating LANL for the Federal Government for a limited period of time. (Applicants Exhibit HH at 3; TR Vol. 5 at 1093/Ins12-14).

329. LANS' contract to manage and operate LANL is subject to termination at any time for the convenience of the Federal Government. (Applicants Exhibit HH at 3; TR Vol. 5 at 1093/Ins15-19).

b. Administrative history

330. Under the current Permit and the Proposed Permit, DOE is the Co-Permittee as the owner and co-operator and LANS is a Co-Permittee as the co-operator. (Section 1.2 of the Proposed Permit).

331. On March 15, 2006, the Bureau notified DOE and LANS that the Bureau intended to require financial assurance of LANS in the renewed permit. (NMED Exhibit 227; AR 16310).

332. On September 26, 2006, DOE notified the Bureau that they objected to the inclusion of the financial assurance requirements applicable to LANS in the renewed permit. (AR 14272).

333. In the August 27, 2007 draft permit and the July 26, 2009 revised draft permit the Bureau imposed financial requirements for permitted units and Material Disposal Areas (MDAs G, H and L, which the Bureau described as permitted and regulated units, by including provisions requiring LANS to provide cost estimates and financial assurance for closure and post-closure.

334. The Applicants have consistently objected to the financial assurance requirements in comments to the August 27, 2007 draft permit and in comments to and the Stipulation to the July 6, 2009 revised draft permit. Applicants continued to object to financial assurance requirements in the Proposed Permit. (Comments to Draft LANL Hazardous Waste Permit, January 10, 2008, AR 31339; DOE/LANS Comments on the Revised Draft Permit for LANL, September 3, 2009, AR 31981; Stipulation on Permit Language, June 26, 2009, AR 31724; Second Stipulation on Permit Language, filed May 7, 2010).

335. The Applicants oppose the inclusion of the financial requirements in Proposed Permit Sections 2.13 through 2.16 and Attachment M because DOE is the owner and operator of LANL, and the requirements of Subpart H are met by DOE. (Applicants Exhibit C at 3-4; TR Vol. 5, testimony of Gene Turner, at 1084/lns 9-21; Applicants Exhibit H).

336. It is undisputed that, because LANS is a management and operating contractor, any financial assurance requirements imposed on LANS will be paid by the Federal Government and ultimately the United States taxpayer. The Bureau recognizes the federal government is exempt from these requirements. The Federal Government is exempt from Subpart H because federally-owned facilities will always have adequate resources to conduct closure and post-closure care. (Applicants Exhibit C at 2-4; Applicants Exhibit HH at 2-4; TR Vol. 5 at 1083/ln16 to 1084/ln21; TR Vol. 5 at 1104/lns18-20, 1105/lns13-17).

337. The Applicants oppose imposing financial requirements on LANS because federal law forbids the Bureau from imposing financial responsibility requirements on LANS as a contractor to the Federal Government for the operation of waste facilities designed to manage transuranic waste material. (Applicants Exhibit C at 5; Applicants Exhibit G, Public Law 106-113, Section 220, November 29, 1999).

338. The Applicants oppose the imposition of financial assurance requirements for MDAs G, H, and L because such requirements are contrary to the Consent Order which, by its terms, meets the requirements of 40 CFR 264 Subpart F, including financial assurance for corrective action. (TR Vol. 5 at 1086/lns1-15; Applicants Exhibit B, Consent Order, at Sections III.A. and III.W.2).

c. Burden of Proof

339. The Bureau added the financial assurance requirements for LANS as a condition in the Proposed Permit that was not included in the Applicants' permit application. Financial requirements are not in the current Permit that the Applicants are seeking to renew.

340. The financial assurance requirements for LANS are all conditions to the Proposed Permit added by the Bureau and are conditions for which the Bureau has the burden of proof. (20,1.4.400.A(1) NMAC).

d. Federal and State Regulations Require Either the Owner or Operator to Provide Financial Assurance.

341. The financial requirements are set forth in 40 CFR Part 264, Subpart H (40 CFR §§140 - 151) and have been incorporated by reference in the New Mexico Hazardous Waste Management Regulations. (40 CFR §§140 - 151; NMED Exhibit 72 at 9).

342. 40 CFR §264.140, Applicability, states: "(c) States and the Federal government are exempt from the requirements of this subpart."

343. The Bureau recognizes that DOE, as both the owner and co-operator of LANL, is exempt from the Subpart H financial requirements in both capacities. (TR Vol. 6 at 1682/lns3-10; TR Vol. 8, testimony of James Bearzi, at 2046/l18 to 2047/l1).

344. Subpart H requires either the owner or the operator to provide cost estimates for closure and post-closure care, financial assurance for closure and post-closure care, and liability

coverage. (40 CFR §264.140; §264.142; §264.143; §264.144; §264.145; §264.147) (Emphasis added).

345. 40 CFR §264.142, Cost Estimate for Closure, states: “The owner or operator must have a detailed written estimate in current dollars of the cost of closing the facility in accordance with the requirements in §§264.111 through 264.115 in the applicable closure requirements.” (Emphasis added).

346. 40 CFR §264.143, Financial Assurance for Closure, states: “An owner or operator of each facility must establish financial assurance for closure of the facility...” (Emphasis added).

347. 40 CFR §264.144, Cost Estimate for Post Closure Care, states: “The owner or operator of a disposal surface impoundment disposal miscellaneous unit land treatment unit, or landfill unit, or of a surface impoundment...” (Emphasis added).

348. 40 CFR §264.145, Financial Assurance for Post Closure Care, states: “The owner or operator of a hazardous waste management unit subject to the requirements of Section 264.144 must establish financial assurance...” (Emphasis added).

349. 40 CFR §264.147: Liability Requirements, states: “Coverage for sudden accidental occurrences. An owner or operator of a hazard waste treatment of storage disposal facility...” (Emphasis added).

350. EPA uses the term “owner or operator” to indicate when the regulations will be satisfied by compliance by either party. (45 FR 33170; Applicants Exhibit C at 3-4; TR Vol. 5 at 1084/lns2-8).

351. In the proposed Part 264 and 265 regulations (which included the Subpart H financial requirements), EPA used the term “owner/operator.” In the final regulation, EPA

changed its usage of the term "owner/operator" to "owner or operator" to clarify when EPA will be satisfied by compliance by either party. (Applicants Exhibit C at 3-4; 45 FR 33170 (May 19, 1980) (Emphasis added).

352. The use of the term "owner or operator" throughout 40 CFR Part 264 Subpart H shows that the requirements may be satisfied by either the owner or the operator. (Applicants Exhibit C at 4; Applicants Exhibit I, EPA 9477.1983(01); TR Vol. 5 at 1084/lns2-21).

e. The Federal Government and Federally-owned Facilities are Exempt from the Financial Requirements

353. In the Federal Register preamble to Subpart H, EPA stated that the exemption for "States and the Federal government" in 40 CFR §264.140(c) applies to "State and *Federally-owned facilities.*" (Applicants Exhibit D, 45 FR 33198 (May 19, 1980)(emphasis added); Applicants Exhibit C at 3-5; TR Vol. 5 at 1083/lns16-21).

354. The Bureau has repeated EPA's position that the Subpart H exemption applies to federally-owned facilities. (TR Vol. 5 at 1084/ln 24 to 1085/l2).

355. In the Fact Sheet supporting the provisions of the Proposed Permit, the Bureau stated that the regulations requiring financial assurance for closure and post-closure care costs *specifically exempt facilities owned and operated by State or Federal government agencies.* (NMED Exhibit 72 at 67)(Emphasis added).

356. In Section 7.9 of the draft hazardous waste permit for the DOE Sandia National Laboratories (SNL), the Bureau states that "[u]nder 40 C.F.R. § 264.140(c), this *Federal Facility is exempt* from financial assurance and liability requirements." (Applicants' Exhibit K, Sandia National Laboratories Draft Hazardous Waste Permit No. NM5890110518 (August 20, 2007) at 136 of Draft Permit (emphasis added); Applicants Exhibit C at 4; TR Vol. 5 at 1085/lns6-12).

357. In Section 15.10. of SNL's draft permit, the Bureau states: "Cost estimates, financial assurance mechanisms, and liability coverage for closure and post-closure activities are not included herein because *Federal facilities such as Sandia National Laboratories are exempt* from these requirements. (Applicants Exhibit K at 371 (emphasis added); Applicants Exhibit C at 4; TR Vol. 5 at 1085/lns6-12).

358. In Section 16.10. of SNL's draft permit, the Bureau states that "[u]nder 40 C.F.R. § 264.140(c) and Public Law 108-199, *federal facilities, including the SNL Facility, are exempt* from financial assurance requirements." (Applicants' Exhibit K at 409 (emphasis added); Applicants' Exhibit C at 4; TR Vol. 5 at 1085/lns6-12).

359. In the permit issued to White Sands Missile Range (WSMR), the Bureau states that WSMR is "*a Federal Government owned installation and is therefore exempt* [§264.140(b)(4)(c)] from closure cost estimates, financial assurance under §270.14(b)(15) incorporating §264.142, and §264.143, and liability requirements under §270.14(b)(17) incorporating §264.147 of the Permit Application General Requirements. (Applicants' Exhibit J, New Mexico Environment Department White Sands Missile Range RCRA Permit No. NM2750211235 (December 2009) at 3 (emphasis added); Applicants' Exhibit C at 5; TR Vol. 5 at 1085/lns13-15).

360. The M&O contractor at the two other DOE-owned federal facilities in New Mexico, Sandia National Laboratory and Waste Isolation Pilot Plant (WIPP), are not subject to financial assurance requirements. (Applicants Exhibit HH at 3; TR Vol. 5 at 1085/lns3-15; Applicants Exhibit E; Applicants Exhibit F).

361. Applicants provided undisputed testimony that no other contractor at a federal facility has been required to comply with the financial assurance requirements of Subpart H. (TR Vol. 5 at 1104/lns14-17; TR Vol. 5 at 1086/lns16-18).

362. EPA established financial responsibility requirements to assure that funds would be available for proper closure of facilities that treat, store, or dispose of hazardous waste and for post-closure care of hazardous waste disposal facilities. (Applicants Exhibit D, 45 FR 33198; Applicants Exhibit C at 3-4; Applicants Exhibit HH at 2-3).

363. EPA exempted the Federal Government from the requirements of Subpart H because Federally-owned facilities will always have adequate resources to conduct closure and post-closure care activities properly. (Applicants Exhibit D; Applicants Exhibit C at 3-4; Applicants Exhibit HH at 2-5).

364. EPA explained that the exemption for State and Federally-owned facilities was being adopted because “government institutions are permanent and stable, and have as their reason for being the health and welfare of their people. Therefore...publicly-owned facilities would be more likely and more able financially to carry out their closure and post-closure responsibilities.” (Applicants Exhibit D; Applicants Exhibit C at 3-4).

365. In the July 6, 2009 Fact Sheet, the Bureau states that “[t]he draft permit requires LANS, a co-operator of the facility, to insure it has sufficient funding to cover the costs of closing the permitted hazardous waste facility at LANL.” (NMED Exhibit 72 at 6).

366. The imposition of financial assurance on LANS undermines the rationale supporting the exemption for State and Federally-owned facilities, i.e., that the government entities will have sufficient funding to cover closure and post-closure costs.

367. Because LANS is a management and operating contractor, any financial assurance requirements imposed on LANS will be paid by the Federal government. (Applicants Exhibit HH at 2-4; Applicants Exhibit C at 2-4; TR Vol. 5 at 1104/lns18-20, 1093/lns 2-4, 1105/lns13-17; TR Vol. 5 at 1083/ln16 to 1084/ln21).

368. LANS operates LANL pursuant to an M&O contract under which it is reimbursed for the costs of operating LANL. This is done by drawing upon a letter of credit issued by the United States Treasury. The source of funding for a financial assurance mechanism will be the Federal Government. (Applicants Exhibit HH at 2-3; TR Vol.5 at 1096/lns14-21).

369. The testimony of Roger Snyder established that DOE would be responsible for the cost of any financial assurance imposed on LANS. (Applicants Exhibit HH at 2-4; TR Vol. 5 at 1096/lns5-21).

370. The federal government is and remains responsible for the financial assurance requirements. (Applicants Exhibit HH at 3; TR Vol. 5 at 1093/lns 2-4).

371. The financial assurance requirements in sections 2.13 through 2.16 and Attachment M of the Proposed Permit would require an insurance policy or trust fund that is pre-funded to cover all the closure and post closure costs imposed by the Proposed Permit. Pursuant to LANS' contract, DOE/NNSA must approve the expenditure of federal funds for this purpose and would be responsible for obtaining Congressional funding. (Applicants Exhibit II, Testimony of Dennis Ritchel; TR Vol. 5, testimony of Dennis Ritchel, at 1089/lns17-24; TR Vol. 5 at 1090/lns17-24; TR Vol. 5 at 1104/ln18 to 1105/ln4).

372. Any financial assurance imposed on LANS would result in the Federal government being required to pay a third party to assure an obligation that the government has already explicitly assumed. Imposing financial assurance requirements on LANS would require

the taxpayers both to pre-fund a financial instrument sufficient to pay for closure and post-closure care, and also to pay the actual costs of closure and post-closure care. (TR Vol. 5 at 1104/lns18-20, 1105/lns5-17; TR Vol. 5 at 1123/ln6 to 1124/ln4).

373. The State of Washington determined that the financial assurance requirements do not apply to the contractor at DOE's Hanford facility because DOE as the owner fulfills the requirements for financial assurance, which may be satisfied by either owner or operator. The State of Washington further agreed with EPA that "federally-owned facilities" are exempt because they will always have adequate resources for closure and post closure. (Applicants Exhibit H; Applicants Exhibit C at 4; TR Vol. 5 at 1084/lns 15-21).

374. Nuclear Watch of New Mexico introduced a letter from EPA, Region 6, which indicates that the State of Oregon had imposed financial assurance requirements on the contractor at the Umatilla Chemical Depot, a federal facility. (NWNM Exhibit 1, letter from EPA, Region 6, Acting Director, Multimedia Planning and Permitting Division, to Mike McFadden, DOE Carlsbad Area Office).

375. The Applicants introduced exhibits that demonstrate that the State of Oregon has not, in fact, imposed financial assurance requirements on the co-permittee/contractor at the Umatilla Chemical Depot. (Applicants Exhibit KKK, Module I, Umatilla Chemical Agent Disposal Facility; Applicants Exhibit LLL, Module II, Umatilla Chemical Agent Disposal Facility).

376. The testimony of Bureau witnesses, James Bearzi and James Werner, failed to explain why the financial assurance requirements for closure and post closure and the liability requirements are not satisfied by the exemption that the regulations provide to DOE as the owner and co-operator of the LANL hazardous waste management facility.

377. James Werner, expert witness for the Bureau, agreed that rationale for the exemption, i.e., “the federal government will be there, and the full faith and credit of the federal and state governments is sufficient to satisfy financial assurance” has not changed. (TR Vol. 11 at 3012/ln19 to 3013/ln3).

378. In his written testimony, Mr. Bearzi claimed, without citation to any authority, that “EPA’s interpretation of the financial assurance requirements is not entirely objective on this issue, as the interpretations applies only to sister agencies of the federal government.” (NMED Exhibit 3 at 63).

379. Mr. Bearzi, again without citation to any authority, further stated in his written testimony that “New Mexico is not required to give the same interpretation to 264.140(c) that EPA applies.” (NMED Exhibit 3 at 63).

380. When asked if the exemption for States and the Federal governments satisfies the requirements for financial assurance, Mr. Bearzi responded “[t]hat could be one interpretation.” (TR Vol. 8 at 2047/lns13-21).

381. Mr. Bearzi stated in both his written and oral testimony that it is the Bureau’s interpretation that an operator of a facility must provide financial assurance even when the Federal owner and co-operator of a facility is exempt from financial assurance requirements. Mr. Bearzi stated “that somebody has to provide financial assurance in some form unless both the owner and the operator enjoy an exemption.” (NMED Exhibit 3 at 63-64; TR Vol. 8 at 2051/lns9-19).

382. Mr. Bearzi did not cite to statutory, regulatory, written policy or other basis for NMED’s interpretation that an operator of a facility must provide financial assurance even when the Federal owner and co-operator of a facility is exempt from financial assurance requirements.

383. NMED cited to and relied on the decision of the Hearing Officer in the original WIPP hazardous waste permit proceeding as justification for imposing financial assurance on LANS. (NMED Exhibit 72 at 28). However, the Hearing Officer in the WIPP proceeding did not address the question of whether DOE, as the owner and operator of LANL, met the financial assurance requirements or the rationale for the federal facility exemption. (NMED Exhibit 90, Report of the Hearing Officer, at 42-43 and 94-95).

384. Neither the Fact Sheet nor the authorities cited in it, including the decision of the hearing officer in the WIPP permitting matter, provide an explanation, justification, or rationale for NMED's assertion that the exemption for the Federal government contained in 264.140(c) does not satisfy the requirements of the financial assurance for closure, post closure, and liability requirements where the Federal Government is the co-permittee as the owner and co-operator.

385. NMED presented no evidence that the EPA preamble and agency interpretation regarding financial assurance and the applicability of the exemption in 264.140(c) to State and Federally-owned facilities has been reversed or rescinded by EPA, or that it has been ignored or overridden by a court or any other state agency in any other authorized State. (TR Vol. 11, testimony of James Werner, at 3012/ln19 to 3013/ln3).

f. The Bureau cannot impose more stringent regulations than EPA without following an Administrative Process

386. The Hazardous Waste Act prohibits the State of New Mexico from adopting regulations more stringent than federal regulations adopted by the federal environmental protection agency pursuant to the federal Resource Conservation and Recovery Act of 1976, as amended, unless the Environmental Improvement Board determines, after notice and public hearing, that such federal regulations are not sufficient to protect public health and the environment. (74-4-4.D NMSA).

387. Neither the Bureau nor other parties presented testimony that the EIB has made such a determination with regard to EPA's Subpart H financial regulations.

388. In the event the Bureau wishes to make its hazardous waste management regulations more stringent than the applicable federal regulations, the Bureau is required to follow the rulemaking process, with notice and a public hearing before the EIB. (74.4.4.D NMSA).

389. The Bureau presented no evidence that it conducted rule making to substitute "owner and operator" for "owner or operator."

390. By imposing financial assurance on LANS, when DOE as the owner and operator is exempt from financial assurance requirements, NMED is ignoring the term "owner or operator," used throughout Subpart H and the federal facility exemption, and is imposing financial assurance requirements that are more stringent than those adopted by EPA, contrary to the Hazardous Waste Act.

391. Mr. James Werner, testifying on behalf of the Bureau, admitted that the State of New Mexico has adopted the federal regulatory language regarding financial assurance requirements. (TR Vol. 11, testimony of James Werner, at 2982/Ins3-7 and 2988/Ins1-3).

392. Mr. Werner admitted that he has not seen a written interpretation by the State of New Mexico stating that when an owner is exempt from financial assurance requirements, the operator must satisfy the financial assurance requirements. (TR Vol. 11 at 2989/Ins18-23).

393. Nuclear Watch of New Mexico introduced a letter from EPA, Region 6, regarding the imposition of financial assurance requirements for Westinghouse, M&O contractor at DOE's WIPP facility. In referring to the State of New Mexico, EPA says that "the State may impose financial assurance requirements under State regulations." (NWNM Exhibit 1).

394. The EPA letter introduced by Nuclear Watch does not support NMED's interpretation of the financial regulations, because EPA's letter fails to recognize that the Hazardous Waste Act prohibits the State of New Mexico from adopting regulations that are more stringent than federal regulations unless a specific determination by the EIB is made following notice and a public hearing. (74.4.4.D NMSA).

395. In the letter introduced by Nuclear Watch, EPA states that EPA would exempt Westinghouse, the M&O contractor at WIPP, from the Subpart H financial requirements, citing to EPA's long-standing rationale iterated the 1983 letter from John Skinner (EPA) to Bradley E. Dillon (US Ecology), a memorandum dated May 11, 1983 from John Skinner (EPA) to Harry Seraydarian (EPA), and a memorandum dated January 30, 1984 from John Skinner (EPA) to Harry Seraydarian (EPA). (NWNM Exhibit 1).

g. Section 220 of Public Law 106-113

396. Pursuant to Section 220 of Public Law 106-113 (113 Stat. 1501A, App. E) “[n]o form of financial responsibility requirement shall be imposed on the Federal Government or its contractors as to the operation of any waste management facility which is designed to manage transuranic waste material and is owned or operated by a department, agency, or instrumentality of the executive branch of the Federal Government and subject to regulation by the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) or by a State program authorized under that Act.” (Applicants Exhibit G).

397. LANL manages transuranic (TRU) waste material at several facilities (TA 3, 54 and 55) that are designed to manage TRU waste. (Applicants Exhibit C at 5; TR Vol. 5 at 1085/lns16-20).

398. The Bureau acknowledges that waste management facilities at LANL to which Sections 2.13 through 2.16 and Attachment M of the Proposed Permit apply do manage transuranic waste material. (TR Vol. 7, testimony of James Bearzi, at 1817/ln5 to 1818/ln14; NMED Exhibit 72 at 3-4).

399. DOE is a department of the executive branch of the Federal Government. (Applicants Exhibit HH at 1; Applicants Exhibit C at 5).

400. LANS is a contractor to DOE. (Applicants Exhibit HH at 2; Applicants Exhibit C at 5).

401. LANL is subject to the State of New Mexico's program to implement the Solid Waste Disposal Act. (NMED Exhibit 72 at 8-10).

h. Congressional Appropriations Process and Funding Levels

402. The Bureau states in the Fact Sheet that, "in any case, there are good grounds to require financial assurance of LANS" because "[t]here is a real risk that, unless financing is assured, the process of closing the MDAs may be frustrated by funding shortfalls." (NMED Exhibit 72 at 28).

403. In asserting the alleged "good grounds" for financial assurance, the Bureau misstates the purpose of the financial assurance requirements. The purpose of financial assurance is to ensure hazardous waste management facilities have sufficient funds to properly close and monitor closure if necessary and that bankruptcy will not leave the cost of that activity to be borne by the taxpayer. (Applicants Exhibit C at 3-4; TR Vol. 5 at 1083/lns15-20).

404. The Bureau and Mr. Werner address the Congressional Funding process or speed at which the remediation of the MDAs is taking place, not whether the Federal government will continue to have sufficient resources available for remediation of the MDAs or closure of

permitted units at LANL. The Fact Sheet alleges that there is evidence that funding shortfalls have caused and may continue to cause delays in the completion of the clean-up at LANL. (NMED Exhibit 72 at 28-29).

405. There is no regulatory, statutory or stated policy basis for the Bureau's alleged "good grounds." There is no basis for imposing financial assurance in order to ensure that remediation of the MDAs or closure of permitted units takes place within a certain timeframe or meets certain deadlines.

406. In addition to misstating the purpose of financial assurance, the facts on the record do not support NMED's position.

407. With respect to permitted units, numerous permitted units have been successfully closed during the life of the current permit. (Proposed Permit at Table J-3). It is anticipated that these units will be closed in a phased fashion. There is no evidence on the record that DOE will not be able to meet the costs of closing the permitted units.

408. The Bureau alleges that the remediation of MDAs G, H and L may be frustrated without financial assurance. (NMED Exhibit 72 at 28; TR Vol. 6 at 1682/lns22-25). Financial assurance for the MDAs should not be imposed because they are governed by the Consent Order. In addition, no evidence was presented that DOE does not intend to fully meet all environmental responsibilities at LANL. Mr. Snyder and Gene Turner testified that DOE has a long-term commitment to meet its environmental obligations and that it intends to continue doing so in the future. Over \$1 billion has been invested in remediation since 2005 when the Consent Order was signed, which demonstrates federal commitment to this process. (TR Vol.5 at 1100/lns3-23; Applicants Exhibit C at 3; Applicants Exhibit HH at 3-4).

409. All of the work performed pursuant to the Consent Order is funded by the DOE Office of Environmental Management through Congressional appropriations. (TR Vol. 3, testimony of Dave McInroy, at 681/ln22 to 682/ln1).

410. There has been a consistent increase in funding since the inception of the Consent Order. The current funding level is approximately \$200 million. An additional \$200 million dollars will be received between 2009 and 2011 as part of American Recovery Act funding. (Applicants Exhibits GG, HH, and HH-1; TR Vol. 3 at 682/lns8-24, 690/lns1-8).

411. The testimony of David McInroy and Roger Snyder demonstrate that DOE funding for the Consent Order has shown regular increases and funding has been allocated and that appropriations have been obtained that meet or exceed the requested amounts. (Applicants Exhibits DD and HH; TR Vol. 3 at 682/ln8 to 683/ln5, 690/ln1-8; TR Vol. 5 at 1100/lns3-23).

412. No testimony was presented by any party that recent, current, or projected DOE appropriation shortfalls are expected.

413. There is no justification for requiring financial assurance for closure, post closure or financial liability in the proposed permit based on the federal appropriations for the Consent Order.

i. Consent Order

414. The Proposed Permit seeks to impose financial assurance requirements on MDAs G, H and L, in violation of the specific terms of the Consent Order, which prohibit the inclusion of requirements in the Permit that address corrective action or that are duplicative of the Consent Order. (Proposed Permit Section 2.13.1; Applicants Exhibit B, Section III.W).

415. Section III.W.4 of the Consent Order directly addresses the relation of the Consent Order to the Permit and states that the requirements of the Consent Order will not

terminate upon renewal of the Permit and that “[t]he renewed Permit, and any future modifications, renewals, or reissuance of the Permit, *will not include any corrective action requirements, nor any other requirement that is duplicative of this Consent Order.* The Permit or any renewed Permit can include the four excepted items and the list of SWMUs requiring corrective action described in Section III.W.1.” (Applicants Exhibit B at 31-32; TR Vol. 3 at 638/ln21 to 640/ln1) (Emphasis added).

416. Section III.W.2 of the Consent Order provides that "the Parties enter into this Consent Order based on their understanding that there shall be only one enforceable instrument for corrective action relating to the Facility, except as provided in Section III.W.1, and that such instrument is this Consent Order...[C]ompliance with the terms of this Consent Order constitutes compliance with the requirements for corrective action under RCRA and the HWA and their implementing regulations... Upon the effective date of this Consent Order, the sole mechanism for enforcing corrective action requirements, except as provided in Section III.W.1, shall be this Consent Order...The State will not take any action to enforce the corrective action requirements of the existing Permit, except as to those items listed in Section III.W.1.”

417. Permit Section 2.13.1 of the Proposed Permit states that “[t]he Permittee LANS shall submit, for Department approval, closure cost estimates for each regulated unit listed in Table J-1 (*Active Portion of the Facility*) in Attachment J (*Hazardous Waste Management Units*) at the time of submission of the Corrective Measures Evaluation (CME) report in accordance with Permit Section 9.3 and §VII.4.b.v of the Order. The Permittee LANS shall include the final cost estimate of the selected remedy in the submittal of the closure plan (*i.e., Corrective Measures Implementation Plan*) for the regulated units listed in Table J-1.”

418. By its terms, section 9.3 of the Proposed Permit duplicates the requirements of the Consent Order for three Material Disposal Areas that are clearly subject to the Consent Order, MDAs G, H, and L.

419. Under the Consent Order, DOE and LANS are responsible for submitting closure cost estimates for each remedial alternative evaluated. Cost is one of the facts that must be evaluated in choosing the appropriate remedy. (Applicants Exhibit B at 156-158). The provisions in the Proposed Permit shift this responsibility to LANS alone.

420. Table J-1 and Permit Section 9.1 of the Proposed Permit identify the regulated units, for which Permit Section 2.13.1 imposes financial assurance, as “material disposal areas G, H and L.”

421. Table K-1 of the Proposed Permit identifies SWMUs and AOCs at the Facility which still require corrective action under the Consent Order. Table K-1 includes all the SWMUs that make up MDAs G, H, and L.

422. The Fact Sheet states that “closure cost estimates are to be submitted for the Table J-1 Material Disposal Areas (MDAs) initially at the time of submission of the Corrective Measures Evaluation report and a final estimate submitted at the time of submission of the Corrective Measures Implementation Work Plan.” (NMED Exhibit 72 at 67).

423. Both the Corrective Measures Evaluation Report and the Corrective Measures Implementation Work Plan are documents set forth in the Consent Order. The timing, scope, content, and review process for both the Corrective Measures Evaluation Report and the Corrective Measures Implementation Work Plan are governed by the Consent Order. (Applicants Exhibit DD).

424. MDAs G, H and L are specifically identified in the Consent Order and are subject to all of the corrective action requirements of the Consent Order, including investigations, CME and CMI requirements, long-term maintenance and monitoring requirements, enforceable schedules, stipulated penalties and other enforcement action. (See Section 9.1 Identification of Regulated Units, below).

425. The financial assurance requirements in the Proposed Permit for MDAs G, H and L are directed to the corrective action activities that are being undertaken pursuant to the Consent Order, as evidenced by the direct reference to the CME report and the CMI Plan required by the Consent Order. Section 2.13.1 states that the closure plan for the regulated units is the CMI Plan. (Proposed Permit Section 2.13.1).

426. The identification of MDAs G, H and L as subject to the Proposed Permit and imposition of financial assurance requirements on MDAs G, H and L mean that the Permit is also an enforceable document for corrective action, in direct violation of Section III.W.2 of the Consent Order.

427. The activities under the Consent Order related to MDAs G, H and L are funded annually through Congressional appropriations. The purpose of the enforceable schedules in the Consent Order is to ensure that adequate progress is made and that the activities are being adequately funded. (TR Vol. 3, testimony of David McInroy, at 680/lms16-21; *see* Applicants Exhibit B, Table XII-XX).

428. The imposition of financial assurance requirements for MDAs G, H and L is in direct violation of Section III.W.4 of the Consent Order, which prohibits the inclusion, in the renewed permit, of any corrective action requirements or any other requirement that is duplicative of the Consent Order.

429. NMED admits that the terms of the Proposed Permit create two enforceable documents for corrective action at LANL. (NMED Exhibit 72 at 4; NMED Exhibit 3 at 25, 66).

430. The Fact Sheet discussion of financial assurance for the MDAs G, H, and L fails to justify the requirement of financial assurance for the regulated units, which are the same units that will be closed under the Consent Order.

D. PART 3 OF THE PROPOSED PERMIT

431. Part 3 of the Proposed Permit (Storage in Containers) governs the storage of hazardous waste in container at container storage areas. Part 3 is based largely on 40 C.F.R. Part 264, Subpart I, which it incorporates by reference. Many of the provisions in Part 3 follow EPA's model RCRA permit and many are similar to conditions in the Applicants' current hazardous waste permit. NMED Ex. 109 at 63; *see also* NMED Ex. 112; NMED Ex. 111.

432. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Part 3 of the Proposed Permit in its entirety. Second Stip.

433. The Applicants stipulate that they agree to the terms of Part 3 of the Proposed Permit, except Sections 3.1(3), 3.7.1, and 3.11.3. Second Stip. Ex. 2. *See also* Finding of Fact 382 *infra* (Applicants' agreement to Section 3.7.1).

1. Section 3.1 General Conditions

434. Section 3.1 of the Proposed Permit (General Conditions), Paragraph 1, requires the Permittees to comply with the regulations at 40 C.F.R. Part 264, Subpart I. NMED Ex. 1 at 65; NMED Ex. 109 at 63.

435. Section 3.1, Paragraph 2 of the Proposed Permit requires the Permittees to store only those hazardous wastes identified in Proposed Permit Attachment B (Part A Application).

The provision requires the Permittees to store hazardous waste only in designated storage areas identified in Proposed Permit Attachment J (Hazardous Waste Management Units), and to store no more waste than the maximum capacity of a given storage area. NMED Ex. 1 at 65; NMED Ex. 109 at 63-64.

436. Section 3.1, Paragraph 2 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 65; *see* NMED Ex. 112 § V.B.

437. Section 3.1, Paragraph 2 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 65; *see* NMED Ex. 111 §§ III.A, III.B.

438. Section 3.1, Paragraph 3 of the Proposed Permit requires the Permittees to ensure that the maps of the storage areas in Permit Attachment N accurately depict the location of all buildings and structures at the storage areas, and are kept up to date. This provision is based on 40 C.F.R. § 264.148. NMED Ex. 1 at 65; NMED Ex. 109 at 64.

439. The requirement that figures in the Proposed Permit accurately reflect the location of the buildings and structures is necessary to enable Department inspectors to properly inspect the facilities; it is also necessary to identify appropriate sampling locations during closure. NMED Ex. 109 at 65.

2. Section 3.2 Condition of Containers

440. Section 3.2 of the Proposed Permit (Condition of Containers) requires the Permittees to ensure that all containers used to store hazardous waste are in good condition. This provision is based on 40 C.F.R. §§ 264.171 and 270.32(b)(2). NMED Ex. 1 at 65; NMED Ex. 109 at 66.

441. Section 3.2 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 65; *see* NMED Ex. 112 § V.C.

442. Section 3.2 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 65; *see* NMED Ex. 111 § III.C.4.

3. *Section 3.3 Acceptable Storage Containers*

443. Section 3.3 of the Proposed Permit (Acceptable Storage Containers) requires the Permittees to use containers that meet the requirements of EPA and Department of Transportation regulations, and to wrap oversized items, such as glove boxes, in plastic. This provision is based on 40 C.F.R. §§ 264.31 and 270.32(b)(2). NMED Ex. 1 at 66; NMED Ex. 109 at 66-67.

4. *Section 3.4 Compatibility of Waste Containers*

444. Section 3.4 of the Proposed Permit (Compatibility of Waste Containers) requires the Permittees to use containers that are made of or lined with materials that will not react with the wastes placed in the container. This provision is based on 40 C.F.R. § 264.172. NMED Ex. 1 at 66; NMED Ex. 109 at 68.

445. Section 3.4 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 68; *see* NMED Ex. 112 § V.D.

446. Section 3.4 of the Proposed Permit is similar to the terms of the current RCRA Permit for the Laboratory. NMED Ex. 109 at 68; *see* NMED Ex. 111 § III.C.5.

5. *Section 3.5 Management of Containers*

447. Section 3.5 of the Proposed Permit (Management of Containers) and Section 3.5.1 of the Proposed Permit (Storage Configuration and Minimum Aisle Space) requires the

Permittees to take certain precautions in managing containers. NMED Ex. 1 at 66-67; NMED Ex. 109 at 68-71.

448. Section 3.5, Paragraph 1 of the Proposed Permit requires the Permittees to keep storage containers closed, and to avoid handling containers in a manner that may cause them to leak or rupture. This provision is based on 40 C.F.R. § 264.173(a) and (b), which is incorporated into the permit by reference. NMED Ex. 1 at 66; NMED Ex. 109 at 68.

449. The requirement to keep containers closed will serve to prevent a release into the environment of liquid, solid, and gaseous wastes. NMED Ex. 109 at 68.

450. Section 3.5, Paragraph 1 of the Proposed Permit follows EPA's model RCRA permit. NMED Ex. 109 at 68; *see* NMED Ex. 112 § V.E.

451. Section 3.5, Paragraph 2 of the Proposed Permit requires the Permittees to mark the boundaries of permitted container storage units. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 66; NMED Ex. 109 at 68-69.

452. The requirement to mark the boundaries of container storage units will clarify the scope of the permitted area, making it easier to comply with and to enforce the permit. Many container storage units consist of a portion of a floor or a parking lot. Without proper demarcation it is difficult to identify the area of the unit. Boundary demarcation assists waste management personnel, assists Department inspectors, and identifies what areas require evaluation at closure. NMED Ex. 109 at 68.

453. During February 12, 2009 and May 28, 2008 site inspections of the Laboratory, Department inspectors noted several locations where it was not possible to determine the boundaries of container storage units, particularly TA-54 Pads 1, 3, 9, and 10. NMED Ex. 109 at 68-69; *see* NMED Exhibit 119.

454. Section 3.5, Paragraph 3 of the Proposed Permit requires the Permittees to elevate drums stored in movable buildings. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 66; NMED Ex. 109 at 69.

455. The requirement to elevate drums stored in movable buildings will serve to protect the drums from contact with accumulated liquids that might cause corrosion. NMED Ex. 109 at 69.

456. Section 3.5, Paragraph 4 of the Proposed Permit requires the Permittees to record the movement of containers in a storage area. This provision is based on 40 C.F.R. § 264.175(b)(2), which is incorporated into the permit by reference. NMED Ex. 1 at 66; NMED Ex. 109 at 69.

457. This requirement to record movement of containers will enable the Permittees and the Department to monitor compliance with permit terms addressing capacity limits, storage duration, secondary containment, and compatibility of wastes. It also will allow prompt location of a particular waste container. NMED Ex. 109 at 69.

458. Section 3.5.1, Paragraph 1 of the Proposed Permit requires the Permittees to maintain adequate aisle space in container storage areas. NMED Ex. 1 at 67. This provision is based on 40 C.F.R. § 264.35. NMED Ex. 1 at 67; NMED Ex. 109 at 69.

459. The requirement for adequate aisle space in the storage areas will enable the Permittees and the Department to monitor compliance with permit and to inspect containers. It also will allow access for emergency personnel. NMED Ex. 109 at 69-70.

460. Section 3.5.1, Paragraph 2 of the Proposed Permit prohibits the Permittees from stacking containers more than three levels high. It also requires the Permittees to place stacked

containers on pallets and bind them together. This provision is based on 40 C.F.R. §§ 264.31, 264.173(b), and 270.32(b)(2). NMED Ex. 1 at 67; NMED Ex. 109 at 70.

461. The limitations on stacking of containers will serve to protect personnel working among the containers and to minimize the possibility of a release of hazardous waste caused by a container falling and rupturing. This limitation will also serve as a precaution in an area of known seismic activity. NMED Ex. 109 at 70.

462. Section 3.5.1, Paragraph 3 of the Proposed Permit requires the Permittees to store containers a minimum of five feet from the perimeter fence and a minimum of five feet from a roadway or a permanent structure. This provision is based on 40 C.F.R. §§ 264.31, 264.34, 264.173(b), and 270.32(b)(2). NMED Ex. 1 at 67; NMED Ex. 109 at 70.

463. The limitation on placing containers less than five feet from the perimeter fence or a permanent structure will allow sufficient space for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment. It also facilitates container inspection. The limitation on placing a container less than five feet from a roadway reduces the risk of an impact from a vehicle that could cause the container to rupture. NMED Ex. 109 at 70.

464. Section 3.5.1, Paragraph 4 of the Proposed Permit requires the Permittees to store gas cylinders containing hazardous waste in racks, baskets, or special pallets that provide support and restraint. This provision is based on 40 C.F.R. §§ 264.31, 264.173(b), and 270.32(b)(2). NMED Ex. 1 at 67; NMED Ex. 109 at 71.

465. The requirement to store hazardous waste gas cylinders securely will minimize the possibility of a release caused by a cylinder toppling and rupturing. NMED Ex. 109 at 71.

466. Section 3.5.1, Paragraph 5 of the Proposed Permit requires the Permittees to ensure that containers stored outside are protected from the weather. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 67; NMED Ex. 109 at 71.

467. The requirement to protect containers from the weather will reduce the risk of containers becoming corroded. It also will protect container labels from detaching or becoming illegible. Further, mixed waste containers generally have vents on top of the container. Precipitation may enter a container through this vent if it is not protected, which could alter the characteristics of the waste, mobilize the waste, or corrode the container. NMED Ex. 109 at 71.

6. Section 3.6 Waste Container Labeling

468. Section 3.6 of the Proposed Permit (Waste Container Labeling) requires the Permittees to properly label containers storing hazardous waste. The containers must be labeled “hazardous waste,” and the label must include the generator’s name, address, and EPA identification number; all applicable EPA hazardous waste numbers; and the date when the container was placed in storage. Containers holding mixed waste must be labeled “radioactive.” Containers holding free liquids must be labeled “free liquids.” This provision is based on 40 C.F.R. §§ 262.34(a)(2), (3), 268.50(a)(2)(i), 264.177(c), and 270.32(b)(2). NMED Ex. 1 at 67; NMED Ex. 109 at 71-73.

469. The requirement to label containers will enable the Permittees and the Department to monitor compliance with permit terms addressing the length of time waste is stored, waste compatibility, and volatile organic air emissions. It is especially important to know the content of containers during an emergency. NMED Ex. 109 at 72-73.

7. Section 3.7 Containment Systems

470. Section 3.7 of the Proposed Permit (Containment Systems) requires the Permittees to implement secondary containment systems for containers storing hazardous waste, especially containers holding free liquids. Section 3.7.1 (Containers with Free Liquids) addresses secondary containment for containers holding free liquids, and section 3.7.2 (Containers without Free Liquids) addresses secondary containment for containers not holding free liquids. NMED Ex. 1 at 68-69.

471. According to EPA, “Containers are relatively thin-walled, can be punctured by fork-lift trucks, and are prone to break open when dropped or knocked over. They tend to corrode or otherwise deteriorate relatively rapidly both from the inside as a result of reaction with the waste, and from the outside as a result of exposure to the environment. The agency believes, therefore, that it is prudent to require a secondary containment system under container storage areas.” NMED Ex. 109 at 73-74; 46 Fed. Reg. 2829 (Jan. 12, 1981).

a. Containers with Free Liquids

472. Section 3.7.1, Paragraph 1 of the Proposed Permit requires the Permittees to maintain secondary containment systems at all container storage areas used to store wastes containing free liquids, and to maintain ground features, such as berms and sloping, to prevent run-on to such storage areas. This provision is based on 40 C.F.R. § 264.175, which is incorporated into the permit by reference. NMED Ex. 1 at 68; NMED Ex. 109 at 73.

473. Section 3.7.1, Paragraph 2 of the Proposed Permit requires the Permittees to remove spilled or leaked waste and accumulated precipitation from sumps or secondary containment systems either: (a) within 24 hours of detection if the waste or precipitation is in liquid form and the sump or secondary containment is the sole means of secondary containment,

or (b) in as timely a manner as necessary to prevent overflow of the containment system. Thus, if there is a redundant secondary containment system or the foreign material is in a solid form, *e.g.*, frozen precipitation, immediate removal is less imperative. This provision is based on 40 C.F.R. §§ 264.175(b)(5) and 270.32(b)(2). NMED Ex. 1 at 68; NMED Ex. 109 at 74-75.

474. The 24-hour time limit to remove liquids will clarify the requirement and makes it easier to enforce, as opposed to the ambiguous phrase “in as timely a manner as is necessary,” under the regulations at 40 C.F.R. §§ 264.175(b)(5). NMED Ex. 109 at 75-76.

475. The 24-hour time limit to remove liquids will proscribe the Applicants’ current practice of allowing liquids to remain in secondary containment for long periods of time. NMED Ex. 109 at 75-76; NMED Ex. 120.

476. The 24-hour time limit to remove liquids will prevent potentially large volumes of accumulated liquids in secondary containment basins from escaping to the environment. NMED Ex. 109 at 75, 77.

477. The 24-hour time limit to remove liquids will facilitate the detection of a leak from a waste container. NMED Ex. 109 at 75, 77.

478. The Department proposes to amend Proposed Permit Section 3.7.1, Paragraph 2, as set forth in NMED Exhibit 230, to address the Applicants’ objections. Bearzi Rebuttal Test. Tr. vol. 15, p. 4089, line 7 to p. 4093, line 6; NMED Ex. 230.

479. The Applicants have agreed to the amendment of Proposed Permit Section 3.7.1, Paragraph 2, as set forth in NMED Exhibit 230. Bearzi Rebuttal Test. Tr. vol. 15, p. 4095, lines 2-17.

480. Section 3.7.1, Paragraph 3 of the Proposed Permit requires the Permittees to maintain the base of secondary containment systems so that they are impervious to leaks, spills,

and precipitation. This provision is based on 40 C.F.R. § 264.175(b)(1), which is incorporated into the permit by reference. NMED Ex. 1 at 68; NMED Ex. 109 at 79.

481. The requirement to maintain the secondary containment systems will serve to prevent migration of hazardous wastes through defective containment systems to the environment. NMED Ex. 109 at 79.

482. Section 3.7.1, Paragraph 4 of the Proposed Permit requires the Permittees to document that any coating or sealant used as a secondary containment system was applied and has been maintained based on the manufacturer's specifications. The Permittees must certify conformance with the specifications. This provision also requires the Permittees to protect expansion joints in the concrete floor of secondary containment systems by the installation and maintenance of chemically resistant water stops embedded the concrete. This provision is based on 40 C.F.R. § 264.175(b)(1) and 270.32(b)(2). NMED Ex. 1 at 68; NMED Ex. 109 at 79.

483. Adherence to sealant manufacturer's specification is necessary to ensuring the proper function of secondary containment systems. NMED Ex. 109 at 79-80.

484. The Department proposes to amend Proposed Permit Section 3.7.1, Paragraph 4, as set forth in NMED Exhibit 230, to address the Applicants' objections. Bearzi Rebuttal Test. Tr. vol. 15, p. 4093, line 7 to p. 4095, line 1; NMED Ex. 230.

485. The Applicants have agreed to the amendment of Proposed Permit Section 3.7.1, Paragraph 4, as set forth in NMED Exhibit 230. Bearzi Rebuttal Test. Tr. vol. 15, p. 4095, lines 2-17.

486. Section 3.7.1, Paragraph 5 of the Proposed Permit requires the Permittees to maintain, for any flexible liner used for secondary containment installed after July 1, 2010, documentation in the facility Operating Record that a flexible liner that constitutes a portion of a

secondary containment system was installed and maintained based on the manufacturer's recommendations. This provision is based on 40 C.F.R. §§ 264.175(b)(1) and 270.32(b)(2). NMED Ex. 1 at 68-69; NMED Ex. 109 at 80-81.

487. NMED Ex. 1 at 93; NMED Ex. 128 at 9. specification is important to ensure the proper function of secondary containment systems using a flexible liner. A certification of proper installation and maintenance will demonstrate compliance. NMED Ex. 109 at 81.

488. Section 3.7.1, Paragraph 6 of the Proposed Permit requires the Permittees to repair a damaged secondary containment system within 15 days of identification of the problem. The Permittees must record the damage and its associated repair in the facility inspection logs. This provision is based on 40 C.F.R. §§ 264.15(c), 264.175(b)(1), and 270.32(b)(2). NMED Ex. 1 at 69; NMED Ex. 109 at 82.

489. Section 3.7.1, Paragraph 7 of the Proposed Permit requires the Permittees to ensure that the number of containers stored on a pallet does not exceed the design capacity of the pallet. This provision is based on 40 C.F.R. §§ 264.31, 264.175(b)(3), and 270.32(b)(2). NMED Ex. 1 at 69; NMED Ex. 109 at 82-83.

490. Section 3.7.1, Paragraph 8 of the Proposed Permit requires the Permittees to ensure that all metal secondary containment pallets are treated with chemically-resistant urethane. This provision is based on 40 C.F.R. §§ 264.31, 264.175(b)(1), and 270.32(b)(2). NMED Ex. 1 at 69; NMED Ex. 109 at 83.

b. Containers without Free Liquids

491. Section 3.7.2, Paragraph 1 of the Proposed Permit requires the Permittees to ensure that container storage areas that will not store free liquids to be sloped or otherwise designed to drain liquids resulting from precipitation and that containers are elevated to protect

them from contact with liquids. This provision is based on 40 C.F.R. § 264.175(c)(1) and (2). NMED Ex. 1 at 69; NMED Ex. 109 at 83-84.

492. Section 3.7.2, Paragraph 2 of the Proposed Permit requires the Permittees to comply with the secondary containment requirements of the permit for container storage areas that will store wastes having waste codes that indicate the presence of dioxins and furans. This provision is based on 40 C.F.R. § 264.175(d). NMED Ex. 1 at 69; NMED Ex. 109 at 84.

493. Section 3.7.2, Paragraph 3 of the Proposed Permit requires the Permittees to ensure that only non-liquid wastes are stored at container storage areas not authorized to store wastes containing free liquids. This provision is based on 40 C.F.R. §§ 264.175(c) and 270.32(b)(2). NMED Ex. 1 at 69; NMED Ex. 109 at 84.

8. *Section 3.8 Inspection Schedules and Procedures*

494. Section 3.8 of the Proposed Permit (Inspection Schedules and Procedures) addresses inspections of container storage units. NMED Ex. 1 at 69-70.

495. Section 3.8, Paragraph 1 of the Proposed Permit requires the Permittees to inspect container storage units weekly for evidence of leaks or deterioration. This provision is based on 40 C.F.R. § 264.174. NMED Ex. 1 at 69; NMED Ex. 109 at 85.

496. Section 3.8, Paragraph 2 of the Proposed Permit requires the Permittees to store containers so that they can be inspected for leaks, corrosion, and deterioration, and so that labels may be read without moving the container. This provision is based on 40 C.F.R. §§ 264.174, 262.34(a)(2), and 270.32(b)(2). NMED Ex. 1 at 70; NMED Ex. 109 at 85.

9. *Section 3.9 Volatile Organic Air Emissions*

497. Section 3.9 of the Proposed Permit (Volatile Organic Air Emissions) requires the Permittees to control emissions of volatile organic compounds from containers based on the

regulations. This provision is based on 40 C.F.R. Part 264, Subpart CC. NMED Ex. 1 at 70; NMED Ex. 109 at 86-88.

10. Section 3.10 TA-3 Container Storage Requirements

498. Section 3.10 of the Proposed Permit (TA-3 Container Storage Requirements) addresses storage of containers at Technical Area 3. NMED Ex. 1 at 71.

499. Section 3.10.1 of the Proposed Permit (General Operating Conditions) requires the Permittees to store hazardous or mixed waste at TA-3 only in three specified rooms in, Rooms 9010, 9020, and 9030 in Building 29. This provision is based on 40 C.F.R. § 270.32(b)(1). NMED Ex. 1 at 71; NMED Ex. 109 at 88.

500. Section 3.10.2 of the Proposed Permit (Secondary Containment) requires the Permittees to paint the floors of the container storage units at TA-3 with an epoxy sealant and to maintain the sealant. This provision is based on 40 C.F.R. § 264.175(b)(1). NMED Ex. 1 at 71; NMED Ex. 109 at 88.

11. Section 3.11 TA-50 Container Storage Requirements

501. Section 3.11 of the Proposed Permit (TA-50 Container Storage Requirements) addresses storage of containers at Technical Area 50. NMED Ex. 1 at 71.

502. Section 3.11.1 of the Proposed Permit (General Operating Conditions) requires the Permittees to store hazardous or mixed waste at TA-50 only in two specified rooms, Rooms 102 and 103 in Building 69, and in an outdoor storage area adjacent to Building 69 comprised of an asphalt pad and transportainer units. This provision also prohibits the Permittees from storing ignitable waste inside glove boxes. The provision requires the Permittees to maintain a fire access lane between the permitted units. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 71; NMED Ex. 109 at 89-90.

503. Section 3.11.2 of the Proposed Permit (Preventing Hazards in Loading/Unloading) prohibits the Permittees from loading or unloading hazardous waste at TA-50 during precipitation events. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 71; NMED Ex. 109 at 90.

504. Section 3.11.3 of the Proposed Permit (Preventing Run-on) requires the Permittees to prevent surface water run-on to the container storage units at TA-50. This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 71; NMED Ex. 109 at 90-91.

12. Section 3.12 TA-54 Container Storage Requirements

505. Section 3.12 of the Proposed Permit (TA-54 Container Storage Requirements) addresses storage of containers at Technical Area 54. NMED Ex. 1 at 72.

506. Section 3.12.1 of the Proposed Permit (General Operating Conditions) requires the Permittees to store hazardous or mixed waste at TA-54 only at the permitted unit at Area L, the nine permitted units at Area G, and the four permitted units at TA-54 West, identified in Permit Attachment A. This provision is based on 40 C.F.R. § 270.32(b)(1). NMED Ex. 1 at 72; NMED Ex. 109 at 89-90.

507. Section 3.12.1 of the Proposed Permit requires the Permittees to evacuate all liquids above the high-density polyethylene (HDPE) liner at TA-54 Area G, Dome 224 within 24 hours of detection. The provision also requires the Permittees to conduct a chemical analysis of the liquid. The provision requires the removal and the results of the analysis to be documented in the facility operating record. This provision is based on 40 C.F.R. §§ 264.31, 264.175(b)(5), and 270.32(b)(2). NMED Ex. 1 at 72; NMED Ex. 109 at 91.

508. The 24-hour time limit to remove liquids will proscribe the Applicants' current practice of allowing liquids to remain in secondary containment for long periods of time. NMED Ex. 109 at 92; NMED Ex. 120.

509. The 24-hour time limit to remove liquids will prevent potentially large volumes of accumulated liquids in secondary containment basins from escaping to the environment. NMED Ex. 109 at 92.

510. Department inspection of TA-54 Area G, Dome 224 in February 2005 revealed the existence of standing fluid in the sump reaching the top of the liner. NMED Ex. 109 at 92; NMED Ex. 120.

511. Section 3.12.1 of the Proposed Permit requires the Permittees to place all containers storing hazardous waste with free liquids at TA-54 Area G and Area L on containment pallets, except wastes stored in those specified storage areas that have engineered secondary containment systems. This provision is based on 40 C.F.R. §§ 264.175, and 270.32(b)(2). NMED Ex. 1 at 72; NMED Ex. 109 at 92-93, 94.

512. Section 3.12.1 of the Proposed Permit requires the Permittees to inspect the fire suppression system firewater holding tank at Area L, Dome 215 monthly. The provision also requires the Permittees to characterize and remove any liquids around the tank within three days. The provision requires the inspections, and any removal and the results of the analysis, to be documented in the facility operating record. This provision is based on 40 C.F.R. §§ 264.31, and 270.32(b)(2). NMED Ex. 1 at 72; NMED Ex. 109 at 93.

513. On December 2, 2006, a Dome 215 fire suppression line froze and ruptured, releasing 43,000 gallons of water that flowed the length of the Dome, entered a drain line, and flowed into a 13,000 gallon holding tank. At the time the holding tank held approximately 3000

gallons of water contaminated with tritium. The holding tank overflowed, releasing 33,000 gallons of water to the environment. The source of the tritium in the water is not known. NMED Ex. 109 at 93; AR 31490.

514. Section 3.12.1 of the Proposed Permit authorizes the Permittees to store mixed transuranic wastes in sealed NRC certified Type B shipping containers at the TA-54-West Outdoor permitted unit without secondary containment and weather protection. NMED Ex. 1 at 72; NMED Ex. 109 at 94.

515. Section 3.12.1 of the Proposed Permit specifies the type of waste containers that may be used at TA-54 West without secondary containment. These containers are “TRUPACT-II” shipping containers that have been loaded to ship transuranic waste to WIPP. These containers have sufficient integrity to make secondary containment and weather protection unnecessary. Moreover, waste prepared for transportation to WIPP must contain no more than 1 percent free liquids. NMED Ex. 109 at 94-95.

516. Section 3.12.2 of the Proposed Permit (Preventing Run-on and Run-off) requires the Permittees to repair and maintain the curbs used to prevent run-on and run-off into and from the permitted units at TA-54 West, Domes 153 and 283, Storage Shed 8, and TA-54-33. This provision also require the Permittees to maintain concrete pads to prevent run-on or run-off. This provision is based on 40 C.F.R. §§ 264.175(b)(4), and 270.32(b)(2). NMED Ex. 1 at 73; NMED Ex. 109 at 95.

517. Section 3.12.3 of the Proposed Permit (Secondary Containment) requires the Permittees to treat the concrete sumps at TA-54-32; the concrete berms and base of the concrete pads at TA 54-35, TA-54-36, and TA-54-58; the concrete floor and curbs at TA-54-39; and the interior and concrete sump of storage sheds 144, 145, 146, and 177 with epoxy sealant. This

provision also requires the Permittees to maintain the coatings. This provision is based on 40 C.F.R. §§ 264.175, and 270.32(b)(2). NMED Ex. 1 at 73; NMED Ex. 109 at 95.

518. Section 3.12.3.7 of the Proposed Permit (Dome 224) requires the Permittees to store all waste containers in Dome 224 holding free liquids on secondary containment pallets. This provision is based on 40 C.F.R. §§ 264.175, and 270.32(b)(2). NMED Ex. 1 at 73; NMED Ex. 109 at 96.

13. Section 3.13 TA-55 Container Storage Requirements

519. Section 3.13 of the Proposed Permit (TA-55 Container Storage Requirements), which contains only one substantive provision, addresses storage of containers at Technical Area 55. NMED Ex. 1 at 75.

520. Section 3.13.1 of the Proposed Permit (General Operating Conditions) requires the Permittees to store hazardous or mixed waste at TA-55 only at the permitted units B45, B40, B05, K13, the vault located at TA-55-4, TA-55-185, and the outdoor container storage pad located northwest of TA-55-4. This provision is based on 40 C.F.R. § 270.32(b)(1). NMED Ex. 1 at 75; NMED Ex. 109 at 96.

E. PART 4 OF THE PROPOSED PERMIT

521. Part 4 of the Proposed Permit (Storage in Tanks and Treatment by Stabilization) governs the storage and treatment of hazardous waste in tanks. Part 4 is based largely on 40 C.F.R. Part 264, Subpart J, which it incorporates by reference, and on 40 C.F.R. Part 264, Subpart X, which it also incorporates by reference. NMED Ex. 1 at 77; NMED Ex. 109 at 96-97.

522. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Part 4 of the Proposed Permit in its entirety. Second Stip.

523. The Applicants stipulate that they agree to the terms of Part 4 of the Proposed Permit, except Section 4.6. Second Stip. Ex. 2.

1. Section 4.1 General Conditions

524. Section 4.1 of the Proposed Permit (General Operating Conditions), Paragraph 1, requires the Permittees to comply with the regulations at 40 C.F.R. Part 264, Subpart J for the storage of mixed waste in tanks, and the regulations at 40 C.F.R. Part 264, Subpart X for the treatment of mixed waste in tanks. NMED Ex. 1 at 65; NMED Ex. 109 at 97.

525. Section 4.1, Paragraph 2, of the Proposed Permit requires the Permittees to maintain and operate the tank storage and stabilization units as specified in Proposed Permit Attachment A (Technical Area Specific Unit Descriptions). Proposed permit Attachment A, Sections A.5.8 and A.5.9 contains information from the Applicants' September 2003 application regarding the design, construction, materials, and operation of the units. NMED Ex. 1 at 65; NMED Ex. 109 at 97-98; *see* NMED Ex. 5 §§ H.1 and I.1.

526. Section 4.1, Paragraph 3, of the Proposed Permit requires the Permittees to store hazardous waste only in designated storage tank systems identified in Proposed Permit Attachment J (Hazardous Waste Management Units), and to store no more waste than the maximum capacity of a given storage area. NMED Ex. 1 at 77; NMED Ex. 109 at 98.

527. Section 4.1, Paragraph 4 of the Proposed Permit requires the Permittees to store and treat in tank systems only those hazardous wastes identified in Proposed Permit Attachment B (Part A Application). NMED Ex. 1 at 77; NMED Ex. 109 at 98.

528. Section 4.1, Paragraph 5 of the Proposed Permit requires the Permittees to ensure that mixed wastes or treatment reagents are not placed in the storage tank or stabilization units if they could cause the units, their ancillary equipment, or the associated containment system to rupture, leak, corrode, or otherwise fail. This provision is based on 40 C.F.R. §§ 264.194(a) and 264.601. NMED Ex. 1 at 77; NMED Ex. 109 at 98.

2. Section 4.2 Existing Tank System Integrity

529. Section 4.2 of the Proposed Permit (Existing Tank System Integrity) requires the Permittees to maintain in the facility operating record the written integrity assessments of all tank unit systems. The integrity assessments, which are part of the Applicants' September 2005 permit application, contain detailed descriptions of the tank system components, their materials, and the testing and evaluation that was performed on each component. This provision is based on 40 C.F.R. §§ 264.191 and 270.32(b)(2). NMED Ex. 1 at 77; NMED Ex. 109 at 98-99; *see* NMED Ex. 5.

3. Section 4.3 Replacement Tank System and Stabilization Unit Components

530. Section 4.3 of the Proposed Permit (Replacement Tank System and Stabilization Unit Components), Paragraph 1, requires the Permittees to repair the tank system and stabilization unit based on the regulations, or to close the unit. This provision is based on 40 C.F.R. §§ 264.196(e)(2), (3), and (4) and 264.197. NMED Ex. 1 at 78; NMED Ex. 109 at 99.

531. Section 4.3, Paragraph 2 of the Proposed Permit requires the Permittees to ensure that proper handling procedures are followed during the replacement of tank unit systems and stabilization unit ancillary equipment to prevent damage to the units, their components, or any ancillary equipment. This provision is based on 40 C.F.R. §§ 264.192(b), 264.601, and 270.32(b)(2). NMED Ex. 1 at 78; NMED Ex. 109 at 99-100.

532. Section 4.3, Paragraph 3 of the Proposed Permit requires the Permittees to ensure that, prior to replacing a portion of the tank or stabilization unit systems, a registered engineer trained and experienced in the proper installation of tank systems or components inspect the system. This provision is based on 40 C.F.R. §§ 264.192(b), 264.601, and 270.32(b)(2). NMED Ex. 1 at 78; NMED Ex. 109 at 100.

533. Section 4.3, Paragraph 4 of the Proposed Permit requires the Permittees, if they repair the storage tank unit or the stabilization systems, to certify that the system can handle mixed wastes without a release for the intended life of the system. This provision is based on 40 C.F.R. §§ 264.196(f) and 264.601. NMED Ex. 1 at 78; NMED Ex. 109 at 100.

534. Section 4.3, Paragraph 5 of the Proposed Permit requires the Permittees to test replacement tanks, their ancillary equipment, and stabilization unit ancillary equipment for tightness prior to being placed into use. The provision also requires that if the such tank or equipment is not tight, the Permittees must make all repairs necessary to remedy the leaks in the system before the system is placed into use. This provision is based on 40 C.F.R. §§ 264.192(d) and 264.601. NMED Ex. 1 at 78; NMED Ex. 109 at 100.

535. Section 4.3, Paragraph 6 of the Proposed Permit requires the Permittees to place in the facility operating record written statements certifying that the tank systems were properly designed and installed, and that any repairs were properly performed. This provision is based on 40 C.F.R. § 264.192(g). NMED Ex. 1 at 78; NMED Ex. 109 at 101.

4. Section 4.4 Tank Systems and Stabilization Unit Containment

536. Section 4.4 of the Proposed Permit (Tank Systems and Stabilization Unit Containment), Paragraph 1, requires the Permittees to ensure that tank and stabilization units

have an associated secondary containment system. This provision is based on 40 C.F.R. §§ 264.193 and 264.601. NMED Ex. 1 at 78-79; NMED Ex. 109 at 101.

537. Section 4.4, Paragraph 2 of the Proposed Permit requires the Permittees to use appropriate controls and practices to prevent spills and overflows from the storage tank unit, the stabilization unit, or their associated containment system. This provision is based on 40 C.F.R. §§ 264.194(b) and 264.601. NMED Ex. 1 at 79; NMED Ex. 109 at 101.

538. Section 4.4, Paragraph 3 of the Proposed Permit requires the Permittees to remove spilled, leaked, or otherwise accumulated liquids from the secondary containment system within 24 hours of detection. This provision is based on 40 C.F.R. § 264.193(c)(4). NMED Ex. 1 at 79; NMED Ex. 109 at 101-02.

539. Section 4.4, Paragraph 4 of the Proposed Permit requires the Permittees to install and maintain secondary containment systems comprised of floor, wall, or joint sealants based on the sealant manufacturer's recommendations. The provision also requires the Permittees to document that they have done so in the facility operating record. This provision is based on 40 C.F.R. §§ 264.193 and 270.32(b)(2). NMED Ex. 1 at 79; NMED Ex. 109 at 102.

540. Section 4.4, Paragraph 5 of the Proposed Permit requires the Permittees to re-seal, within 90 days of the effective date of the permit, secondary containment systems utilizing sealants existing at the time of this permit's issuance but not having sealant manufacturer's recommendations or a certification statement. This provision is based on 40 C.F.R. §§ 264.193 and 270.32(b)(2). NMED Ex. 1 at 79; NMED Ex. 109 at 102-03.

541. Section 4.4, Paragraph 6 of the Proposed Permit requires the Permittees to ensure that all tank and stabilization unit ancillary equipment have secondary containment. The provision also requires the Permittees to inspect above ground waste piping, including welded

flanges, joints, and connections, for leaks each operating day. This provision is based on 40 C.F.R. §§ 264.193(f), 264.601, and 270.32(b)(2). NMED Ex. 1 at 79; NMED Ex. 109 at 103.

542. Section 4.4, Paragraph 7 of the Proposed Permit requires the Permittees immediately to remove from service any storage tank unit, stabilization unit, secondary containment system, or portion of these units or systems, from which there has been a leak or spill or which is otherwise unfit for use. This provision is based on 40 C.F.R. §§ 264.196 and 264.601. NMED Ex. 1 at 79; NMED Ex. 109 at 103.

543. Section 4.4, Paragraph 8 of the Proposed Permit requires the Permittees to report to the Department any release to the environment of mixed waste from a storage tank or stabilization unit within 24 hours of its detection. The provision also requires the Permittees to submit to the Department, within 30 days of detection, a written report containing the information specified in the regulations at 40 C.F.R. § 264.196(d)(3). This provision is based on 40 C.F.R. §§ 264.196(d), 264.601, and 270.32(b)(2). NMED Ex. 1 at 80; NMED Ex. 109 at 104.

544. Section 4.4, Paragraph 9 of the Proposed Permit requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed Permit Section 1.13 of the written report containing the information specified in 40 C.F.R. § 264.196(d)(3). This provision is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 80; NMED Ex. 3 at 32-33; Bearzi Test. Tr. vol. 6, p. 1618, line 22 to p. 1620, line 9.

5. Section 4.5 Ignitable, Reactive, or Incompatible Wastes

545. Section 4.5 of the Proposed Permit (Ignitable, Reactive, or Incompatible Wastes) prohibits the Permittees from managing ignitable or reactive wastes in the mixed waste storage tank and stabilization units. The provision also prohibits the Permittees from placing incompatible wastes or other materials in the mixed waste storage tank and stabilization units.

This provision is based on 40 C.F.R. §§ 264.199 and 264.601. NMED Ex. 1 at 80; NMED Ex. 109 at 104.

6. Section 4.6 Radioactive Liquid Waste Treatment Facility

546. Section 4.6 of the Proposed Permit (Radioactive Liquid Waste Treatment Facility) requires the Permittees to discharge all treated wastewater from the TA-50 Radioactive Liquid Waste Treatment Facility (“Treatment Facility”) through the outfall permitted under section 402 of the federal Clean Water Act, or as otherwise based on the terms of an applicable Clean Water Act permit that regulates the treatment and use of wastewater. Section 4.6 further provides that if the Permittees intentionally discharge through a location other than the permitted outfall, they will fail to comply with this requirement, and as a consequence the wastewater treatment unit exemption under 40 C.F.R. § 264.1(g)(6) will no longer apply to the Treatment Facility. The provisions also prohibits the Permittees from accepting listed hazardous wastes as specified at 40 C.F.R. part 261, subpart D at the Treatment Facility. This provision is based on 40 C.F.R. § 264.1(g)(6). NMED Ex. 1 at 80; NMED Ex. 3 at 37-38.

547. The Treatment Facility is located at TA-50. NMED Ex. 3 at 37.

548. The Treatment Facility discharges effluent through an outfall (discharge point) into Mortandad Canyon that is regulated by a permit issued by EPA under section 402 of the Clean Water Act (“NPDES² Permit”). NMED Ex. 3 at 38; Applicants Ex. L at 5; Grieggs Test. Tr. vol. 3, p. 577, lines 14-25.

549. The Treatment Facility is a wastewater treatment unit. NMED Ex. 3 at 38.

² NPDES stands for National Pollutant Discharge Elimination System, a permitting program under section 402 of the Clean Water Act, 33 U.S.C. § 1342.

550. The Treatment Facility treats or stores an influent wastewater that is a hazardous waste. Grieggs Test. Tr. vol. 3, p. 578, lines 5-7.

551. The Treatment Facility is a tank or a tank system. Grieggs Test. Tr. vol. 2, p. 459, lines 15-17; Grieggs Test. Tr. vol. 3, p. 578, lines 11-13.

552. The regulations at 40 C.F.R. § 264.1(g)(6) exempt a wastewater treatment unit, defined as a device which is part of a wastewater treatment facility that is subject to regulation under section 402 of the Clean Water Act; which receives and treats or stores an influent wastewater that is a hazardous waste under the regulations; and which meets the definition of tank or tank system under the regulations. NMED Ex. 3 at 37; *see* 40 C.F.R. §§ 260.10 and 264.1(g)(6).

553. The purpose of the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6) is to avoid duplicative regulation of a single wastewater treatment facility under both the Hazardous Waste Act (or RCRA) and Clean Water Act. NMED Ex. 3 at 38; Applicants Ex. L at 5.

554. In an interpretive letter dated June 1, 1990, EPA stated “The underlying assumption used in justifying the wastewater treatment unit exemption [at 40 C.F.R. § 264.1(g)(6)] was that tanks used to handle hazardous wastewaters at these facilities would be provided with EPA oversight under the Clean Water Act, thereby ensuring no significant decrease in environmental control afforded at these facilities.” NMED Ex. 3 at 38; *see* NMED Ex. 77.

555. EPA construes the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6) to require that the wastewater treatment unit discharge treated wastewater exclusively through the Clean Water Act-regulated outfall, and that diversion to other points of

discharge voids the exemption. NMED Ex. 3 at 38-39; *see* NMED Ex. 78; NMED Ex. 79; NMED Ex. 80.

556. The Department agrees with the EPA interpretation of the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6) as set forth above. NMED Ex. 3 at 38; *see* Finding #465.

557. On at least 5 occasions, the Applicants have diverted treated wastewater from the Treatment Facility into tanks (or impoundments) for evaporation at TA-53 rather than through the outfall into Mortandad Canyon. NMED Ex. 3 at 39; NMED Ex. 81; Grieggs Test. Tr. vol. 3, p. 584, lines 3-4.

558. By letter dated January 17, 2008, the Department determined that because the Applicants had diverted treated wastewater from the Treatment Facility into the evaporation tanks, the Treatment Facility was no longer subject to the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6). The letter directed the Applicants to submit a hazardous waste permit application for the Treatment Facility. NMED Ex. 220; *see also* Grieggs Test. Tr. vol. 2, p. 474, line 3 to p. 476, line 13.

559. By letter dated February 21, 2008, the Applicants disputed the Department's determination that the Treatment Facility was no longer subject to the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6). NMED Ex. 81.

560. The Department drafted Section 4.5 of the Proposed Permit as a compromise between the Department's position that the Treatment Facility is no longer subject to the wastewater treatment unit exemption at 40 C.F.R. § 264.1(g)(6) and the Applicants' contrary position. Bearzi Test. Tr. vol. 8, p. 2024, lines 17-22, and p. 2027, lines 3-8.

561. The evaporation tanks are located at TA-53. NMED Ex. 3 at 39.

562. The evaporation tanks are not connected to the Treatment Facility by pipes or other conduit or infrastructure. The effluent must be transported from the Treatment Facility to the evaporation tanks by truck. Grieggs Test. Tr. vol. 14, p. 3987, lines 6-10.

563. The evaporation tanks are located more than one mile away from the Treatment Facility. *See* AR 32080.

564. The evaporation tanks are not part of the Treatment Facility. *See* Findings #471 to #473.

565. Evaporation of effluent from the Treatment Facility results in the release of tritium into the environment. Grieggs Test. Tr. vol. 3, p. 601, lines 4-6.

566. The evaporation tanks are not listed in the NPDES Permit. Grieggs Test. Tr. vol. 3, p. 605, lines 13-18; *see* Applicants Ex. M.

567. There are no operating conditions placed on the evaporation tanks in the NPDES Permit. Grieggs Test. Tr. vol. 3, p. 606, lines 10-22.

568. The evaporation tanks at TA-53 are not regulated under the Clean Water Act.

569. There is no limit on the volume of effluent wastewater that can be discharged into the Evaporation Tanks in the NPDES Permit. Grieggs Test. Tr. vol. 3, p. 610, lines 16-20.

570. The Applicants have stated to the Department that the Treatment Facility is used only to treat characteristic hazardous waste, and that the Treatment Facility does not accept or receive listed hazardous waste. NMED Ex. 3 at 39; NMED Ex. 81, Enclosure at 1; NMED Ex. 82, Enclosure 1 at 6.

571. If the Treatment Facility were used to treat listed waste, the treated effluent would remain hazardous waste. Bearzi Test. Tr.

F. PARTS 5, 6, 7, AND 8 OF THE PROPOSED PERMIT

572. Part 5 of the Proposed Permit is reserved to address any new and different hazardous waste process units at the Laboratory, so that all process units may be grouped together in the Permit. NMED Ex. 1 at 81; NMED Ex. 3 at 12.

573. Part 6 of the Proposed Permit is reserved to address open burning units, should any be permitted in the future. NMED Ex. 1 at 83; NMED Ex. 3 at 12.

574. Part 7 of the Proposed Permit is reserved to address open detonation units, should any be permitted in the future. NMED Ex. 1 at 85; NMED Ex. 3 at 12.

575. Part 8 of the Proposed Permit is reserved to address other possible units or other issues. NMED Ex. 1 at 87; NMED Ex. 3 at 13.

G. PART 9 OF THE PROPOSED PERMIT

576. Part 9 of the Proposed Permit (Closure) governs the closure of hazardous waste management units at the Laboratory. Part 9 is based largely on 40 C.F.R. §§ 264.110 through 264.116, 264.178, and 264.197, which it incorporates by reference. NMED Ex. 1 at 89; NMED Ex. 3 at 47; NMED Ex. 128 at 4.

577. Nuclear Watch New Mexico stipulates that it agrees to the terms of Part 9 of the Proposed Permit in its entirety. However, it reserves its objections to certain provisions of the Closure Plans (Proposed Permit Attachment G). Second Stip.

578. Natural Resources Defense Council and Southwest Research and Information Center stipulate that they agree to the terms of Part 9 of the Proposed Permit except Section 9.2.2(1). They also reserve their objections to certain provisions of the Closure Plans (Proposed Permit Attachment G). Second Stip.

579. The Applicants stipulate that they agree to the terms of Part 9 of the Proposed Permit, except Sections 9.1.2, 9.1.3, 9.2.2.2, 9.2.2.3, 9.3, 9.4.9, and 9.5, and except for the use of the term “regulated unit” throughout Part 9. They also reserve their objection to certain provisions of the Closure Plans (Proposed Permit Attachment G). Second Stip. Ex. 2.

580. Closure is a process that is initiated by the removal of waste for the purpose of closing a unit and is concluded upon the Department’s approval of certification of closure of that unit. During closure, no hazardous wastes are accepted at a unit, hazardous wastes are completely removed, and all hazardous waste residues are removed or decontaminated from the unit as well as from all structures, components, equipment, and soils at that unit closing. Partial closure of a unit is the closure of a portion the unit, for example, the disassembling of a dome structure, while hazardous waste management operations are still active at that unit. NMED Ex. 128 at 3-4; Cram Test. Tr. p. 2422, line 8 to p. 2423, line 10.

1. Section 9.1 Introduction

581. Section 9.1 of the Proposed Permit (Introduction) requires the Permittees to close permitted storage and treatment units at the Laboratory based on the requirements of 40 C.F.R. §§ 264.110 through 264.116, 264.178, and 264.197; Part 9 of the permit; and the closure plans. NMED Ex. 1 at 89; NMED Ex. 128 at 4-6.

582. The hazardous waste management units covered under this Part 9 of the Proposed Permit can be divided into three categories: 1) so-called “regulated units,” which are landfills no longer in operation; 2) indoor container storage and treatment units; and 3) outdoor container storage and treatment units. NMED Ex. 3 at 47.

a. *Regulated Units*

583. Section 9.1.1 of the Proposed Permit (Regulated Units) prohibits the Permittees from placing hazardous waste or mixed waste in MDA G, MDA H, and MDA L, the so-called “regulated units.” The provision requires the Permittees to close these regulated units based on Part 9 of the permit. NMED Ex. 1 at 89; NMED Ex. 3 at 48; NMED Ex. 128 at 6.

584. The regulations at 40 C.F.R. § 264.90(a)(2) define the term “regulated unit” as “[a] surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 6, 1982.” NMED Ex. 3 at 55.

585. MDA G, MDA H, and MDA L is each in its entirety a waste management unit, specifically a landfill, at which hazardous waste was placed into the ground after July 26, 1982 with no intention of removing it. NMED Ex. 3 at 54-56.

586. The disposal trenches, pits, and shafts at MDA G, MDA H, and MDA L are not lined. NMED Ex. 3 at 55.

587. Hazardous constituents released from the disposal trenches, pits, and shafts at MDA G, MDA H, and MDA L have become comingled in the subsurface. NMED Ex. 3 at 56; NMED Ex. 132 at 8; NMED Ex. 86, Plates 6.3-1 through 6.6-2; Baciagalupa Test. Tr. vol. 3, p. 757, lines 2-6.

588. EPA has described a waste management unit for purposes of the regulations as follows:

A waste management unit is a contiguous area of land on or in which waste is placed. A waste management unit is the largest area in which there is a significant likelihood of mixing of waste constituents in the same area. . . . Today’s regulations establish specific requirements for surface impoundments, waste piles, land treatment units, and landfills. Generally, each of these four terms is synonymous with the concept of a waste management unit. . . . Landfills may, however, present an exception to this general rule. Some landfills are designed as a series of adjacent trenches that are separately lined. In this situation, the term

“landfill” can refer to the entire set of trenches. Yet, each individual trench is a separate waste management unit under today’s regulations.

NMED Ex. 3 at 56; 47 Fed. Reg. 32274, 32289 (July 26, 1982).

589. In their original permit application in 1980, and for several years thereafter, the Applicants referred to MDA G, MDA H, and MDA L as individual waste management units. NMED Ex. 3 at 57-59; NMED Ex. 222; AR 16444.

590. On November 19, 1980, DOE submitted a Part A permit application to obtain interim status to operate pending final action on the Laboratory permit. The application was accompanied by a cover letter, dated November 19, 1980, entitled “Hazardous Waste Permit Application.” The cover letter stated “The size of the disposal area, 61 acres, does not readily lend itself to reduction of a drawing the size specified in the permit applications.” The 61-acre area referred to the active portion of Area G. It did not reference individual trenches, pits, or shafts. NMED Ex. 222 at 2; Baciagalupa Test. Tr. vol. 3, p. 758, line 16 to p. 759, line 3, and p. 760, lines 1-5.

591. The November 19, 1980 cover letter accompanying the Part A permit application referenced a map of “Area L of TA-54 where most chemical waste disposal takes place.” It did not reference individual trenches, pits, or shafts. NMED Ex. 222 at 3; Baciagalupa Test. Tr. vol. 3, p. 759, lines 4-8, and p. 760, lines 1-5.

592. The November 19, 1980 cover letter accompanying the Part A permit application referenced a map of “Area G, where the disposal of radioactive mixed stream and PCBs takes place.” It did not reference individual trenches, pits, or shafts. NMED Ex. 222 at 3; Baciagalupa Test. Tr. vol. 3, p. 759, lines 9-13, and p. 760, lines 1-5.

593. The November 19, 1980 cover letter accompanying the Part A permit application stated, “It is our interpretation of RCRA regulations that disposal may occur anywhere at TA-54

and still be part of an existing disposal facility.” The letter did not make any reference to individual trenches, pits, or shafts. NMED Ex. 3 at 57; NMED Ex. 222 at 3; Baciagalupa Test. Tr. vol. 3, p. 760, lines 6-16.

594. The November 19, 1980 Part A permit application included maps that covered MDA G and MDA L. The maps did not distinguish the areas for disposal of hazardous waste from the areas for disposal of radioactive waste. NMED Ex. 222, Figs. 2 and 3, Sheets 1-4; Baciagalupa Test. Tr. vol. 3, p. 760, line 17 to p. 761, line 17.

595. Thus, in the November 19, 1980 Part A permit application DOE sought to obtain interim status for all of TA-54. NMED Ex. 3 at 57.

596. On June 7, 1985, after DOE had decided to close MDA G and MDA L, DOE sent a letter to the Department stating that Area G is 63 acres and would be closed out for RCRA wastes under interim status. A map accompanying the letter depicted 37 acres, including MDA H, as having interim status. NMED Ex. 3 at 58-59; *see* AR 14848.

597. On September 27, 1985, DOE submitted a closure plan for MDA G and MDA L. DOE accepted the obligation to close the entirety of MDA G:

Burial facilities include pits and shafts, all of varying dimensions. Certain radioactive mixed and nonradioactive hazardous chemical wastes have been buried along with the radioactive wastes at Area G. Area G is a waste disposal facility operated under a Resource Conservation and Recovery act (RCRA) Part A permit. A Part B permit is not being sought for this facility and Area G will be closed under interim authority.

NMED Ex. 3 at 59; AR 16444 at 1-1.

598. In the September 27, 1985 closure plan for MDA G and MDA L, DOE further stated:

The active portion of the site comprises a total area of 63 acres. Burial/storage facilities within the area include pits, shafts, trenches, and pads, all of varying dimensions. The facility has only been used for pit and shaft disposal of regulated wastes.

NMED Ex. 3 at 59; AR 16444 at 2-1.

599. In the September 27, 1985 closure plan for MDA G and MDA L, DOE recognized that closure of individual pits and shafts constituted “partial closure.” NMED Ex. 3 at 59; AR 16444 at 4-1.

600. In its correspondence with the Applicants, the Department has consistently taken the position that MDA G, MDA H, and MDA L are each regulated units, subject to closure in their entirety. NMED Ex. 3 at 57-59.

b. *Indoor and Outdoor Units*

601. Section 9.1.2 of the Proposed Permit (Indoor Units) requires the Permittees to close the “indoor units,” meaning buildings, structures, domes, transportainers, canopies, trailers, permacons, and rooms within buildings, based on Part 9 of the permit. NMED Ex. 1 at 89; NMED Ex. 128 at 6.

602. Section 9.1.3 of the Proposed Permit (Outdoor Units) requires the Permittees to close the “outdoor units,” meaning concrete or asphalt pads, including buildings or structures thereon, based on Part 9 of the permit. NMED Ex. 1 at 89-90; NMED Ex. 128 at 7.

603. The Applicants proposed the terminology distinguishing indoor and outdoor units in their permit application. NMED Ex. 128 at 6; Cram Test. Tr. vol. 9, p. 2425, lines 2-8.

2. *Section 9.2 Closure Performance Standards*

604. Section 9.2 of the Proposed Permit (Closure Performance Standards) sets forth the performance standards for closure of the regulated units, indoor units, and outdoor units, respectively. The provision includes standards for removal of all hazardous waste and hazardous constituents from a hazardous waste unit, or “clean closure,” and standards for leaving waste in place at a unit where clean closure is not feasible. NMED Ex. 1 at 90-92.

a. *Clean Closure*

605. Section 9.2.1 of the Proposed Permit (Clean Closure) provides, in Paragraph 1, that to achieve “clean closure,” the Permittees will be required to remove all hazardous waste residues and hazardous constituents. This requirement applies to all hazardous units, but particularly indoor units and structures on outdoor units at the Laboratory. This provision is based on 40 C.F.R. § 264.112(b)(4). NMED Ex. 1 at 90; NMED Ex. 3 at 48.

606. Section 9.2.1 of the Proposed Permit provides, in Paragraph 2, that to achieve “clean closure,” the Permittees will be required to ensure that contaminated media do not contain concentrations of hazardous constituents greater than the cleanup levels established under Proposed Permit Sections 11.4 and 11.5. This requirement applies to all hazardous units, but particularly outdoor units. The provision also requires the Permittees to clean up soil contamination sufficiently to allow residential use. The provision also requires the Permittees to ensure that there is be no potential for groundwater contamination. This provision is based on 40 C.F.R. § 264.112(b)(4). NMED Ex. 1 at 90; NMED Ex. 3 at 49.

b. *Closure with Waste Left in Place*

607. Section 9.2.2 of the Proposed Permit (Inability to Achieve Clean Closure Performance Standards) provides that if the Permittees are unable to achieve clean closure, they must control hazardous waste residues, hazardous constituents, and contaminated media so that they do not exceed specified risk levels, minimize the need for further maintenance, and control, minimize, or eliminate the escape of hazardous waste or hazardous constituents. This provision is based on 40 C.F.R. § 264.111. NMED Ex. 1 at 90-91; NMED Ex. 3 at 50.

608. Section 9.2.2.1 of the Proposed Permit provides that if the Permittees intend to close an indoor unit leaving waste in place, they must notify the Department and demonstrate the

inability to clean close, and they must submit to the Department a proposed permit modification. The provision also requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed Permit Section 1.13 of the notice. This provision is based on 40 C.F.R. § 264.112. NMED Ex. 1 at 91; NMED Ex. 3 at 50.

609. To close a hazardous waste unit leaving waste in place, the Permittees must demonstrate to the Department that all appropriate measures were taken to remove or decontaminate hazardous waste residues, but such measures were not successful in attaining clean closure standards. NMED Ex. 3 at 50.

610. Section 9.2.2.2 of the Proposed Permit provides that if the Permittees intend to close an outdoor unit that is co-located with a regulated unit leaving waste in place, they may petition the Department for alternative closure requirements set forth in an enforceable document. The provision also requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed Permit Section 1.13 of the petition. This provision is based on 40 C.F.R. § 264.110(c). NMED Ex. 1 at 91; NMED Ex. 3 at 51.

611. The regulations at 40 C.F.R. § 264.110(c) provide that the closure requirements of 40 C.F.R. part 264, subpart G applicable to a regulated unit may be replaced with alternative requirements set out in an enforceable document if the regulated unit is situated among solid waste management units or areas of concern, a release of hazardous waste or hazardous constituents has occurred, and both the regulated unit and one or more solid waste management units or areas of concern are likely to have contributed to the release; and the alternative requirements will protect human health and the environment and meet the closure performance standards. NMED Ex. 3 at 46.

612. MDA G, MDA H, and MDA L is each a regulated unit. NMED Ex. 3 at 54; *see* Findings of Fact #494 to #495.

613. Various solid waste management units are co-located with MDA G, MDA H, and MDA L. NMED Ex. 3 at 45; *see* NMED Ex. 83; NMED Ex. 84; NMED Ex. 85.

614. There have been releases of hazardous waste and hazardous constituents from solid waste management units and areas of concern within MDA G, MDA H, and MDA L. The releases are mingled; it is not possible to distinguish the source of the releases as being from the regulated units or one or more solid waste management units or areas of concern. NMED Ex. 3 at 45; NMED Ex. 132 at 8; *see* NMED Ex. 83, NMED Ex. 84, NMED Ex. 85; NMED Ex. 86.

615. Several outdoor units at the Laboratory, such as TA-54, Area G, Pad 9, are situated among MDA G and MDA L. NMED Ex. 3 at 51.

616. The regulations at 40 C.F.R. §§ 270.1(c)(7) and 271.16(e) define “enforceable document” as, among other things, an order issued by an authorized state under authority that includes the authority to sue in courts to enjoin any threatened or continuing violation of the requirements of such order, as well as the authority to compel compliance with emergency response measures to protect human health and the environment, and the authority to assess or sue in court to recover civil penalties for violation of requirements in the order. NMED Ex. 3 at 44; Bearzi Test. Tr., Vol. 6, page 1661, lines 6 to page 1662, line 20.

617. The Department can enforce the requirements of the March 1, 2005 Consent Order; the Department can sue in court to compel compliance with the requirements of the Consent Order, and the Department can assess and sue in court to recover civil penalties for violation of those requirements. NMED Ex. 26 §§ III.G, III.U.

618. The Department has assessed and recovered civil penalties for violations of the requirements of the March 1, 2005 Consent Order. NMED Ex. 3 at 22-25; *see* NMED Exs. 36-70.

619. The March 1, 2005 Consent Order is an enforceable document. NMED Ex. 3 at 46.

620. The requirements of the March 1, 2005 Consent Order will protect human health and the environment and meet the closure performance standards. NMED Ex. 3 at 46-47.

621. The public will have an opportunity to comment on the closure requirements for each regulated unit in the Corrective Measures Evaluation (“CME”) Report for the unit, the Corrective Measures Implementation (“CMI”) Plan for the unit, and the permit modification to designate the unit as corrective action completed. Bearzi Test. Tr. vol. 6, p. 1669, line 20 to p. 1671, line 9.

622. The CMI Plan under the March 5, 2005 Consent Order is the equivalent of a closure plan. Bearzi Test. Tr. vol. 6, p. 1670, lines 20-24.

623. There is no provision in the regulations requiring the Department to announce to the public that an enforceable document will be the basis for alternative closure requirements. Bearzi Test. Tr. vol. 10, p. 2697, lines 8-21.

624. Section 9.2.2.3 of the Proposed Permit provides that if the Permittees intend to close an outdoor unit, other than one co-located with a regulated unit, leaving waste in place, they must notify the Department and demonstrate the inability to clean close, and they must submit to the Department a proposed permit modification. The provision also requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed

Permit Section 1.13 of the notice. This provision is based on 40 C.F.R. § 264.112. NMED Ex. 1 at 91; NMED Ex. 3 at 51.

3. Section 9.3 Closure Requirements for Regulated Units

625. Section 9.3 of the Proposed Permit (Closure Requirements for Regulated Units) provides that closure of the regulated units must meet the corrective action requirements of the March 1, 2005 Consent Order. NMED Ex. 1 at 92; NMED Ex. 3 at 47.

4. Section 9.4 Closure Requirements for Indoor and Outdoor Units

626. Section 9.4 of the Proposed Permit (Closure Requirements for Indoor and Outdoor Units) sets forth the specific closure requirements for indoor and outdoor units. NMED Ex. 1 at 92; NMED Ex. 128 at 8.

627. Section 9.4.1 of the Proposed Permit (Closure Schedule) requires the Permittees to notify the Department in writing at least 45 days prior to the date they expect to begin closure of a permitted unit. The section provides that the “beginning of closure” is the initiation of removal of waste for the purpose of closure. The provision also requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed Permit Section 1.13 of the notice. This provision is based on 40 C.F.R. § 264.112(d)(1), which is incorporated into the permit by reference. NMED Ex. 1 at 92; NMED Ex. 128 at 8.

628. Section 9.4.1 of the Proposed Permit further requires the Permittees to begin closure within 30 days after the receipt of the known final volume of hazardous waste. This provision is based on 40 C.F.R. § 264.112(d)(2), which is incorporated into the permit by reference. NMED Ex. 1 at 92; NMED Ex. 128 at 8-9.

629. Section 9.4.1 of the Proposed Permit further requires the Permittees to remove or treat all hazardous waste from the permitted unit within 90 days after the receipt of the known

final volume of hazardous waste. This provision is based on 40 C.F.R. § 264.113(a), which is incorporated into the permit by reference. NMED Ex. 1 at 92; NMED Ex. 128 at 8-9.

630. Section 9.4.1.1 of the Proposed Permit (Time Allowed for Closure) requires the Permittees to complete closure of the permitted unit within 90 days after the receipt of the known final volume of hazardous waste. This provision is based on 40 C.F.R. § 264.113(a). NMED Ex. 1 at 92; NMED Ex. 128 at 8-9.

631. Section 9.4.2 of the Proposed Permit (Removal of Hazardous Waste) requires the Permittees to remove or treat all hazardous waste from the permitted unit within 90 days after the receipt of the known final volume of hazardous waste. This provision is based on 40 C.F.R. § 264.113(a), which is incorporated into the permit by reference. NMED Ex. 1 at 93; NMED Ex. 128 at 9.

632. Section 9.4.3 of the Proposed Permit (Decontamination and Removal) requires the Permittees to decontaminate or remove all structures and related equipment and materials, such as asphalt or concrete pads, as part of closure. This provision is based on 40 C.F.R. §§ 264.112(b)(4) and 264.114. NMED Ex. 1 at 93; NMED Ex. 128 at 9.

633. The requirement to decontaminate or remove all structures, equipment, and materials will ensure that contaminated media, equipment, and other materials associated with the permitted unit are removed and disposed of in a manner that is safe and protective to human health and the environment. NMED Ex. 128 at 9.

634. Section 9.4.3.1 of the Proposed Permit (Decontamination of Surfaces, Structures, and Related Equipment) requires the Permittees to decontaminate by pressure-washing or steam-cleaning the floors, walls, and ceilings, up to a height of 11 feet, of indoor units and structures at outdoor units, as well as related equipment. The provision further requires the Permittees to

perform decontamination procedures at least twice at units that were used to manage volatile organic compounds (“VOC’s”). This provision is based on 40 C.F.R. § 264.114. NMED Ex. 1 at 93; NMED Ex. 128 at 9.

635. The requirement to decontaminate surfaces, structures, and equipment by pressure-washing or steam-cleaning is an effective way to remove hazardous constituents from surfaces, such as like concrete floors, because of the high pressures and temperatures of the water or steam applied. This method is a current practice in the industry. This method follows EPA decontamination guidance. NMED Ex. 128 at 9; *see* NMED Ex. 131.

636. The requirement to pressure wash or steam clean walls and ceilings to a height of 11 feet is based on past container stacking practices. The height of two 55-gallon drums, including two pallets, is approximately eight feet. The Department added an additional three feet above the highest stacked drum, calculating that, if a spill or release from the higher stacked drum occurred it is likely to affect at most three feet above that drum. Where certain sheds have ceilings lower than 11 feet, such as TA-54 Area G, the ceiling must be decontaminated. NMED Ex. 128 at 10.

637. The requirement to perform decontamination procedures at least twice at units that may be contaminated with VOC’s is to ensure that any VOC contamination is completely removed, given the difficulty in detecting the presence of whether VOC’s. NMED Ex. 128 at 11.

638. Section 9.4.3.2 of the Proposed Permit (Removal of Structures, Related Equipment, and Pads) requires the Permittees to physically remove and properly dispose of those structures and equipment at indoor and outdoor units that cannot be decontaminated by pressure washing or steam cleaning. This provision is based on 40 C.F.R. § 264.114. NMED Ex. 1 at 93; NMED Ex. 128 at 11-12.

639. Section 9.4.3.2 of the Proposed Permit further requires the Permittees to close those outdoor units constructed of asphalt by completely removing and disposing of the asphalt pads. This provision is based on 40 C.F.R. § 264.112(b)(4). NMED Ex. 1 at 94; NMED Ex. 128 at 12.

640. The requirement that asphalt pads be completely removed at closure is necessary to allow visual examination of soils beneath the pad to assess the potential need for additional soil sampling. NMED Ex. 128 at 12.

641. The requirement that asphalt pads be removed at closure was originally proposed by the Applicants in their June 2003 permit renewal application, which stated “[i]f the decision is made to not decontaminate the asphaltic concrete . . . it will be totally or partially removed and disposed of appropriately in lieu of decontamination activities.” NMED Ex. 128 at 12; *see* NMED Ex. 5 at F.13.

642. Section 9.4.4 of the Proposed Permit (Decontamination Verification and Soil Sampling) requires the Permittees to verify that indoor and outdoor units have been decontaminated by collecting and analyzing wipe samples taken from surfaces, and soil samples at outdoor units particularly beneath pads. This provision is based on 40 C.F.R. § 264.112(b)(4). NMED Ex. 1 at 94; NMED Ex. 128 at 12.

643. The requirement to collect and analyze soil samples taken from beneath pads at outdoor units is to detect any release of hazardous waste or hazardous constituents from a container on a pad that may have leached through the pad to underlying soils. NMED Ex. 128 at 13.

644. The Department proposes that Proposed Permit Section 9.4.4 be revised to state that wipe, *chip*, and *liquid* sampling, *as appropriate*, shall be employed, since certain closure

plans indicate that chip and liquid samples may be collected. Wipe samples, which are collected from smooth surfaces, and chip samples, which are collected from porous surfaces, such as concrete floors, are collected to test for potential surficial contamination; liquid samples are collected to test for potential contamination in residual liquids, such as those in sumps and drains. NMED Ex. 128 at 12-13; NMED Ex. 130.

645. Section 9.4.5 of the Proposed Permit (Management and Disposal Procedures for Waste Generated During Closure) requires the Permittees to manage and dispose of any waste generated by closure activities in compliance with all federal, state, and local requirements. This provision is based on 40 C.F.R. § 264.114. NMED Ex. 1 at 94-95; NMED Ex. 128 at 13.

646. Section 9.4.6 of the Proposed Permit (Records Review and Structural Assessment) requires the Permittees to conduct a records review and structural assessment for each indoor and outdoor unit prior to closure. Section 9.4.6 further provides that the results of the records review and structural assessment may necessitate a revision of the sampling and analysis plan. This provision is based on 40 C.F.R. § 264.112(b)(5) and (6). NMED Ex. 1 at 94-95; NMED Ex. 128 at 13-15.

647. Section 9.4.6.1 of the Proposed Permit (Records Review) requires the Permittees to review the Facility Operating Record to reevaluate the list of hazardous constituents to be sampled and analyzed for each indoor and outdoor unit at closure. In conducting the review, the Permittees will be required to determine whether any spills or releases, defects, deterioration, damage, or hazards affecting waste containment occurred or developed during the life of the unit. The provision requires the Permittees to complete the review within ten days after waste is removed from the unit. This provision is based on 40 C.F.R. § 264.112(b)(5) and (6). NMED Ex. 1 at 95; NMED Ex. 128 at 14-15.

648. Section 9.4.6.2 of the Proposed Permit (Structural Assessment) requires the Permittees to conduct a structural assessment of each indoor and outdoor unit to evaluate a unit's physical condition at closure. In conducting the assessment, the Permittees will be required to identify any evidence of a release, such as stains, or damage to the flooring or building materials, such as cracks, gaps, or chips. The provision requires the Permittees to complete the assessment within ten days after waste is removed from the unit. This provision is based on 40 C.F.R. § 264.112(b)(5) and (6). NMED Ex. 1 at 95; NMED Ex. 128 at 15-16.

649. The requirement to conduct a structural assessment including a visual inspection is necessary to identify any evidence of a release of a hazardous waste or hazardous constituent, or damage to a unit that might facilitate such a release, so that samples are collected from these locations. NMED Ex. 128 at 15-16.

650. Section 9.4.7 of the Proposed Permit (Closure Plans) requires the Permittees to submit to the Department closure plans for each indoor and outdoor unit describing how the unit will be closed. The provision requires that the closure plans include a Sampling and Analysis Plan for each unit. The closure plans for indoor and outdoor units, which have been submitted, are Proposed Permit Attachment G. This provision is based on 40 C.F.R. § 264.112. NMED Ex. 1 at 96; NMED Ex. 128 at 16.

651. Section 9.4.7.1 of the Proposed Permit (Sampling and Analysis Plans) requires the Permittees to develop a sampling and analysis plan for each indoor and outdoor unit. The provision requires the Permittees, in the plan, to verify that all surfaces, structures, and equipment are decontaminated; and to determine whether a release of hazardous constituents to environmental media has occurred. The provision requires the Sampling and Analysis Plan to include a list of hazardous constituents to be tested; a site plan for verification and soil sampling;

an identification of the type of samples to be collected; a description of sampling methods; a description of analytical methods; and a description of quality assurance and quality control procedures. The provision also specifies in some detail the sampling regime for indoor and outdoor units. This provision is based on 40 C.F.R. § 264.112(b)(4). NMED Ex. 1 at 96-98; NMED Ex. 128 at 16-18.

652. The Department proposes that Proposed Permit Section 9.4.7.1.i be revised by removing “*Wipe*” from the subheading, and adding “wipe or chip samples as appropriate” in the text, since verification sampling can take the form of either sample type. NMED Ex. 128 at 17; *see* NMED Ex. 130.

653. The Department proposes that Proposed Permit Section 9.4.7.1.ii be revised by changing the subheading to Soil Sampling *Requirements* for Outdoor *Storage* Units”; by removing the subheading 9.4.7.1.ii.a “Outdoor Storage Units”; and to revise the first paragraph. NMED Ex. 128 at 18-19; *see* NMED Ex. 130.

654. Section 9.4.8 of the Proposed Permit (Amendments of the Closure Plan) requires the Permittees to submit to the Department a proposed permit modification to amend a closure plan if newly identified hazardous constituents are determined to have been managed at a permitted unit; if new sampling locations are found to be necessary as a result of the records review or the structural assessment; or as otherwise required by the regulations at 40 C.F.R. § 264.112(c)(2). This provision is based on 40 C.F.R. § 264.112(c)(2). NMED Ex. 1 at 98; NMED Ex. 128 at 19.

655. Section 9.4.9 of the Proposed Permit (Variance to Decontamination Verification Standards) allows the Permittees to seek from the Department a variance from the requirement for wipe sampling. NMED Ex. 1 at 99; NMED Ex. 128 at 19.

656. The provision allowing a variance from the requirements for wipe sampling is appropriate because certain building materials contain hazardous constituents that do not derive from solid wastes, such as lead or other heavy metals in the paint on painted surfaces. The variance will allow the Permittees the opportunity to demonstrate to the Department, for example, that the detected lead in a wipe sample derives from the wall paint and not from a release of hazardous waste. NMED Ex. 128 at 19.

5. Section 9.5 Closure Certification Report to the Department

657. Section 9.5 of the Proposed Permit (Closure Certification Report to the Department) requires the Permittees to submit to the Department for review and approval a closure certification report. The provision requires the Permittees to certify in the report that the permitted unit has been closed according to the closure plan. The provision further requires the Permittees, in the report, to describe all activities undertaken during closure. The provision requires the Permittees to submit such a report within 60 days after completion of closure of the permitted unit. NMED Ex. 1 at 99-100; NMED Ex. 128 at 19-20.

6. Closure Plans

658. Attachment G to the Proposed Permit (Closure Plans) is comprised of the closure plans for the indoor and outdoor units. NMED Ex. 1, Attachment G.

659. The Department proposes several revisions to the closure plans. NMED Ex. 128 at 21-24; NMED Ex. 130.

H. PART 10 OF THE PROPOSED PERMIT

660. Part 10 of the Proposed Permit (Post-Closure Care) governs the post-closure care of hazardous waste management units at the Laboratory. Part 10 is based largely on 40 C.F.R.

§§ 264.117 through 264.120, and 264.197, which it incorporates by reference. NMED Ex. 1 at 101; NMED Ex. 3 at 53.

661. Nuclear Watch New Mexico stipulates that it agrees to the terms of Part 10 of the Proposed Permit in its entirety. Second Stip.

662. Natural Resources Defense Council and Southwest Research and Information Center stipulate that they agree to the terms of Part 10 of the Proposed Permit in its entirety. Second Stip.

663. The Applicants stipulate that they agree to the terms of Part 10 of the Proposed Permit, except Section 10.1.2. Second Stip. Ex. 2.

664. Post-closure care begins after closure of a permitted unit is certified complete. NMED Ex. 3 at 53.

1. *Section 10.1 Post-Closure Care*

665. Section 10.1 of the Proposed Permit (Post-Closure Care) requires the Permittees to conduct post-closure care based on the regulations at 40 C.F.R. §§ 264.117 through 264.120. The provision requires the Permittees to begin any necessary post-closure care upon completion of closure of a permitted unit, and to continue for 30 years thereafter, although this period may be modified. The provision further requires post-closure care to include monitoring and reporting, and monitoring and maintenance of waste containment systems. This provision is based on 40 C.F.R. § 264.117 through 264.120. NMED Ex. 1 at 101; NMED Ex. 3 at 53-54.

666. Section 10.1 of the Proposed Permit further requires the Permittees to submit to the Department a request to modify the permit in order to conduct post-closure care. This provision is based on 40 C.F.R. § 264.117. NMED Ex. 1 at 101; NMED Ex. 3 at 53.

667. The obligation to submit a proposed post-closure care plan and to seek its adoption as a permit modification arises only when the Permittees determine that the permitted unit will be closed leaving waste in place. In the case of the permitted hazardous waste units, the Permittees cannot make that determination until the Department has approved a closure plan, or a remedy under corrective action, for a given unit. It will then become clear whether the remedy includes removing all waste from the unit or, on the other hand, leaving some waste, contamination, or residues in place. At that time, the Permittees have the information needed to submit a post-closure care permit application. NMED Ex. 3 at 53.

668. Currently, there are not any hazardous waste management units at the Laboratory that are in post-closure care. Bearzi Test. Tr. vol. 6, p. 1642, lines 2-7.

669. Although Attachment H of the Proposed Permit is designated for Post-Closure Care Plans, it is currently a blank page because no such plans have been submitted. NMED Ex. 1, Attachment H; Bearzi Test. Tr. vol. 6, p. 1642, lines 8-11.

670. Section 10.1.1 of the Proposed Permit (Post-Closure Care Plan) requires the Permittees to ensure that all post-closure activities are identified in the post-closure plan, including requirements for monitoring, maintenance, security, inspections, and sampling and analysis. This provision is based on 40 C.F.R. § 264.118(a) and (b). NMED Ex. 1 at 102.

671. Section 10.1.2 of the Proposed Permit (Amendment of the Post-Closure Care Plan) requires the Permittees to submit to the Department a request to modify the permit if it is necessary to amend a post-closure care plan. This provision is based on 40 C.F.R. § 264.118(d). NMED Ex. 1 at 102-03.

2. Section 10.2 Notices and Certifications

672. Section 10.2.1 of the Proposed Permit (Notification Requirements) requires the Permittees to maintain in the Facility Operating Record copies of all documentation submitted to the local land use authority. The provision also requires the Permittees to submit to the Department a record of the type, location, and quantity of hazardous waste and hazardous constituents remaining after closure in each permitted unit. This provision is based on 40 C.F.R. §§ 264.119(a) and 270.32(b)(2). NMED Ex. 1 at 103.

673. Section 10.2.2 of the Proposed Permit (Record Requirements) requires the Permittees to maintain documentation of certification of closure of all hazardous waste management units. The provision also requires the Permittees to record a notation on the deed for the Facility property that the property has been used to manage hazardous waste and a notice of any restrictions on the use of the property. This provision is based on 40 C.F.R. §§ 264.119(b) and 270.32(b)(2). NMED Ex. 1 at 103.

674. Section 10.2.3 of the Proposed Permit (Completion of Post-Closure Requirements) requires the Permittees, within 60 days after the end of the post-closure care period, to submit to the Department a certification that post-closure care was completed in compliance with the post-closure care plan. This provision is based on 40 C.F.R. §§ 264.120 and 270.32(b)(2). NMED Ex. 1 at 104.

I. PART 11 OF THE PROPOSED PERMIT

675. Part 11 of the Proposed Permit (Corrective Action) governs corrective action to address releases of hazardous waste and hazardous constituents at the Laboratory that are not addressed by the March 1, 2005 Consent Order. NMED Ex. 1 at 105.

676. Nuclear Watch New Mexico stipulates that it agrees to the terms of Part 11 of the Proposed Permit except Sections 11.4 and 11.4.2.1. Second Stip.

677. Natural Resources Defense Council and Southwest Research and Information Center stipulate that they agree to the terms of Part 11 of the Proposed Permit except Sections 11.4, 11.4.1, 11.4.2.1, 11.4.2.2, and 11.12.5.9. Second Stip.

678. The Applicants stipulate that they agree to the terms of Part 10 of the Proposed Permit, except Sections 11.1, 11.2, 11.2.1, 11.3.1, 11.3.1.2, and 11.4.1. Second Stip. Ex. 2.

679. The term “corrective action” covers all activities related to environmental site investigation, cleanup, and monitoring, including the reporting of releases of contaminants, and the actions taken to mitigate and remove or reduce contamination in environmental media such as soil or groundwater that has been affected by a release. It also includes preparation of work plans and reports. It is a very broad term. NMED Ex. 132 at 3; Cobrain Test. Tr. vol. 12, p. 3160, lines 5-15.

680. Corrective action at the Laboratory is addressed largely under the March 1, 2005 Consent Order. Bearzi Test. Tr. vol. 6, p. 1652, lines 4-5.

681. The March 1, 2005 Consent Order primarily covers corrective action for releases of hazardous waste and hazardous constituents that have occurred in the past and that are known. Bearzi Test. Tr. vol. 6, p. 1652, lines 10-13.

682. The Proposed Permit primarily covers corrective action for releases of hazardous waste and hazardous constituents that may occur in the future; it is “forward looking.” Bearzi Test. Tr. vol. 6, p. 1652, lines 21-23.

683. The Proposed Permit covers corrective action in four circumstances not covered by the March 1, 2005 Consent Order: (1) new releases and newly discovered releases from

hazardous waste management units (“operating units” in the Consent Order), (2) closure and post-closure care of hazardous waste management units, (3) implementation of controls for any solid waste management units or areas of concern which have been listed as having corrective action complete with controls, and (4) releases occurring or discovered after the Consent Order terminates. NMED Ex. 1 at 105; NMED Ex. 26 § III.W.1; NMED Ex. 3 at 26; NMED Ex. 132 at 5-6; Bearzi Test. Tr. vol. 6, p. 1653, lines 6-16.

1. Section 11.1 Corrective Action Requirements Under the Consent Order

684. Section 11.1 of the Proposed Permit (Corrective Action Requirements under the Consent Order) clarifies that the Permittees are required to conduct corrective action for releases of hazardous waste and hazardous constituents from solid waste management units and areas of concern at the Laboratory under the March 1, 2005 Consent Order. The provision further states that nothing in Part 11 of the Proposed Permit changes the Consent Order. NMED Ex. 1 at 105; NMED Ex. 3 at 25; NMED Ex. 132 at 5; Bearzi Test. Tr. vol. 6, p. 1651, lines 18-23.

2. Section 11.2 Corrective Action Requirements Under the Permit

685. Section 11.2 of the Proposed Permit (Record Requirements) clarifies that the Proposed Permit requires the Permittees to conduct corrective action under four circumstances not covered under the March 1, 2005 Consent Order: (1) new releases and newly discovered releases of hazardous waste and hazardous constituents from hazardous waste management units, (2) closure and post-closure care of hazardous waste management units, (3) implementation of controls, including long-term monitoring, for any solid waste management units or areas of concern listed on Proposed Permit Attachment K as having corrective action complete with controls, and (4) releases of hazardous waste or hazardous constituents occurring or discovered after the Consent Order terminates. NMED Ex. 1 at 105; NMED Ex. 3 at 26; NMED Ex. 132 at

5-6; Bearzi Test. Tr. vol. 6, p. 1653, lines 6-23; Cobrain Test. Tr. vol. 12, p. 3160, line 24 to p. 3161, line 13.

686. The first category of corrective action covered under the Proposed Permit is new releases and newly discovered releases of hazardous waste or hazardous constituents from hazardous waste management units. Hazardous waste management units are defined in Section 1.8 of the Proposed Permit. They are units that have been used to treat, store or dispose of hazardous waste and that are permitted to manage such waste. The Proposed Permit requires the Permittees to conduct corrective action, as necessary, to address new releases or newly discovered releases of hazardous waste or hazardous constituents from these units. NMED Ex. 1 at 105; NMED Ex. 132 at 6.

687. The second category of corrective action covered under the Proposed Permit is closure and post-closure care of hazardous waste management units. Although these requirements are referenced in the Consent Order, and in Proposed Permit Section 11.2, as an exception to corrective action requirements under the Consent Order, closure and post-closure care requirements are in any event distinct from corrective action requirements. NMED Ex. 1 at 105; NMED Ex. 132 at 6.

688. The third category of corrective action covered under the Proposed Permit is implementation of controls for any solid waste management units or areas of concern which have been listed as having corrective action complete with controls. Cleanup of environmental media affected by the operations at a hazardous waste management unit are subject to corrective action requirements included in the Proposed Permit. Implementation of any controls for solid waste management units or areas of concern where corrective action is complete is also covered by the Proposed Permit. Such controls may include long-term monitoring, maintenance of an

engineered cover, or maintenance of a fence to restrict access. NMED Ex. 1 at 105; NMED Ex. 132 at 7.

689. The fourth category of corrective action covered under the Proposed Permit is releases of hazardous waste or hazardous constituents occurring or discovered after the Consent Order terminates. The cleanup work under the Consent Order is scheduled to be completed by 2015. Implementation of corrective action to address releases of contaminants that occur or are discovered after the date on which the Consent Order terminates also are subject to the requirements included in the Proposed Permit. NMED Ex. 1 at 105; NMED Ex. 132 at 7.

690. Section 11.2 of the Proposed Permit further provides that releases of hazardous waste or hazardous constituents from hazardous waste management units that commingle with releases originating from other sources, such as solid waste management units or areas of concern, are subject to cleanup under the Consent Order. This provision is based on 40 C.F.R. § 264.110(c). NMED Ex. 1 at 105; NMED Ex. 132 at 7.

691. In the first category of corrective action covered under the Proposed Permit, new releases and newly discovered releases of hazardous waste or hazardous constituents from hazardous waste management units, the Proposed Permit refers to “hazardous waste management units,” while the March 1, 2005 Consent Order refers to “operating units.” *Compare* NMED Ex. 1 § 11.2 *with* NMED Ex. 26 § III.W.1.

692. The term “operating unit” is not defined in the hazardous waste regulations, the statute, or the Consent Order. Bearzi Test. Tr. vol. 6, p. 1654, lines 8-11, p. 1655, lines 11-12.

693. The term “hazardous waste management unit” is defined in the regulations at 40 C.F.R. § 260.10. Bearzi Test. Tr. vol. 6, p. 1654, line 19 to p. 1655, line 8.

694. The definition of “hazardous waste management unit” reflects the parties’ understanding of the meaning of the term “operating unit” in the March 1, 2005 Consent Order. Bearzi Test. Tr. vol. 6, p. 1655, lines 9-24.

2. Section 11.3 General Conditions

695. Section 11.3 of the Proposed Permit (General Conditions) contains general, standard conditions governing corrective action at the Laboratory. This provision is based on 40 C.F.R. §§264.90 to 264.100. NMED Ex. 1 at 106.

696. Section 11.3.1 of the Proposed Permit (Groundwater Monitoring) requires the Permittees to conduct groundwater monitoring for all regulated units at the Laboratory. The section further provides that as long as the March 1, 2005 Consent Order is in effect, the corrective action requirements of the Consent Order will fulfill the corrective action requirements for regulated units under 40 C.F.R. §§ 264.90 to 264.100. NMED Ex. 1 at 106; NMED Ex. 3 at 60-61; NMED Ex. 132 at 8.

697. The section also provides that groundwater monitoring conducted under the permit should be coordinated with groundwater monitoring conducted under the Consent Order. NMED Ex. 1 at 106; NMED Ex. 3 at 60; NMED Ex. 132 at 9-10.

698. The groundwater monitoring requirements in 40 C.F.R. § 264.90(a)(1) apply to solid waste management units subject to the corrective action under 40 CFR § 264.101, and to hazardous waste management units that meet the definition of a “regulated unit” under 40 C.F.R. § 264.90(a)(2). A regulated unit includes land disposal units that received waste after July 26, 1982, such as MDA G, MDA H, and MDA L at TA-54. NMED Ex. 132 at 8.

699. The regulations at 40 C.F.R. § 40 CFR § 264.90(f) provide that the groundwater monitoring requirements of 40 C.F.R. part 264, subpart F, §§ 264.91 to 264.100, applicable to a

regulated unit may be replaced with alternative requirements set out in an enforceable document if the regulated unit is situated among solid waste management units or areas of concern, a release of hazardous waste or hazardous constituents has occurred, and both the regulated unit and one or more solid waste management units or areas of concern are likely to have contributed to the release; and the alternative requirements will protect human health and the environment. NMED Ex. 3 at 46.

700. MDA G, MDA H, and MDA L is each a regulated unit. NMED Ex. 3 at 54; *see* Findings of Fact #494 to #495.

701. There have been releases of hazardous waste and hazardous constituents from solid waste management units and areas of concern within MDA G, MDA H, and MDA L. The releases are mingled; it is not possible to distinguish the source of the releases as being from the regulated units or one or more solid waste management units or areas of concern. NMED Ex. 3 at 45; NMED Ex. 132 at 8; *see* NMED Ex. 83, NMED Ex. 84, NMED Ex. 85; NMED Ex. 86.

702. Several outdoor units at the Laboratory, such as TA-54, Area G, Pad 9, are situated among MDA G and MDA L. NMED Ex. 3 at 51.

703. The March 1, 2005 Consent Order is an enforceable document. NMED Ex. 3 at 46; *see* Findings of Fact #526 to #529.

704. Since releases from the regulated units are commingled with those from other solid waste management units, combining groundwater investigation and monitoring necessary for closure or post-closure care with corrective action for solid waste management units under the Consent Order is the most efficient approach. NMED Ex. 132 at 8-9.

705. The groundwater monitoring requirements for regulated units at the Laboratory, if implemented separately under the permit, would overlap with and sometimes duplicate the

groundwater characterization, remediation, and monitoring under the Consent Order. NMED Ex. 132 at 9.

706. The groundwater monitoring system at TA-54 currently is not adequate; however, the Department is requiring the Applicants to expand and improve the system, and to install additional monitoring wells, so that it is adequate. Bearzi Test. Tr. vol. 3, p. 1593, lines 9-15; Cobrain Test. Tr. vol. 12, p. 3163, line 6 to p. 3164, line 2.

707. The alternative groundwater monitoring requirements in the March 1, 2005 Consent Order will protect human health and the environment. NMED Ex. 3 at 45; NMED Ex. 132 at 8.

708. The alternative groundwater monitoring requirements in the March 1, 2005 Consent Order are *more* protective of human health and the environment than the groundwater monitoring requirements in the regulations at 40 C.F.R. part 264, subpart F. Bearzi test. Tr. vol. 6, p. 1669, lines 10-15.

709. The first reason that the alternative groundwater monitoring requirements in the Consent Order are more protective of human health and the environment than the groundwater monitoring requirements in the regulations is that they address the complicated geology beneath the Laboratory. It is unlikely that contaminants released from the regulated units at TA-54 (MDA G, MDA H, and MDA L) would migrate straight down to groundwater and be detected by monitoring wells located at the edge of the units. Bearzi Test. Tr. vol. 6, p. 1671, line 16 to p. 1674, line 2; Cobrain Test. Tr. vol. 12, p. 3164, line 9 to p. 3165, line 15.

710. The second reason that the alternative groundwater monitoring requirements in the Consent Order are more protective of human health and the environment than the groundwater monitoring requirements in the regulations is that they combine several steps of

detection monitoring and compliance monitoring to get to corrective action. Bearzi Test. Tr. vol. 6, p. 1674, line 2 to p. 1675, line 4, and p. 1676, lines 16-25.

711. The third reason that the alternative groundwater monitoring requirements in the Consent Order are more protective of human health and the environment than the groundwater monitoring requirements in the regulations is that they require protection of groundwater throughout the aquifer, not merely at the “point of compliance” as defined in the regulations. Bearzi Test. Tr. vol. 6, p. 1677, line 1 to p. 1679, line 9.

712. The public will have several opportunities to comment on the groundwater monitoring system, as the system will be an element of the CME Report, the CMI Plan, the permit modification when corrective action is completed, and if necessary, the post-closure care plan. Bearzi Test. Tr. vol. 10, p. 2700, line 9 to p. 2703, line 23.

713. There is no provision in the regulations requiring the Department to announce to the public that an enforceable document will be the basis for alternative groundwater monitoring requirements. Bearzi Test. Tr. vol. 10, p. 2697, lines 8-21.

714. Section 11.3.1.1 of the Proposed Permit (Notification of Detections) requires the Permittees to notify the Department of initial detections of contaminants in groundwater monitoring wells, concentration trends that indicate that an ongoing release is occurring, and detections of contaminants at concentrations that exceed one-half the groundwater cleanup standards. The provision also requires the Permittees to give notice to persons on the e-mail notification list by e-mail under Proposed Permit Section 1.13 of the notice. NMED Ex. 1 at 107-08; NMED Ex. 132 at 11.

715. Prompt notification of detections of contaminants in groundwater is essential to taking appropriate action to prevent further migration of contamination and to mitigate such contamination. NMED Ex. 132 at 11.

716. Section 11.3.1.2 of the Proposed Permit (Source Identification and Corrective Action) requires the Permittees to report detections of contaminants at concentrations that exceed the groundwater cleanup standards. The provision further requires the Permittees to determine whether the source is from a regulated unit or another source. If the source of the release is a regulated unit, the provision requires the Permittees to determine the nature and extent of the release and contain or otherwise mitigate the release. This provision is based on 40 C.F.R. § 264.99(i). NMED Ex. 1 at 108; NMED Ex. 132 at 11.

717. Section 11.3.2 of the Proposed Permit (Groundwater Monitoring Reporting) requires the Permittees to submit to the Department periodic reports of groundwater monitoring data. NMED Ex. 1 at 108; NMED Ex. 132 at 11.

718. Section 11.3.3 of the Proposed Permit (Corrective Action Beyond the Facility Boundary) requires the Permittees to notify the Department upon discovering that a hazardous waste or hazardous constituent has migrated beyond physical boundary of the facility. The provision further requires the Permittees to implement corrective action beyond physical boundary of the facility, as necessary to protect health and the environment. This provision is based on 40 C.F.R. § 264.101(c). NMED Ex. 1 at 109; NMED Ex. 132 at 11-12.

719. Section 11.3.4 of the Proposed Permit (Off-Site Access) requires the Permittees to use their best efforts to obtain access from owners of property outside the Permittees' control, if necessary to conduct corrective action. The provision requires the Permittees to notify the

Department if such access is denied by the property owner. This provision is based on 40 C.F.R. § 264.101(c). NMED Ex. 1 at 109; NMED Ex. 132 at 12.

720. Section 11.3.5 of the Proposed Permit (Newly Discovered Releases) requires the Permittees to notify the Department of the discovery of any previously unknown release of hazardous waste or hazardous constituents into soil, sediment, surface water, or groundwater. This provision is based on 40 C.F.R. § 270.14(d)(2). NMED Ex. 1 at 109; NMED Ex. 132 at 12.

721. Section 11.3.5 of the Proposed Permit follows the EPA Hazardous and Solid Waste Amendments (HSWA) Model Permit. NMED Ex. 132 at 12; *see* NMED Ex. 114 § M.

722. Section 11.3.6 of the Proposed Permit (Field Activities) requires the Permittees to notify the Department of field sampling or other field activities. The provision also requires the Permittees to allow the Department to collect split samples upon request. This provision is based on 40 C.F.R. § 264.97(d). NMED Ex. 1 at 109; NMED Ex. 132 at 12.

723. It is necessary for the Department to monitor sampling and other field activities to ensure that technical standards for data collection are met and to collect split samples to verify that the data are valid. NMED Ex. 132 at 12.

724. Section 11.3.6 of the Proposed Permit follows the EPA Hazardous and Solid Waste Amendments (HSWA) Model Permit. NMED Ex. 132 at 12; *see* NMED Ex. 114 § O.

725. Section 11.3.7 of the Proposed Permit (Health and Safety Plan) requires the Permittees to prepare site-specific health and safety plans for all field activities. This requirement is based on 40 C.F.R. § 270.32(b)(2). NMED Ex. 1 at 110; NMED Ex. 132 at 13.

726. Section 11.3.8 of the Proposed Permit (Recordkeeping) requires the Permittees to maintain monitoring data and related records in the facility Operating Record for a minimum of three years after the end of the operating life of the Laboratory and a minimum of three years

after the end of any post-closure care periods. This requirement is based on 40 C.F.R. 264.97(j). NMED Ex. 1 at 110; NMED Ex. 132 at 13.

4. Section 11.4 Cleanup Levels

727. Section 11.4 of the Proposed Permit (Cleanup Levels) sets forth the corrective action cleanup levels for contaminated groundwater, surface water, soil and sediment. NMED Ex. 1 at 110; NMED Ex. 132 at 13.

728. The cleanup levels in Permit Section 11.4 are based, in most instances, on target hazard or risk levels for protection of human health. The goals are a human health target excess risk level of one excess cancer incidents per 100,000 population (1×10^{-5}) for carcinogens and a Hazard Index of 1.0 for non-carcinogens. NMED Ex. 132 at 14; Cobrain Test. Tr. vol. 12, p. 3166, lines 1-9.

729. Risk is calculated to evaluate the potential effects of carcinogenic compounds. Risk is calculated based on the potential for excess incidence of cancer within a population exposed to a carcinogenic compound and is typically expressed as the number of excess incidences of cancer per unit population (usually number of incidences per 10,000, 100,000 or 1,000,000 individuals). Risk for multiple compounds is calculated by adding the number of excess incidences per population for each carcinogenic compound present. NMED Ex. 132 at 14; *see also* NMED Ex. 3 at 40.

730. Hazard is a measure used to evaluate the potential for noncancer health effects, such as organ damage, from chemical exposure. Hazard consists of a comparison of an estimated chemical intake (dose) with a reference dose level below which adverse health effects are unlikely. A hazard quotient is expressed as the ratio of the estimated intake to the reference dose for an individual chemical. A hazard index is calculated if more than one chemical is

present. A hazard index is the additive value of more than one hazard quotient. NMED Ex. 132 at 14.

731. The cleanup levels in Section 11.4 of the Proposed Permit are based on federal and State regulatory standards, and they follow Department and EPA guidance. NMED Ex. 132 at 13; Cobrain Test. Tr. vol. 12, p. 3165, lines 20-21.

732. The cleanup levels in Section 11.4 of the Proposed Permit are the same as the cleanup levels that the Department has applied at other facilities in the State, for example, in the hazardous waste facility permits for the U.S. Army White Sands Missile Range, the NASA White Sands Test Facility, Kirtland Air Force Base, the U.S. Army Fort Wingate Depot Activity, and the Mixed Waste Landfill at Sandia National Laboratories; the proposed hazardous waste permit for Sandia National Laboratories; the Administrative Order for the Western Refining Company Bloomfield Refinery; and the April 29, 2004 Consent Order for Sandia National Laboratories. They are also virtually identical to the cleanup levels in the March 1, 2005 Consent Order for the Laboratory. NMED Ex. 132 at 13-14; NMED Ex. 26 § VIII; Cobrain Test. Tr. vol. 12, p. 3165, lines 22-25.

a. Risk Level

733. Some commenters have advocated that the Department should apply a more stringent risk target of 10^{-6} for carcinogens for corrective action under the permit. NMED Ex. 3 at 40.

734. Whether to apply a target risk level of 10^{-5} or 10^{-6} is a major policy question, which is much broader than the Proposed Permit for the Laboratory. NMED Ex. 3 at 40.

735. The Department has, for many years, applied a target risk level of 10^{-5} for carcinogens in its permits, regulations, and cleanup actions across several different programs. A

change in that policy would necessitate a rulemaking proceeding; it is not appropriate for a proceeding on an individual facility permit. NMED Ex. 3 at 40.

736. EPA has said that any cleanup within the range of 10^{-6} to 10^{-4} is acceptable, and the Department's target is in the middle of that range. NMED Ex. 3 at 40.

737. In New Mexico, the 10^{-5} risk target level is consistently applied in several environmental permitting and cleanup programs, either as a matter of policy or promulgated regulations. Such consistency is important, first because it promotes fairness and equity among regulated facilities, and among the persons living near those facilities now or in the future. Second, such consistency is important because the hazardous waste program frequently applies cleanup standards that are established under other programs. NMED Ex. 3 at 40.

738. Under the New Mexico Water Quality Act, the Water Quality Control Commission has promulgated groundwater quality standards, including pollutant-specific numerical human health standards for groundwater that are based upon a cancer risk of 10^{-5} . 20.6.2.3101 to 20.6.1.4115 NMAC. NMED Ex. 3 at 41-42.

739. Under the New Mexico Water Quality Act, the Water Quality Control Commission has promulgated standards for intrastate and interstate surface waters, including standards providing that surface waters designated for use as domestic water supplies "shall not contain substances in concentrations that create a lifetime cancer risk of more than one cancer per 100,000 exposed persons" (*i.e.*, 10^{-5}). 20.6.4.900.B NMAC. NMED Ex. 3 at 42.

740. Under the New Mexico Solid Waste Act, the Environmental Improvement Board has adopted regulations for groundwater protection standards for carcinogens that "represents a concentration associated with an excess lifetime cancer risk of more than one cancer per 100,000 exposed persons" (*i.e.*, 10^{-5}). 20.9.9.13.I.3 NMAC. NMED Ex. 3 at 42.

741. Under the New Mexico Hazardous Waste Act, the hazardous waste program has consistently applied a 10^{-5} risk target level for corrective action under permits and for cleanup orders. NMED Ex. 3 at 42-43; *see also* Finding of Fact #642.

742. The New Mexico standards applicable to groundwater discharge permits, groundwater abatement, surface water permits, solid waste disposal permits, and corrective action at hazardous waste facilities are all based upon a risk level of 10^{-5} . NMED Ex. 3 at 43.

b. *Proposed Permit Conditions*

743. Section 11.4.1 of the Proposed Permit (Groundwater Cleanup Levels) sets forth the corrective action cleanup levels for contaminated groundwater, which generally are groundwater quality standards established by the Water Quality Control Commission and maximum contaminant levels established by EPA. If a State groundwater quality standard and a federal maximum contaminant level have been established for a particular substance and they differ, the more stringent standard would apply. NMED Ex. 1 at 110-111; NMED Ex. 132 at 15-16; Cobrain Test. Tr. vol. 12, p. 3166, lines 10-17.

744. Section 11.4.1.1 of the Proposed Permit (Groundwater Cleanup Level for Perchlorate) sets forth the corrective action cleanup levels for perchlorate contamination in groundwater, which is to be set based on a hazard index of 1.0. NMED Ex. 1 at 111; NMED Ex. 132 at 15-16.

745. Section 11.4.2.1 of the Proposed Permit (Soil Cleanup Levels) sets forth the corrective action cleanup levels for contaminated soil and sediment, which are based on the Department's soil screening levels. NMED Ex. 1 at 111; NMED Ex. 132 at 16-17; *see* NMED Ex. 136; Cobrain Test. Tr. vol. 12, p. 3167, lines 1-9.

746. Section 11.4.2.1 of the Proposed Permit (Soil Cleanup Level for Polychlorinated Biphenyls) sets forth the corrective action cleanup level for polychlorinated biphenyls (“PCB’s”) contamination in soil and sediment, which is generally 1 milligram per kilogram. NMED Ex. 1 at 112; NMED Ex. 132 at 17; *see* AR 9800; Cobrain Test. Tr. vol. 12, p. 3167, lines 10-16.

747. Section 11.4.3 of the Proposed Permit (Surface Water Cleanup Levels) sets forth the corrective action cleanup levels for contaminated surface water, which generally are the standards for interstate and intrastate surface waters established by the Water Quality Control Commission. NMED Ex. 1 at 112; NMED Ex. 132 at 17.

5. Section 11.5 Ecological Risk Evaluation

748. Section 11.5 of the Proposed Permit (Ecological Risk Evaluation) requires the Permittees to conduct an evaluation for ecological risk as an element of corrective action. NMED Ex. 1 at 112; NMED Ex. 132 at 17-18.

749. Ecological risk is determined by evaluating the effects of exposure of a set of animal and plant receptors to identified contaminants, based on data from toxicological studies. NMED Ex. 132 at 17-18.

6. Section 11.6 Variance from Cleanup Levels

750. Section 11.6 of the Proposed Permit (Variance from Cleanup Levels) allows the Permittees to request a variance from the cleanup levels if site conditions make them impractical to achieve. NMED Ex. 1 at 113; NMED Ex. 132 at 18-19.

7. Section 11.7 Permit Modification for Corrective Action Complete

751. Section 11.7 of the Proposed Permit (Permit Modification for Corrective Action Complete) allows the Permittees to seek a permit modification to change the status of a solid waste management unit or area of concern listed on Proposed Permit Table K-1 “corrective

action required” to Proposed Permit Table K-2 “corrective action complete.” NMED Ex. 1 at 113 and Attachment K; NMED Ex. 132 at 19.

752. A permit modification under Section 11.7 of the Proposed Permit would be a “Class 3” permit modification under 40 C.F.R. § 270.42, appendix I. Such modification would be subject to a public participation process under 40 C.F.R. § 270.42 and 20.4.1.901 NMAC. The Department would prepare a statement of basis to support the determination that corrective action is complete. NMED Ex. 132 at 19.

753. Corrective action may be determined to be complete with or without controls. Controls on a corrective action complete determination may include groundwater monitoring, and long-term monitoring and maintenance of the remedy, and land use restrictions. NMED Ex. 132 at 19.

8. *Section 11.8 Corrective Action Procedures*

754. Section 11.8 of the Proposed Permit (Corrective Action Procedures) sets forth the procedures for the conduct of corrective action. Corrective action begins with discovery and assessment of a release and continues through remedy completion and any necessary long-term monitoring. Corrective action includes not only field investigation and remediation activities but also historical research, records maintenance, laboratory analyses, preparation of work plans and reports, and the implementation of interim measures to prevent migration of contaminants and mitigate immediate threats to human health and the environment. This provision is based on 40 C.F.R. §§ 264.100 and 264.101. NMED Ex. 1 at 114-127; NMED Ex. 132 at 19-20; *see also* NMED Ex. 132 at 20-24; Cobrain Test. Tr. vol. 12, p. 3167, line 17 to p. 3170, line 6.

755. The procedures for corrective action set forth in Section 11.8 of the Proposed Permit are the same as those required under the March 1, 2005 Consent Order. Cobrain Test. Tr. vol. 12, p. 3170, lines 7-9.

9. Section 11.9 Approval of Submittals

756. Section 11.9 of the Proposed Permit (Approval of Submittals) provides that all work plans, reports, and other documents that the Permittees prepare as part of the corrective action process under the permit are subject to the Department's review and approval. NMED Ex. 1 at 127; NMED Ex. 132 at 24.

10. Section 11.10 Methods and Procedures

757. Section 11.10 of the Proposed Permit (Methods and Procedures) sets forth detailed technical requirements for investigation, sampling and analysis, risk assessment, and determining background levels of contamination for corrective action under the permit. NMED Ex. 1 at 127; NMED Ex. 132 at 24; Cobrain Test. Tr. vol. 12, p. 3170, lines 10-21.

758. The methods and procedures set forth in Section 11.10 of the Proposed Permit are based primarily on standard methods and procedures have been developed by EPA, the American Society of Testing and Materials (ASTM), the U.S. Geological Survey (USGS), other federal agencies, state agencies, and the environmental and engineering industries. The methods and procedures address all phases of corrective action, including field data collection, hydrologic characterization, sample analyses, and data assessment. NMED Ex. 132 at 24.

759. The primary purpose of Section 11.10 of the Proposed Permit is to establish minimum requirements for field investigations, monitoring, environmental sampling, and laboratory analysis that will yield accurate data. Accurate data is needed to evaluate site

conditions, determine the nature and extent of contamination, assess the migration of contaminants, and select and implement an appropriate remedy. NMED Ex. 132 at 25.

760. Another purpose of Section 11.10 of the Proposed Permit is to provide consistency in the methods and procedures used for corrective action at facilities across the State. NMED Ex. 132 at 25.

761. Section 11.10.1 of the Proposed Permit (Standard Operating Procedures) requires the Permittees to include a brief description of investigation, sampling, and analytical methods and procedures in documents, such as work plans and reports, submitted to the Department. NMED Ex. 1 at 127; NMED Ex. 132 at 25.

762. Section 11.10.2 of the Proposed Permit (Investigation, Sampling, and Analysis Methods) requires the Permittees to follow minimum procedures for field investigations, geophysical surveys, drilling boreholes, groundwater monitoring, collecting samples, handling samples, field analysis, decontamination, field quality assurance and quality control (“QA/QC”), and reporting field activities. NMED Ex. 1 at 127-43; NMED Ex. 132 at 25-33.

763. Section 11.10.3 of the Proposed Permit (Chemical Analyses) requires the Permittees to follow minimum procedures for laboratory analysis, laboratory QA/QC, and laboratory reporting. NMED Ex. 1 at 143-50; NMED Ex. 132 at 33-36.

764. Section 11.10.4 of the Proposed Permit (Site-Specific Human Health Risk Assessment) requires the Permittees to follow standard procedures for conducting a human health risk assessment. NMED Ex. 1 at 150-53; NMED Ex. 174 at 3-9.

765. Section 11.10.5 of the Proposed Permit (Site-Specific Ecological Risk Assessment) requires the Permittees to follow standard procedures for conducting an ecological risk assessment. NMED Ex. 1 at 153; NMED Ex. 174 at 9.

766. Section 11.10.6 of the Proposed Permit (Determination of Background) requires the Permittees to follow standard procedures for determining background levels of hazardous constituents. NMED Ex. 1 at 153-54; NMED Ex. 174 at 10.

767. The procedures for risk assessment in Proposed Permit Sections 11.10.4, 11.10.5, and 11.10.6 are consistent with applicable federal and State guidance for conducting human health and ecological risk assessments. NMED Ex. 174 at 3.

768. The Department's risk assessment expert stated that in her opinion, the procedures for risk assessment in Proposed Permit Sections 11.10.4, 11.10.5, and 11.10.6 are based on standard risk assessment methodology. NMED Ex. 174 at 10; Walton Test. Tr. vol. 11, p. 2744, lines 16-20.

769. The Department's risk assessment expert stated that in her opinion, the procedures for risk assessment in Proposed Permit Sections 11.10.4, 11.10.5, and 11.10.6 are reasonable and appropriate permit conditions. NMED Ex. 174 at 10; Walton Test. Tr. vol. 11, p. 2744, lines 16-22.

11. Section 11.11 Monitoring Well Construction Requirements

770. Section 11.11 of the Proposed Permit (Monitoring Well Construction Requirements) sets forth detailed technical requirements for drilling, construction, development, and abandonment of groundwater monitoring wells. NMED Ex. 1 at 154; NMED Ex. 168 at 3-14.

771. The Department proposes that Proposed Permit Section 11.11.3.1 be revised by changing the fourth sentence of the first paragraph to read: "Generally, if the monitoring program requires the analysis of organic constituents, stainless steel should be used." NMED Ex. 168 at 15.

772. The proposed revision to Permit Section 11.11.3.1 is necessary because fluoropolymer materials may sorb or desorb organic constituents from or into the solution. For that reason, fluoropolymer materials are not recommended when sampling for organic constituents. NMED Ex. 168 at 15; *see* NMED Ex. 171 Table 4.1 and Appendix A.

773. The Department proposes that Proposed Permit Section 11.11.3.3 be revised by changing the second sentence of the last paragraph to read: “These include multi-level borehole completion systems (*e.g.*, Westbay MP System[®]) and pneumatically deployed inverting PVC membranes (*e.g.*, FLUTE).” NMED Ex. 168 at 15.

774. The proposed revision to Permit Section 11.11.3.3 is necessary because the SEAMIST system is no longer manufactured and has been replaced by the FLUTE system. NMED Ex. 168 at 15.

775. The Department proposes that Proposed Permit Section 11.11.3.4 be revised by changing the second sentence of the last paragraph to read: “The grout seal may consist of a high solids (30 percent) bentonite grout, a neat cement grout, ~~or~~ a cement/bentonite grout, or other suitable grout material that is approved by the Department.” NMED Ex. 168 at 15.

776. The proposed revision to Permit Section 11.11.3.4 (second sentence of last paragraph) is necessary to allow more flexibility in choosing new or improved grout materials that may offer better performance than the currently used materials. NMED Ex. 168 at 16.

777. The Department proposes that Proposed Permit Section 11.11.3.4 be revised by changing the fourth sentence of the last paragraph to read: “The tremie pipe shall be equipped with a side discharge port to minimize damage to the filter pack or filter pack annular bentonite seal during grout placement.” NMED Ex. 168 at 16.

778. The proposed revision to Permit Section 11.11.3.4 (fourth sentence of last paragraph) is necessary because EPA RCRA guidance documents recommend side-discharge tremie pipe for placement of annular sealants in slurry form. NMED Ex. 168 at 16.

12. Section 11.12 Reporting Requirements

779. Section 11.12 of the Proposed Permit (Reporting Requirements) sets forth standard format and content requirements for work plans and reports that the Permittees must prepare and submit to the Department as an element of corrective action, namely investigation work plans, investigation reports, periodic monitoring reports, risk assessment reports, and corrective measures evaluation reports. NMED Ex. 1 at 169-202; NMED Ex. 132 at 36-38.

780. The Department receives and reviews work plans and reports from hazardous waste facilities that vary widely in quality and content, and that often do not provide all of the information necessary for a full evaluation of the phase of corrective action addressed in the document. Proposed Permit Section 11.12 is written to streamline the review process, reduce Department comments on draft documents, and minimize the number of revisions to the documents that must be prepared. NMED Ex. 132 at 37.

III. NOTICE OF INTENT TO DENY PERMIT FOR OPEN BURNING

A. INTRODUCTION

781. Open burning is the burning of any materials that produce air contaminants that are directly emitted into the air without first passing through a stack or chimney from an enclosed chamber. NMED Ex. 3 at 71.

782. The Applicants operate two hazardous waste open burn units at TA-16, Structure 16-388 (Flash Pad) and Structure 16-399 (Burn Tray). The units are used to burn off-specification and discarded high explosive wastes, and wastes contaminated with high

explosives, in a raised steel pan or tray designed to withstand extremely high temperatures. NMED Ex. 3 at 71; NMED Ex. 72 at 31; *see* Findings of Fact #12 and #13; *see also* Applicants Ex. MM; Applicants Ex. NN.

783. At Structure 16-388, the high explosive wastes are placed in a raised steel pan (called a flash pan), which is designed to withstand extremely high temperatures. Propane burners apply a flame to the explosive waste in the pan to attain complete destruction of the explosive component of the wastes. NMED Ex. 3 at 71-72.

784. At Structure 16-399, waste is placed in a raised steel tray (called a burn tray), which is also designed to withstand extremely high temperatures. The waste is burned with dunnage (i.e., combustible material such as wood or cardboard) and diesel fuel on top of the waste. NMED Ex. 3 at 71-72.

785. Open burning of high explosive waste may release several hazardous constituents to the atmosphere. The constituents that might be emitted depend on the wastes being treated. Common emission products are metals. In addition, as stated in the Applicants' Part B permit application, the high explosives treated at the open burn units at TA-16 contain plastics that are capable of generating dioxin and furan congeners when burned. NMED Ex. 3 at 72; *see* NMED Ex. 94; NMED Ex. 95.

786. High explosive wastes are reactive hazardous wastes (waste code D003) under the regulations at 40 C.F.R. § 261.23, and are therefore regulated under RCRA and the HWA. NMED Ex. 3 at 71.

787. Units for the treatment of reactive hazardous waste by open burning are regulated as miscellaneous units under the regulations at 40 C.F.R. part 264, subpart X. NMED Ex. 72 at 31.

788. The Applicants currently operate the open burn units at TA-16 under interim status. NMED Ex. 3 at 11, 71.

789. The Applicants seek a hazardous waste permit from the Department to continue to operate the open burn units at TA-16. NMED Ex. 3 at 71.

790. In June 1995, the Applicants initially submitted to the Department a Part B permit application for the interim status open burn units at TA-16. AR 6437.

791. In August 2003, the Applicants submitted to the Department the most recent general Part B permit renewal application, which included the open burn units at TA-16. NMED Ex. 3 at 71; NMED Ex. 72 at 11; NMED Ex. 5; *see* Finding of Fact 28.

792. In their application, the Applicants sought authorization to treat a total of 12,500 pounds of high explosive hazardous waste per year in the two open burn units at TA-16. NMED Ex. 3 at 72.

793. During the hearing, the Applicants proposed to seek authorization to treat a total of 6000 pounds of high explosive hazardous waste per year in the two open burn units at TA-16. Applicants Ex. JJ at 2; Vigil-Holterman Test. Tr. vol. 5, p. 1253, lines 6-9.

794. Due to concerns that the treatment of waste high explosives at the burn units at TA-16 would release dioxins and furans into the environment, the Department placed a prohibition on treating wastes capable of generating dioxins and furans in the July 6, 2009 Revised Draft Permit. NMED Ex. 3 at 72; *see* NMED Ex. 89 § 6.2, ¶ 9.

795. The prohibition on treating wastes capable of generating dioxins and furans in the July 6, 2009 Revised Draft Permit was based on three factors: 1) the Department conducted air modeling which resulted in the potential for excess risk to ecological receptors from exposure to dioxins and furans; 2) soil sampling conducted by the Applicants indicated elevated levels of

dioxins and furans; and 3) the screening level risk assessment using the results from the limited soil sampling indicated dioxin and furan concentrations in excess of Ecological Screening Limits (ESLs) and the Department's target risk limit. NMED Ex. 3 at 72.

796. On February 2, 2010, the Department announced that it intends to deny the Applicants' application for a permit to treat by open burning reactive hazardous waste in the open burn units at TA-16. NMED Ex. 2; NMED Ex. 3 at 71.

797. The Department has given three reasons for its intent to deny the permit for open burning of high explosive hazardous waste at TA-16: first, the Department has received extensive public opposition to open burning at the Laboratory; second, the Applicants have not demonstrated that continued operation of the open burn units could continue without significant adverse risk to the environment; and third, the Department believes that there are preferable and viable alternatives to open burning of the high explosive waste at the Laboratory. NMED Ex. 2 at 4-7; NMED Ex. 3 at 76.

B. PUBLIC OPPOSITION TO OPEN BURNING

798. There is substantial public opposition to the continued open burning of hazardous waste at the Laboratory. NMED Ex. 3 at 74.

799. In the June 26, 2007 Stipulation on Permit Language (AR 31724), Concerned Citizens for Nuclear Safety and the Embudo Valley Environmental Monitoring Group objected to and reserved their right to appeal that section of the revised draft permit that would allow open burning at TA-16. *See First Stip.*

800. The initial draft permit, released on August 27, 2007, proposed to allow the Applicants, with certain restrictions, to treat high explosive hazardous waste and other waste contaminated with high explosives by open burning. The draft permit would have allowed such

open burning in two units at Structure 16-388 (the Flash Pad) and Structure 16-399 (the Burn Tray). NMED Ex. AR 31313.

801. During the public comment period held from August 27, 2007 through February 1, 2008, the Department received several comments, including comments from San Ildefonso Pueblo, Santa Clara Pueblo, Concerned Citizens for Nuclear Safety, and the Embudo Valley Environmental Monitoring Group, opposing open burning at the Laboratory. AR 31341 Attachment at 1; AR 31351 at 6, AR 31352 at 45-46, AR 31345 at 3-4.

802. The July 6, 2009 revised draft permit also proposed to allow the Applicants to treat hazardous waste by open burning at TA-16. However, the revised draft permit contained more stringent conditions, prohibiting the open burning of any wastes that would release dioxins and furans – highly toxic chemicals – into the air. NMED Ex. 89 §§ 6.1, 6.2, ¶ 9.

803. During the public comment period held from July 6, 2009 through September 4, 2009, the Department received approximately 1,400 comments from individuals and organizations, including Concerned Citizens for Nuclear Safety and the Embudo Valley Environmental Monitoring Group, opposing open burning at the Laboratory. NMED Ex. 3 at 74; Bearzi Test. Tr. vol. 6, p. 1687, lines 12-18.

804. Commenters have noted risks to wildlife, public health, and the environment from open burning of high explosives. NMED Ex. 3 at 74.

805. Commenters have pointed out that open burning of high explosives is particularly objectionable to persons with allergies or other sensitivities to airborne pollutants. NMED Ex. 3 at 74.

806. The Department has carefully considered these comments. NMED Ex. 3 at 74; Bearzi Test. Tr. vol. 6, p. 1687, lines 19-21.

C. FAILURE OF APPLICANTS TO DEMONSTRATE PROTECTION OF THE ENVIRONMENT

807. The Applicants have not demonstrated that operation of the open burn units at TA-16 will be protective of the environment. NMED Ex. 2 at 1; NMED Ex. 174 at 13; Walton Test. Tr. vol. 11, p. 2754, lines 6-15.

808. In its review of the Applicants' permit application, the Department has considered air modeling results, soil sampling data, and a preliminary or "screening" ecological risk assessment. NMED Ex. 2 at 3-7.

1. *Air Modeling*

809. To assess future impacts to human health and the environment from open burning of high explosive waste at TA-16, the Department, through its contractors, conducted air modeling. NMED Ex. 174 at 13.

810. The Applicants' Part B permit application indicated that the high explosive waste burned at TA-16 contains plastics that are capable of forming dioxins and furans when burned. NMED Ex. 3 at 72; *see* NMED Ex. 94; NMED Ex. 95.

811. The Department used the Open Burn Open Detonation Model ("OBODM"). OBODM was developed at the U.S. Army Dugway Proving Ground specifically to evaluate release and dispersion characteristics from open burn and open detonation operations, such as those proposed by the Applicants. OBODM shows how emission products from open burning will rise and transport and disperse downwind. These predicted data are then used to estimate deposition of the emission products onto soil. NMED Ex. 174 at 13.

812. The Department conducted two runs of the model. The first run assumed 35 pounds of high explosive contaminated waste was burned, and the second run assumed 250 pounds of high explosive contaminated waste was burned. NMED Ex. 174 at 13.

813. The results from OBODM indicated that there was a dominant depositional area to the north and to the east-southeast of the burn units. NMED Ex. 174 at 13.

814. The two runs of the OBODM resulted in the same depositional pattern, although the second run, which assumed a larger mass of high explosive contaminated waste burned, resulted in more extensive deposition than the first run. NMED Ex. 174 at 13-14.

815. The OBODM indicated that there was potential for adverse ecological risk due to dioxin and furan congeners from future operations of the burn units. NMED Ex. 174 at 14.

816. The Applicants conducted separate air modeling to assess the open burning of high explosive waste at TA-16. NMED Ex. 174 at 14.

817. The Applicants used the CALPUFF model, which can estimate concentrations of pollutants from non-steady-state emission sources. NMED Ex. 174 at 14.

818. The CALPUFF model indicated that the primary areas of dispersion and deposition are to the north and east-southeast of the burn units, thus confirming the results of the OBODM model. NMED Ex. 174 at 14.

2. Soil Sampling

819. To verify the results of the air modeling, the Department requested that the Applicants collect discrete surface soil samples for analysis. NMED Ex. 174 at 14.

820. The Applicants collected samples from a total of 36 locations for analysis for dioxin and furan congeners and 31 locations for metals analysis. Concentrations of dioxin and furans as well as metals detected above background levels were plotted on a site map. NMED Ex. 174 at 14.

821. Dioxin or furan congeners were found in each of the 36 samples collected. Mirenda Test. Tr. vol. 6, p. 1404, lines 12-17.

822. The highest concentrations of all data were found to the north and east-southeast of the burn units. The soil data confirmed the deposition pattern predicted by both OBODM and CALPUFF models. NMED Ex. 174 at 14.

823. The depositional pattern of dioxins and furans is consistent with prevailing winds carrying burn products from Structure 16-388 and Structure 16-399. Walton Test. Tr. vol. 11, p. 2748, lines 11-15; Vigil-Holterman Test. Tr. vol. 5, p. 1335, line 12 to p. 1136, line 12.

3. Ecological Risk Assessment

824. The Applicants submitted to the Department a human health and ecological screening risk assessment as part of the permit application for the TA-16 open burn units. Applicants Ex. SS at 1; AR 31731; Applicants Ex. TT.

825. A risk assessment is conducted to assess if constituents in various environmental media could cause harm to humans or animals that come into contact with them. The risk assessment is a tool that provides an understanding of potential risks posed by contamination in the absence of any cleanup or removal. NMED Ex. 174 at 15; Walton Test. Tr. vol. 11, p. 2745, line 21 to p. 2747, line 16.

a. Initial Risk Assessment (June 2009)

826. On June 25, 2009, the Applicants submitted to the Department an Ecological Risk Screening Assessment interpreting the results of the soil sampling. NMED Ex. 72 at 31; *see* AR 31731.

827. The initial screening risk assessment indicated that open burning would not pose a risk to human health above the target levels of 1×10^{-6} excess cancer risk, and 1.0 hazard index. NMED Ex. 174 at 16.

828. In the initial ecological screening assessment the Applicants, through their contractor, focused on four “contaminants of concern”: barium, cadmium, silver, and dioxin/furans. They compared the soil concentrations of these contaminants to ecological screening levels for several indicator species: kestrel, robin, deer mouse, desert cottontail, red fox, Montane shrew, earthworm, and plants. The ecological screening levels are derived from experimentally-determined “no observed adverse effect levels” (“NOAEL”) for those species. NMED Ex. 72 at 31; NMED Ex. 174 at 16-17; Mirenda Test. Tr. vol. 5, p. 1277, lines 14-25.

829. The initial screening assessment indicated that there were elevated hazards, meaning above the target hazard index level of 1.0, for the robin, deer mouse, earthworm, red fox, Montane shrew, and plants. NMED Ex. 72 at 31; NMED Ex. 194 at 14; *see also* Mirenda Test. Tr. vol. 5, p. 1278, lines 5-8.

830. The Applicants were aware by July 6, 2009, if not before, that the risk assessment needed further refinement. Bearzi Test. Tr. vol. 15, p. 4077, line 20 to p. 478, line 1.

831. The July 6, 2009 revised draft permit proposed to prohibit the treatment of wastes capable of producing dioxins in the burn units at TA-16. *See* Finding of Fact #712.

832. The Fact Sheet accompanying the July 2009 revised draft permit cautioned that a conclusive determination whether operation of the open burn units would result in an unacceptable risk due to the release of dioxins and furans could not be made based on available information. It stated:

Department modeling of air emissions indicated that Ecological Screening Levels (ESLs) for certain animal species would be exceeded by the release of furans during open burning. Based on these modeling results, the [Applicants] collected soil samples at five locations near the [open burn] units to determine the current concentrations of furans. Sampling was conducted, and on June 25, 2009 the [Applicants] submitted an Ecological Risk Screening Assessment reporting and interpreting the results of the sampling. The sampling results confirm that furans are present in concentrations that would exceed ESLs. Based on this information

a conclusive determination as to whether operation of the [open burn] units at TA-16 will result in excess ecological risk cannot be made at the time of permit issuance.

NMED Ex. 72 at 31.

833. The Fact Sheet further stated that the Applicants could seek to modify the permit restrictions by conducting a risk assessment “showing that open burning of such wastes [that generate dioxins and furans] will be conducted in a manner that is protective of human health and the environment.” NMED Ex. 72 at 32.

834. The Department believed that a prohibition on treating wastes capable of generating dioxins and furans would effectively prohibit operation of the open burn units at TA-16. NMED Ex. 3 at 73; NMED Ex. 72 at 31.

835. The Applicants understood that a prohibition on treating wastes capable of generating dioxins and furans, if included in the final permit, would effectively prohibit operation of the open burn units at TA-16 without a modification of that permit. Vigil-Holterman Test. Tr. vol. 5, p. 1301, line 22 to p. 1302, line 5.

836. During a November 19, 2009 meeting between the Department and the Applicants, that the draft risk assessment would not be adequate to support operations at TA-16. Vigil-Holterman Test. Tr. vol. 14, p. 3873, line 19 to p. 3875, line 5; *see also* Bearzi Test. Tr. vol. 15, p. 4079, lines 2-11.

b. *First Revised Risk Assessment (January 2010)*

837. On January 8, 2010, the Applicants submitted to the Department a revised Human Health and Ecological Screening Assessment for the TA-16 Burn Ground, Revision 1, interpreting the results of the soil sampling. NMED Ex. 3 at 73-74; *see* Applicants Ex. TT.

838. The Applicants’ revised risk assessment was similar to the initial risk assessment, except that the Applicants applied population area use factors, based on the assumption that the

indicator species spend some time in areas that are not contaminated. *Mirenda Test. Tr. vol. 6, p. 1410, lines 13-19.*

839. The Applicants' revised risk assessment, applying the population area use factors, indicated an elevated hazard for the deer mouse, at a hazard index of 1.9. *NMED Ex. 174 at 17; Mirenda Test. Tr. p. 1417, line 21 to p. 1418, line 2.*

840. The Applicants' revised risk assessment was not adequate to demonstrate that burning of high explosive waste at TA-16 would be protective of the environment. *NMED Ex. 2 at 1, 5-6; NMED Ex. 3 at 76.*

841. The Applicants' risk assessment was incomplete in several respects, resulting in uncertainty as to the ecological risk associated with open burning of high explosive waste at TA-16. *NMED Ex. 2 at 5-6; NMED Ex. 174 at 17-18; Walton Test. Tr. vol. 11, p. 2804, lines 2-5.*

842. The Applicants' risk assessment was incomplete because it did not include a more refined analysis using ecological screening levels based on "lowest observed adverse effect levels" ("LOAEL's"), rather than NOAEL's, for the indicator species. *NMED Ex. 2 at 5-6; NMED Ex. 174 at 17-18; Mirenda Test. Tr. vol. 14, p. 3926, lines 1-4.*

843. The Applicants' risk assessment applied population area use factors based on the assumption that the indicator species spend some time in the defined contaminated area and some time outside that area. The assessment was based on the further assumption that there was no contamination outside the defined contaminated area, although there was no data to support that assumption. *Mirenda Test. Tr. vol. 6, p. 1410, line 13 to p. 1415, line 3.*

844. The Applicants' risk assessment was incomplete because it did not assess the risks associated with organic compounds. *Vigil-Holterman Test. Tr. vol. 6, p. 1477, line 21 to p. 1478, line 11; Walton Test. Tr. vol. 11, p. 2760, line 18 to p. 2761, line 6, p. 2818, lines 9-17.*

845. The Applicants' risk assessment was incomplete because it did not assess the bioavailability of contaminants. NMED Ex. 174 at 20.

846. The Applicants' risk assessment was incomplete because it did not evaluate routes of ingestion of contaminants by indicator species. NMED Ex. 174 at 20.

847. The Applicants' risk assessment was incomplete because it did not evaluate background contamination. Bearzi Test. Tr., vol. 15, p. 4067, line 24 to p. 4068, line 2.

848. The Department can only make permit decisions based on information in the record at the time it makes a decision. It cannot make permit decisions based on unfounded assertions, speculation, or reports, analysis, or tests that have never been submitted to the Department for consideration. Bearzi Test. Tr. vol. 6, p. 1683, line 14 to p. 1683, line 12.

849. During a meeting on January 13, 2010, the Department informed representatives of the Applicants that it intended to deny the permit because the risk assessment was not adequate. Bearzi Test. Tr. vol. 15, p. 4079, line 18 to p. 4080, line 1.

c. Second Revised Risk Assessment (April 2010)

850. Although the Applicants submitted for the record a second revised Ecological Risk Screening Assessment, Revision 2, during the hearing on May 6, 2010, which included an analysis based on LOAEL's, the Applicant's second revised risk assessment contained many of the same deficiencies as the earlier versions. Bearzi Test. Tr. vol. 15, p. 4067, line 5 to p. 4068, line 20; *see* AR.³

³ The Applicants offered the second revised Ecological Risk Screening Assessment, Revision 2, into evidence as Applicants Exhibit HHH on April 9, 2010. The Department objected to admission of the document, as did several other parties, and the Hearing Officer denied its admission. Tr. vol. 5, p. 1287, lines 4-22, p. 1288, lines 2-4, p. 1294, line 1. The Applicants submitted the document to the administrative record as public comment on May 6, 2010. Tr. vol. 14, p. 3929, line 9 to p. 3930, line 16.

4. Burn Temperature

851. During the hearing, the Applicants stated that dioxins and furans would be produced at temperatures above 400 degrees Fahrenheit, but that at temperatures above 1400 degrees Fahrenheit, all dioxins and furans would be destroyed. Applicants Ex. JJ at 13; Vigil-Holterman Test. Tr. vol. 5, p. 1237, lines 1-7.

852. During the hearing, the Applicants introduced temperature data in a document entitled Thermal Data Collection Report from Propane Burners at TA-126-388 (Applicants Exhibit QQ) and stated that the burn units operate at temperatures above 1400 degrees Fahrenheit. Vigil-Holterman Test. Tr. vol. 5, p. 1237, line 8 to p. 1239, line 21; Applicants Ex. QQ.

853. The Applicants' statements that the burn units at TA-16 operate at temperatures above 1400 degrees Fahrenheit and would thus destroy all dioxins and furans are not credible. *See Findings of Fact #764 to #769.*

854. The temperature data show portions of the burn area at temperatures between 400 and 1400 degrees Fahrenheit where dioxins and furans might be generated. Vigil-Holterman Test. Tr. vol. 5, p. 1305, line 25 to p. 1306, line 5; Applicants Ex. QQ.

855. The temperature data show that it took at least ten seconds for the temperature to reach 1400 degrees Fahrenheit. Vigil-Holterman Test. Tr. vol. 5, p. 1496, lines 2-14; Applicants Ex. QQ at 4-5; *see also* Vigil-Holterman Test. Tr. vol. 6, p. 1510, line 25 to p. 1511, line 3.

856. The temperature data were collected during test burns without any waste in the unit, so it might take longer to reach 1400 degrees Fahrenheit during actual waste treatment operations. Vigil-Holterman Test. Tr. vol. 6, p. 1511, lines 14-22.

857. The Department first received the temperature data (Applicants Exhibit QQ) on March 19, 2010, when the Parties exchanged exhibits based on the Hearing Officer's Revised Scheduling and Procedural Order. Vigil-Holterman Test. Tr. vol. 5, p. 1298, lines 15-24; *see* Revised Scheduling and Procedural Order ¶ 6 (Feb. 15, 2010).⁴

858. The Thermal Data Collection Report (Applicants Exhibit QQ) was not part of the Applicants' permit application. Bearzi Test. Tr. vol. 6, p. 1695, lines 7-10.

859. At the time of the hearing, the Department had not yet evaluated the Thermal Data Collection Report (Applicants Exhibit QQ); such evaluation might take weeks or months, and the Department might need to hire a contractor with special expertise to assist in such evaluation. Bearzi Test. Tr. p. 1695, lines 1-18.

D. FAILURE OF APPLICANTS TO DEMONSTRATE THERE ARE NO ALTERNATIVES

860. The Applicants have not demonstrated that there are no alternatives to open burning for the treatment of high explosive hazardous waste that would be more protective of health and the environment than open burning. NMED Ex. 2 at 6; NMED Ex. 3 at 74-76.

861. EPA guidance on open burning provides that the selection and appropriateness of open burning must be based on site-specific considerations of the feasibility of alternative technology. Bearzi Test. Tr. vol. 10, p. 2695, lines 5-25; *see* NMED Ex. 225 at p. 2-9.

862. The Applicants submitted assessments of various alternatives to open burning to the Department in August 2002 and March 2007. Those assessments identified the existence of alternatives, including the shipping of the applicable waste off-site. NMED Ex. 3 at 74; *see* NMED Ex. 94; AR 6371.

⁴ The transcript at page 1298, lines 16-17 reads "March 19 of 2008." It should read "March 19 of 2010."

863. The Applicants' assessments of alternatives to open burning did not take into consideration significant advances in explosive waste treatment technology that has been developed by private industry. Hayes Test. Tr. vol. 13, p. 3402, lines 10-23.

864. Under the hazardous waste regulations at 40 C.F.R. § 264.73(b)(9), the Applicants are required to implement a waste minimization program to reduce the volume and toxicity of hazardous wastes generated to the degree that is economically practicable. NMED Ex. 3 at 74.

865. The Applicants have not provided to the Department sufficient information demonstrating compliance with the requirements for waste minimization for wastes they propose to treat at TA-16 by open burning. NMED Ex. 3 at 75.

866. A substantial portion of the high explosive waste that the Laboratory generates is not detonable and is transported off-site for treatment and disposal. Powell Test. Tr. vol. 14, p. 3796, lines 15-19.

867. Limited categories of high explosive waste that the Laboratory generates cannot be safely shipped off-site. Powell Test. Tr. vol. 14, p. 3796, line 23 to p. 3797, line 14.

868. The first category of high explosive waste that the Laboratory generates that cannot be safely shipped off-site is contaminated equipment, pipes, and ductwork. Powell Test. Tr. vol. 14, p. 3796, line 23 to p. 3797, line 1.

869. The second category of high explosive waste that the Laboratory generates that cannot be safely shipped off-site is waste that does not meet the Department of Transportation requirements for shipment on public roads. Powell Test. Tr. vol. 14, p. 3797, lines 2-4.

870. The third category of high explosive waste that the Laboratory generates that cannot be safely shipped off-site is classified compositions and parts, most of which is generated by the Laboratory's global security work. Powell Test. Tr. vol. 14, p. 3797, lines 5-7.

871. The fourth category of high explosive waste that the Laboratory generates that cannot be safely shipped off-site is machining wastes, saturated filter paper, filter socks, damaged parts, legacy parts, and powders. Powell Test. Tr. vol. 14, p. 3797, lines 8-10.

872. The Laboratory generates under 2000 pounds per year of high explosive waste that cannot be safely shipped off-site. Powell Test. Tr. vol. 14, p. 3800, line 25 to p. 3801, line 1.

873. There are alternative methods, other than open burning, for treating on-site those high explosive wastes that cannot be safely shipped off-site, although such methods are not available on-site at this time. Powell Test. Tr. vol. 14, p. 3808, lines 6-11; *see also* Hayes Test. Tr. vol. 13, p. 3403, lines 9-23.

874. One alternative method for treating on-site those high explosive wastes that cannot be safely shipped off-site is a contained burn system. Hayes Test. Tr. vol. 13, p. 3403, lines 16-23.

875. The Applicants have not applied for a permit to construct a contained burn system at TA-16. *See* NMED Ex. 5.

CONCLUSIONS OF LAW

I. BACKGROUND

A. THE LABORATORY

1. The Laboratory is a “facility” within the meaning of the regulations. 40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC.

2. The Laboratory manages “hazardous waste” within the meaning of the HWA and the regulations. NMSA 1978, § 74-4-3(K); 40 C.F.R. § 261.3 (2009), incorporated by 20.4.1.200 NMAC.

3. The Laboratory manages “mixed waste” within the meaning of RCRA and the regulations. RCRA § 1004(41), 42 U.S.C. § 6903(41).

4. The Laboratory is a facility that engages in “treatment” and “storage” of hazardous wastes and mixed wastes within the meaning of the HWA and the regulations. NMSA 1978, § 74-4-3(P) and (T); 40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC.

5. The Laboratory is a facility that has, in the past, engaged in “disposal” of hazardous waste within the meaning of NMSA 1978, § 74-4-3(E); 40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC.

6. DOE is the “owner” and “operator” of the Laboratory within the meaning of the regulations. 40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC.

7. LANS is the “operator” of the Laboratory within the meaning of the regulations. 40 C.F.R. § 260.10, incorporated by 20.4.1.100 NMAC.

8. DOE and LANS is each a “person” within the meaning of the HWA and the regulations. NMSA 1978, §74-4-3(M); 40 C.F.R. § 260.10, incorporated by 20.4.1.100 NMAC.

9. The federal government, including DOE, has waived its sovereign immunity from the permitting and other requirements, including the enforcement provisions, of federal and state laws governing the management of hazardous and solid waste. RCRA provides, in part, that “[e]ach department, agency, and instrumentality of the executive ...branch[] of the Federal Government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural . . . , respecting control and abatement of

solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements.” RCRA § 6001, 42 U.S.C. § 6961.

10. DOE and LANS are required to obtain a permit for the treatment and storage of hazardous waste at the Laboratory. RCRA § 3005(a), 42 U.S.C. § 6925(a); NMSA 1978, §74-4-4(A)(6).

B. THE DEPARTMENT

11. The Department is an agency of the executive branch of the State of New Mexico, created by statute. NMSA 1978, § 9-7A-6(B)(3) (1991).

12. The Department is authorized to issue hazardous waste permits to facilities that treat, store, or dispose of hazardous waste. NMSA 1978, § 74-4-4.2(C).

13. The Department is authorized to issue a hazardous waste permit “subject to any conditions necessary to protect human health and the environment for the facility.” NMSA 1978, § 74-4-4.2(C).

14. The Department’s interpretation of the HWA and the hazardous waste regulations is entitled to “substantial weight.” *Sierra Club v. N.M. Mining Comm’n*, 2001-NMCA-047, ¶ 17, 130 N.M. 497, 501, 27 P.3d 984, 988.

15. The Department is entitled to “a heightened degree of deference” regarding “legal questions that implicate special agency expertise or the determination of fundamental policies within the scope of the agency’s statutory function.” *Sierra Club v. N.M. Mining Comm’n*, 2003-NMSC-005, ¶ 25, 133 N.M. 97, 106, 61 P.3d 806, 815.

C. THE HAZARDOUS WASTE ACT

16. The purpose of the HWA “is to help ensure the maintenance of the quality of the state’s environment, to confer optimum health, safety, comfort and economic and social well-being on its inhabitants, and to protect the proper utilization of its lands. NMSA 1978, § 74-4-2.

17. The corrective action and closure provisions of the HWA are remedial in nature and should be liberally construed. *Cf. United States v. Aceto Agric. Chems. Corp.*, 872 F.2d 1373, 1383 (7th Cir. 1989) (RCRA “is a remedial statute which should be liberally construed.”).

D. PROCEDURAL HISTORY

18. The Department provided the public, including the Applicants with notice of the proposed permit in accordance with the regulations at section 20.4.1.901.A and C NMAC.

19. The Department provided the public, including the Applicants an opportunity to comment on the proposed permit in accordance with the regulations at section 20.4.1.901.A NMAC.

20. Because the Department received a timely request for a public hearing on the proposed permit, and the requests were not withdrawn, a public hearing is required. 20.4.1.901.A(5)(b) NMAC.

21. Because the Department Secretary determined that there was significant public interest and a hearing should be held on the intent to deny the permit for open burning of hazardous waste at TA-16, a public hearing is required. 20.4.1.901.A(5) NMAC.

22. The Department provided the public, including the Applicants with notice of the public hearing in accordance with the regulations at sections 20.4.1.901.F NMAC and 20.1.4.200 NMAC.

23. The Department held a hearing on the proposed permit in accordance with the regulations at sections 20.4.1.901.F NMAC and 20.1.4.400 NMAC.

II. THE PROPOSED PERMIT

A. INTRODUCTION

24. The Department is authorized to issue hazardous waste permits subject to any terms or conditions necessary to achieve compliance with RCRA, the HWA, or the hazardous waste regulations. 40 C.F.R. § 270.32(b)(1) (2009), incorporated by 20.4.1.900 NMAC.

25. The Department is authorized to issue hazardous waste permits subject to any conditions necessary to protect human health and the environment. NMSA 1978, § 74-4-4.2(C); 40 C.F.R. § 270.32(b)(2) (2009), incorporated by 20.4.1.900 NMAC.

26. The Applicants have the burden of proof that the permit should be issued and not denied. This burden does not shift. 20.1.4.400.A(1) NMAC.

27. The Applicants have generally met their burden of demonstrating that the permit should be issued for the hazardous waste container storage unit at TA-3, the hazardous waste container storage units at TA-50; the hazardous waste container storage units at TA-54; the hazardous waste container storage units at TA-55; the hazardous waste storage tank at TA-55; and the hazardous waste treatment unit at TA-55.

28. The Department has the burden of proof for a challenged permit condition that the Department has proposed. 20.1.4.400.A(1) NMAC.

29. A party that contends that a permit condition is improper, inadequate, or invalid has the burden of going forward to present an affirmative case on the challenged condition. 20.1.4.400.A(1) NMAC.

B. PART 1 OF THE PROPOSED PERMIT

30. Section 1.1 of the Proposed Permit (Authority) is a reasonable provision that sets forth the Department's authority.

31. Section 1.1 of the Proposed Permit is authorized by the HWA, NMSA 1978, § 74-4-4.2.

32. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.1 of the Proposed Permit. Second Step.

33. Section 1.2 of the Proposed Permit (Permittees and Permitted Activities) is a reasonable provision that identifies the Permittees and the permitted activities.

34. Section 1.2 of the Proposed Permit is authorized by 40 C.F.R. § 270.13, incorporated by 20.4.1.900 NMAC.

35. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.2 of the Proposed Permit. Second Step.

36. Section 1.3 of the Proposed Permit (Citations) is a reasonable provision that explains the citation system in the permit.

37. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.3 of the Proposed Permit. Second Step.

38. Section 1.4 of the Proposed Permit (Effect of Permit) is a reasonable and necessary condition that sets forth the effect of the permit with respect to compliance with the hazardous waste laws and regulations.

39. Section 1.4 of the Proposed Permit is authorized by 40 C.F.R. §§ 270.4, 270.30(g), and 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

40. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.4 of the Proposed Permit. Second Stip.

41. Section 1.5 (Effect of Inaccuracies in Permit Application) of the Proposed Permit is a reasonable and necessary condition that provides that any inaccuracies in the permit application may result in termination, revocation and reissuance, or modification of the permit.

42. Section 1.5 of the Proposed Permit is authorized by the HWA, NMSA 1978, § 74-4-4.2(D)(1); 40 C.F.R. §§ 270.32(b), 270.41, and 270.43 (2009), incorporated by 20.4.1.900 NMAC.

43. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.5 of the Proposed Permit. Second Stip.

44. Section 1.6 of the Proposed Permit (Permit Actions) is a reasonable and necessary condition that provides that the duration of the permit shall be for ten years; that they may be modified; that the permit may be suspended, terminated, or revoked and reissued for cause; that the permit will remain in effect after the expiration date if the Permittees submit a timely and complete renewal application; and that the Department may review and amend the closure and post-closure care requirements of the permit. , or modification of the permit.

45. Section 1.6 of the Proposed Permit is authorized by the HWA, NMSA 1978, § 74-4-4.2(D); 40 C.F.R. §§ 270.10(h), 270.30(f), 270.32(b), 270.41, 270.42, and 270.43, 270.50(a) (2009), and 270.51, incorporated by 20.4.1.900 NMAC.

46. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.6 of the Proposed Permit. Second Stip.

47. Section 1.7 of the Proposed Permit (Severability) is a reasonable and necessary condition that provides that the provisions of the permit are severable.

48. Section 1.7 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

49. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.7 of the Proposed Permit. Second Stip.

50. Section 1.8 of the Proposed Permit (Definitions) is a reasonable and necessary provision that sets forth the definitions of certain terms used in the permit.

51. Section 1.8 of the Proposed Permit is authorized by 40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC; and 40 C.F.R. §§ 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

52. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.8 of the Proposed Permit. Second Stip.

53. The Applicants stipulate that they agree to the terms of Section 1.8 of the Proposed Permit, except for the definition of “Permitted Unit.” Second Stip.

54. Concerned Citizens for Nuclear Safety stipulates that it agrees to the terms of Section 1.8 of the Proposed Permit, except for the definitions of “Active Portion,” “Aquifer,” “Groundwater,” “Partial Closure,” “Permitted Unit,” and “Representative Sample.” Second Stip.

55. Section 1.9 of the Proposed Permit (Duties and Requirements) sets forth reasonable and necessary conditions providing that the Permittees have a duty to comply with the permit; that failure to comply with the permit may subject the Permittees to an enforcement action including the assessment of civil penalties; that the Permittees may not transfer the permit without Department approval; that the need to halt or limit permitted activities to maintain compliance is not a defense; that the Permittees have a duty to mitigate releases of hazardous waste and hazardous constituents into the environment; that the Permittees have a duty properly to operate and maintain pollution control and treatment facilities; that the Permittees must furnish relevant information to the Department upon request; that the Permittees must allow Department representatives access to the facility for inspections; that environmental samples the Permittees collect must be representative; that the Permittees must report to the Department planned changes in the facility, anticipated non-compliance, and existing or past noncompliance; that the Permittees must correct any omissions or inaccuracies in documents submitted to the Department; that the Permittees must sign and certify as accurate all applications, reports, or other documents submitted to the Department; that submissions to the Department must be sent to the Chief of the Hazardous Waste Bureau; that documents submitted to the Department under the permit are subject to Department approval; that the Permittees may request extensions of time on permit deadlines for good cause; that the Permittees may claim that documents or information submitted to the Department is confidential; and that the Permittees must obtain a modified permit to manage hazardous waste in a new management unit.

56. Section 1.9 of the Proposed Permit is authorized by the HWA, NMSA 1978, §§ 74-4-4.2 and 74-4-4.3; RCRA § 3007(a), 42 U.S.C. § 6927(a); 40 C.F.R. § 260.2 (2009), incorporated by 20.4.1.100 NMAC; 40 C.F.R. §§ 264.12(c) and 264.74(a) (2009), incorporated

by 20.4.1.500 NMAC; and 40 C.F.R. §§ 270.12, 270.30(c), (d), (e), (h), (i), (k), and (l), 270.32(b), 270.41, and 270.43 (2009), incorporated by 20.4.1.900 NMAC.

57. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.9 of the Proposed Permit. Second Step.

58. Section 1.10 of the Proposed Permit (Information Repository) is a reasonable and necessary condition that requires the Permittees to establish an information repository for use by the public.

59. Section 1.10 of the Proposed Permit is authorized by 40 C.F.R. § 124.33(d) (2009), incorporated by 20.4.1.901.E; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

60. Section 1.11 of the Proposed Permit (General Documents and Information to be Retained at the Facility) is a reasonable and necessary condition that requires the Permittees to maintain at the Laboratory copies of the permit, a topographic map of the Laboratory, the Waste Analysis Plan, the Inspection Plan; and emergency response agreements.

61. Section 1.11 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.13(b) and 264.15(b) (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. §§ 270.13(l) and 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

62. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.11 of the Proposed Permit. Second Step.

63. Section 1.12 of the Proposed Permit (Community Relations Plan) is a reasonable and necessary condition that requires the Permittees to establish and carry out a community

relations plan to inform nearby communities and members of the public of permit-related activities.

64. Section 1.12 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.13(b) and 264.15(b) (2009), incorporated by 20.4.1.500 NMAC; and C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

65. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.12 of the Proposed Permit. Second Stip.

66. Section 1.13 of the Proposed Permit (Public Notification Via Electronic Mail) is a reasonable and necessary condition that requires the Permittees to issue notice via electronic mail (e-mail) of the submittal to the Department of specific documents of interest to the public.

67. Section 1.13 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

68. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.13 of the Proposed Permit. Second Stip.

69. Section 1.14 of the Proposed Permit (Dispute Resolution) is a reasonable and necessary provision that establishes a procedure for the resolution of disputes that arise under the permit.

70. Section 1.14 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

71. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.14 of the Proposed Permit. Second Step.

72. Section 1.15 of the Proposed Permit (Compliance Schedule) is a reasonable and necessary condition that requires the Permittees to submit documents and perform other actions under the permit according to the schedule in Attachment I of the Proposed Permit.

73. Section 1.15 of the Proposed Permit is authorized by 40 C.F.R. §§ 270.32(b) and 270.33(a) (2009), incorporated by 20.4.1.900 NMAC.

74. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.15 of the Proposed Permit. Second Step.

75. Section 1.16 of the Proposed Permit (Transfer of Land Ownership) is a reasonable and necessary condition that requires the Permittees to give the Department notice before the planned transfer of ownership of Laboratory land, including in the notice a description of the property, identify the transferee, and a summary of remedial actions taken at the property.

76. Section 1.16 of the Proposed Permit is authorized by CERCLA § 120(h), 42 U.S.C. § 9620(h); and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

77. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.16 of the Proposed Permit. Second Step.

78. Section 1.17 of the Proposed Permit (Notice of Demolition Activities) is a reasonable and necessary condition that requires the Permittees to provide the Department with a

notice in the form of a list of buildings and other fixed structures that may contain hazardous material scheduled to be demolished in the following federal fiscal year.

79. Section 1.17 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

80. Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 1.17 of the Proposed Permit. Second Stip.

81. The Applicants have not objected to Section 1.17 of the Proposed Permit, as revised. *See* Finding of Fact #196.

82. No party has met the burden of showing that any condition in Part 1 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

C. PART 2 OF THE PROPOSED PERMIT

83. Section 2.1 of the Proposed Permit (Design, Construction, Operation, and Maintenance of the Facility) is a reasonable and necessary condition that requires the Permittees to design, construct, operate, and maintain the Laboratory to minimize the possibility of fire, explosion, or release of hazardous waste or hazardous constituents into the environment.

84. Section 2.1 of the Proposed Permit is authorized by 40 C.F.R. § 264.31 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

85. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.1 of the Proposed Permit. Second Stip.

86. Section 2.2 of the Proposed Permit (Authorized Wastes) is a reasonable and necessary condition that requires the Permittees to store only those hazardous wastes that are identified in the Part A Permit Application (Attachment B to the Proposed Permit); places conditions on the management at the Laboratory of hazardous wastes from off-site sources; prohibits the management at the Laboratory of hazardous wastes from foreign sources; and restricts the storage at the Laboratory of wastes containing PCB's except in compliance with the applicable regulations.

87. Section 2.2 of the Proposed Permit is authorized by 40 C.F.R. § 268.50(f) (2009), incorporated by 20.4.1.800 NMAC; 40 C.F.R. 270.13(j), and 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

88. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.1 of the Proposed Permit. Second Stip.

89. Section 2.3 of the Proposed Permit (Land Disposal Restrictions) is a reasonable and necessary condition that requires the Permittees to comply with the land disposal restrictions requirements of the regulations, including a limitation on the duration of hazardous waste storage; a prohibition on dilution as a substitute for treatment; and a requirement to document the basis for any exemption or exclusion.

90. Section 2.3 of the Proposed Permit is authorized by 40 C.F.R. §§ 268.3, 268.7(a)(7), and 268.50(a) (2009), incorporated by 20.4.1.800 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

91. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.3 of the Proposed Permit. Second Stip.

92. Section 2.4 of the Proposed Permit (Waste Analysis) is a reasonable and necessary condition that requires the Permittees to analyze and characterize waste generated at the Laboratory and waste received at the Laboratory from off-site.

93. Section 2.4 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.13, 264.17, 264.72, 264.177, 264.193(c)(1), 264.198, 264.199, 264.1080(b), 264.1082(c), and 264.1083(a) (2009), incorporated by 20.4.1.500 NMAC; 40 C.F.R. §§ 268.7(a) and (b), and 268.48 (2009), incorporated by 20.4.1.800 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

94. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.4 of the Proposed Permit. Second Stip.

95. Section 2.5 of the Proposed Permit (Security) is a reasonable and necessary condition that requires the Permittees to limit the unauthorized entry of persons or livestock onto the permitted units at the Laboratory through measures including 24-hour surveillance and controlled entry.

96. Section 2.5 of the Proposed Permit is authorized by 40 C.F.R. § 264.14 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

97. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.5 of the Proposed Permit. Second Stip.

98. Section 2.6 of the Proposed Permit (General Inspection Requirements) is a reasonable and necessary condition that requires the Permittees to inspect all the permitted units for malfunctions, deterioration, operator errors, and discharges which may result in a release of hazardous constituents to the environment or a threat to human health.

99. Section 2.6 of the Proposed Permit is authorized by 40 C.F.R. § 264.15 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

100. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.6 of the Proposed Permit. Second Stip.

101. Section 2.7 of the Proposed Permit (Personnel Training) is a reasonable and necessary condition that requires the Permittees to ensure that all Laboratory personnel who are involved in hazardous waste management successfully complete required training programs.

102. Section 2.7 of the Proposed Permit is authorized by 40 C.F.R. § 264.16 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

103. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.7 of the Proposed Permit. Second Stip.

104. Section 2.8 of the Proposed Permit (Special Requirements for Ignitable, Reactive, or Incompatible Wastes) is a reasonable and necessary condition that requires the Permittees to manage ignitable, reactive, and incompatible wastes properly; to take precautions to prevent the generation of extreme heat or pressure, fires, explosions, violent reactions, the generation of toxic fumes or mist, or damage to the structural integrity of the waste container or tank; and to keep such wastes at least fifteen meters from the facility boundary.

105. Section 2.8 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.17, 264.176, 264.177, 264.198, and 264.199 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

106. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.8 of the Proposed Permit. Second Stip.

107. Section 2.9 of the Proposed Permit (Waste Minimization) is a reasonable and necessary condition that requires the Permittees to implement and maintain a waste minimization program to reduce the volume and toxicity of hazardous wastes generated at the Laboratory.

108. Section 2.9 of the Proposed Permit is authorized by 40 C.F.R. § 264.73(b)(9) (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

109. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.9 of the Proposed Permit. Second Stip.

110. Section 2.10 of the Proposed Permit (Preparedness and Prevention) is a reasonable and necessary condition that requires the Permittees to maintain and operate the

permitted units in a manner that minimizes the possibility of a fire, explosion, or release of hazardous constituent to the environment or that otherwise might threaten human health.

111. Section 2.10 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.31 and 264.37, incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

112. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.9 of the Proposed Permit. Second Stip.

113. The Applicants have not objected to Section 2.10 of the Proposed Permit, as revised. *See* Finding of Fact #270.

114. Section 2.11 of the Proposed Permit (Contingency Plan) is a reasonable and necessary condition that requires the Permittees to maintain a contingency plan for the Laboratory.

115. Section 2.11 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.51(b), 264.54, 264.55, and 264.56 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

116. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.11 of the Proposed Permit. Second Stip.

117. Section 2.12 of the Proposed Permit (Recordkeeping and Reporting) is a reasonable and necessary condition that requires the Permittees to maintain a contingency plan for the Laboratory.

118. Section 2.12 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.71, 264.72, 264.73, 264.74, 264.75, and 264.76 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

119. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 2.12 of the Proposed Permit. Second Stip.

120. Part 2 of the Proposed Permit with the deletion of the financial assurance provisions in Permit Sections 2.12.2(8), 2.13, 2.14, 2.15 and 2.16 meets the applicable requirements of the regulations, including 40 CFR Part 264 Subparts B through E and is protective of human health and the environment.

121. DOE is the owner and co-operator of the Los Alamos National Laboratory.

122. DOE is exempt from the financial requirements of 40 CFR Part 264 Subpart H.

123. The requirements of 40 CFR Part 264, Subpart H are met when either the owner or the operator has met them.

124. The requirements of §§ 264.142, 264.143, 264.145, 264.147(a) and (b), and 264.148 have been met by DOE.

125. Federal facilities are exempt from the financial assurance requirements of 40 CFR Part 264 Subpart H.

126. NMED is prohibited by Section 220 of P.L. 106-113 from imposing the financial requirements of 40 CFR, Subpart H on LANS, a federal government contractor.

127. By imposing the requirements of Subpart H on LANS when DOE has already fully complied with the requirements, New Mexico is imposing more stringent regulations than those adopted by EPA or the EIB.

128. NMED has not demonstrated that there is a public policy basis for imposing financial assurance against LANS.

129. The imposition of financial assurance for activities being conducted under the Consent Order is a violation of the specific terms of the Consent Order.

130. NMED has not met its burden of proof for imposing financial assurance requirements against LANS.

D. PART 3 OF THE PROPOSED PERMIT

131. Section 3.1 of the Proposed Permit (General Conditions) is a reasonable and necessary condition that requires the Permittees generally to comply with the regulations at 40 C.F.R. Part 264, Subpart I; to store only those hazardous wastes identified in Proposed Permit Attachment B (Part A Application); and to ensure that the maps of the storage areas in Permit Attachment N accurately depict the location of all buildings and structures at the storage areas, and are kept up to date.

132. Section 3.1 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.148, 264.170 to 264.179 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

133. Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.1 of the Proposed Permit. Second Stip.

134. Section 3.2 of the Proposed Permit (Condition of Containers) is a reasonable and necessary condition that requires the Permittees to ensure that all containers used to store hazardous waste are in good condition.

135. Section 3.2 of the Proposed Permit is authorized by 40 C.F.R. § 264.171 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

136. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.2 of the Proposed Permit. Second Stip.

137. Section 3.3 of the Proposed Permit (Acceptable Storage Containers) is a reasonable and necessary condition that requires the Permittees to use containers that meet the requirements of EPA and Department of Transportation regulations, and to wrap oversized items, such as glove boxes, in plastic.

138. Section 3.3 of the Proposed Permit is authorized by 40 C.F.R. § 264.31 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

139. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.3 of the Proposed Permit. Second Stip.

140. Section 3.4 of the Proposed Permit (Compatibility of Waste Containers) is a reasonable and necessary condition that requires the Permittees to use containers that are made of or lined with materials that will not react with the wastes placed in the container.

141. Section 3.4 of the Proposed Permit is authorized by 40 C.F.R. § 264.172 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

142. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.4 of the Proposed Permit. Second Stip.

143. Section 3.5 of the Proposed Permit (Management of Containers) is a reasonable and necessary condition that requires the Permittees to take precautions in managing containers, including requirements to keep storage containers closed; to avoid handling containers in a manner that may cause them to leak or rupture; to mark the boundaries of permitted container storage units; to elevate drums stored in movable buildings; to record the movement of containers in a storage area; to maintain adequate aisle space in container storage areas; to stack containers no more than three levels high; to place stacked containers on pallets and bind them together; to store containers a minimum of five feet from the perimeter fence and a minimum of five feet from a roadway or a permanent structure to store gas cylinders containing hazardous waste in racks, baskets, or special pallets that provide support and restraint; and to ensure that containers stored outside are protected from the weather.

144. Section 3.5 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.31, 264.34, 264.35, 264.173(a) and (b), and 264.175(b)(2) (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

145. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.5 of the Proposed Permit. Second Stip.

146. Section 3.6 of the Proposed Permit (Waste Container Labeling) is a reasonable and necessary condition that requires the Permittees to label containers storing hazardous waste as “hazardous waste”; to label containers holding mixed waste as “radioactive”; to label

containers holding liquids as “free liquids”; and to include on the label the generator’s name, address, and EPA identification number; all applicable EPA hazardous waste numbers; and the date when the container was placed in storage.

147. Section 3.6 of the Proposed Permit is authorized by 40 C.F.R. § 262.34(a)(2), (3), incorporated by 20.4.1.300 NMAC; 40 C.F.R. § 264.177(c)264.172 (2009), incorporated by 20.4.1.500 NMAC; 40 C.F.R. § 268.50(a)(2)(i) (2009), incorporated by 20.4.1.800 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

148. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.6 of the Proposed Permit. Second Stip.

149. Section 3.7 of the Proposed Permit (Containment Systems) is a reasonable and necessary condition that requires the Permittees to implement secondary containment systems for containers storing hazardous waste, especially containers holding free liquids.

150. Section 3.7 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.15(c), 264.31, and 264.175 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

151. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.7 of the Proposed Permit. Second Stip.

152. Section 3.8 of the Proposed Permit (Inspection Schedules and Procedures) is a reasonable and necessary condition that requires the Permittees to inspect container storage units weekly for evidence of leaks or deterioration.

153. Section 3.8 of the Proposed Permit is authorized by 40 C.F.R. § 264.174 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

154. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.8 of the Proposed Permit. Second Step.

155. Section 3.9 of the Proposed Permit (Volatile Organic Air Emissions) is a reasonable and necessary condition that requires the Permittees to control emissions of volatile organic compounds from containers in accordance with the regulations.

156. Section 3.9 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.1080 to 1090 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

157. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.9 of the Proposed Permit. Second Step.

158. Section 3.10 of the Proposed Permit (TA-3 Container Storage Requirements) is a reasonable and necessary condition that requires the Permittees to store hazardous waste at TA-3 only in three specified rooms, and to paint the floors of these rooms with epoxy sealant.

159. Section 3.10 of the Proposed Permit is authorized by 40 C.F.R. § 264.175(b)(1) (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

160. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.9 of the Proposed Permit. Second Stip.

161. Section 3.11 of the Proposed Permit (TA-50 Container Storage Requirements) is a reasonable and necessary condition that requires the Permittees to store hazardous or mixed waste at TA-50 only in two specified rooms and in an outdoor storage area; to avoid storing ignitable waste inside glove boxes at TA-50; to maintain a fire access lane between the permitted units at TA-50; to avoid loading or unloading hazardous waste at TA-50 during precipitation events; and to prevent surface water run-on to the container storage units at TA-50.

162. Section 3.11 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

163. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.11 of the Proposed Permit. Second Stip.

164. Section 3.12 of the Proposed Permit (TA-54 Container Storage Requirements) is a reasonable and necessary condition that requires the Permittees to store hazardous or mixed waste at TA-54 only at the permitted unit at Area L, the nine permitted units at Area G, and the four permitted units at TA-54 West; and to take various measures to ensure that hazardous wastes stored at TA-54 are contained, *viz.*, to use proper containers, to use secondary containment pallets, to repair and maintain containment structures, to apply sealants, to remove standing liquids, to prevent run-on and runoff; and to conduct inspections of the containment structures.

165. Section 3.12 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.31 and 264.175 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

166. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.12 of the Proposed Permit. Second Step.

167. Section 3.13 of the Proposed Permit (TA-55 Container Storage Requirements) is a reasonable and necessary condition that requires the Permittees to store hazardous or mixed waste at TA-55 only at seven specified storage units.

168. Section 3.13 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

169. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 3.13 of the Proposed Permit. Second Step.

170. No party has met the burden of showing that any condition in Part 3 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

E. PART 4 OF THE PROPOSED PERMIT

171. Section 4.1 of the Proposed Permit (General Operating Conditions) is a reasonable and necessary condition that requires the Permittees generally to comply with the regulations at 40 C.F.R. Part 264, Subpart J for the storage of mixed waste in tanks, and the regulations at 40 C.F.R. Part 264, Subpart X for the treatment of mixed waste in tanks; to store hazardous waste only in designated storage tank systems identified in Proposed Permit Attachment J (Hazardous Waste Management Units); to store no more waste than the maximum

capacity of a given storage area; to store and treat in tank systems only those hazardous wastes identified in Proposed Permit Attachment B (Part A Application); to ensure that wastes or reagents are not placed in the storage tank or stabilization units if they could cause the units to rupture, leak, corrode, or otherwise fail.

172. Section 4.1 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.175, 264.190 to 264.200, and 264.600 to 264.603 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

173. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 4.1 of the Proposed Permit. Second Stip.

174. Section 4.2 of the Proposed Permit (Existing Tank System Integrity) is a reasonable and necessary condition that requires the Permittees to maintain in the facility operating record the written integrity assessments of all tank unit systems.

175. Section 4.2 of the Proposed Permit is authorized by 40 C.F.R. § 264.191 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

176. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 4.2 of the Proposed Permit. Second Stip.

177. Section 4.3 of the Proposed Permit (Replacement Tank System and Stabilization Unit Components) is a reasonable and necessary condition that requires the Permittees to repair the tank system and stabilization unit in accordance with the regulations, or to close the unit; to ensure that any repair or replacement of these units is performed properly to prevent damage to

the units; to ensure that any repair or replacement of these units is inspected by a trained, registered engineer; to test any repaired or replaced tanks for tightness prior to use; and to certify that the repaired or replaced system can receive wastes without releasing waste into the environment for the intended life of the system.

178. Section 4.3 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.192, 264.196(e) and (f), and 264.197 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

179. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 4.3 of the Proposed Permit. Second Stip.

180. Section 4.4 of the Proposed Permit (Tank Systems and Stabilization Unit Containment) is a reasonable and necessary condition that requires the Permittees to ensure that tank and stabilization units have an associated secondary containment system; to use appropriate controls to prevent spills and overflows from the tank and stabilization units; to remove accumulated liquids from the secondary containment system within 24 hours of detection; to install and maintain secondary containment systems comprised of sealants in accordance with the sealant manufacturer's recommendations and to maintain supporting documents in the facility operating record; to re-seal such secondary containment systems if the manufacturer's recommendations have not been retained; to ensure that all tank and stabilization unit ancillary equipment has secondary containment; to inspect above ground waste piping for leaks each operating day; to remove from service any storage tank unit, stabilization unit, or containment system from which there has been a leak or spill or which is otherwise unfit for use; to report to

the Department any release to the environment of waste from a storage tank or stabilization unit; and to give notice to persons on the e-mail notification list by e-mail of the report.

181. Section 4.4 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.193, 264.194(b), 264.196, and 264.601 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

182. The Applicants, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 4.4 of the Proposed Permit. Second Stip.

183. Section 4.5 of the Proposed Permit (Ignitable, Reactive, or Incompatible Wastes) is a reasonable and necessary condition that requires the Permittees to avoid managing ignitable or reactive wastes in the mixed waste storage tank and stabilization units; and to avoid placing incompatible wastes or other materials in the mixed waste storage tank and stabilization units.

184. Section 4.5 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.199 and 264.601 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

185. The Applicants, Concerned Citizens for Nuclear Safety, Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 4.5 of the Proposed Permit. Second Stip.

186. Section 4.6 of the Proposed Permit (Radioactive Liquid Waste Treatment Facility) is a reasonable and necessary condition that requires the Permittees to discharge all treated wastewater from the TA-50 Radioactive Liquid Waste Treatment Facility (“Treatment Facility”) through the outfall permitted under section 402 of the federal Clean Water Act, or as otherwise authorized by the terms of an applicable Clean Water Act permit that regulates the treatment and

use of wastewater; further provides that if the Permittees intentionally discharge through a location other than the permitted outfall, they will fail to comply with this requirement, and as a consequence the wastewater treatment unit exemption under 40 C.F.R. § 264.1(g)(6) will no longer apply to the Treatment Facility; and prohibits the Permittees from accepting listed hazardous wastes as specified at 40 C.F.R. part 261, subpart D at the Treatment Facility.

187. Section 4.6 of the Proposed Permit is authorized by 40 C.F.R. § 264.1(g)(6), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

188. The State and federal regulations include an exemption for the “owner or operator of . . . a wastewater treatment unit as defined in § 260.10 of this chapter.” 40 C.F.R. § 264.1(g)(6) (2009), incorporated by 20.4.1.500 NMAC.

189. The regulations define “wastewater treatment unit” as:

[A] device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either section 402 or 307(b) of the Clean Water Act; and

(2) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in § 261.3 of this chapter, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in § 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in § 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in § 260.10 of this chapter.

40 C.F.R. § 260.10 (2009), incorporated by 20.4.1.100 NMAC.

190. The purpose of the wastewater treatment unit exemption in 40 C.F.R. § 264.1(g)(6), incorporated by 20.4.1.500 NMAC, is to avoid duplicative regulation, under the Hazardous Waste Act (or RCRA) and Clean Water Act, of a single wastewater treatment facility.

191. “The underlying assumption used in justifying the wastewater treatment unit exemption was that tanks used to handle hazardous wastewaters at these facilities would be provided with EPA oversight under the Clean Water Act, thereby ensuring no significant decrease in environmental control afforded at these facilities.” NMED Ex. 77.

192. Under the wastewater treatment unit exemption in 40 C.F.R. § 264.1(g)(6), incorporated by 20.4.1.500 NMAC, the wastewater treatment unit must discharge treated wastewater exclusively through the Clean Water Act-regulated outfall, and diversion to other points of discharge voids the exemption. *See* NMED Ex. 78; NMED Ex. 79; NMED Ex. 80; Findings of Fact #465, #466.

193. EPA’s interpretation of the wastewater treatment unit exemption in 40 C.F.R. § 264.1(g)(6) is entitled to considerable weight. *Chevron U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 844 (1984), *reh’g denied*, 468 U.S. 1227 (1984).

194. The Department’s interpretation of the wastewater treatment exemption in the hazardous waste regulations is entitled to “substantial weight.” *Sierra Club v. N.M. Mining Comm’n*, 2001-NMCA-047, ¶ 17, 130 N.M. 497, 501, 27 P.3d 984, 988; *see* Conclusion of Law #14.

195. The Department’s interpretation of the wastewater treatment exemption in the hazardous waste regulations is a “legal question[] that implicate[s] special agency expertise [and] the determination of fundamental policies within the scope of the agency’s statutory function,” and it is therefore entitled to “a heightened degree of deference” *Sierra Club v. N.M. Mining Comm’n*, 2003-NMSC-005, ¶ 25, 133 N.M. 97, 106, 61 P.3d 806, 815; *see* Conclusion of Law #15.

196. Based on the record, the Department in its discretion could reasonably conclude that the Treatment Facility is no longer subject to the wastewater treatment unit exemption. *See* Findings 467-479.

197. If the Treatment Facility were used to treat listed waste, the treated effluent would remain hazardous waste. 40 C.F.R. § 261.3(c)(1) (2009), incorporated by 20.4.1.200 NMAC.

198. No party has met the burden of showing that any condition in Part 4 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

F. PART 9 OF THE PROPOSED PERMIT

199. Section 9.1 of the Proposed Permit (Introduction) is a reasonable and necessary condition that requires the Permittees to close permitted storage and treatment units at the Laboratory in accordance with the requirements of 40 C.F.R. §§ 264.110 through 264.116, 264.178, and 264.197.

200. Section 9.1 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.110 through 264.116, 264.178, and 264.197 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

201. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 9.1 of the Proposed Permit. Second Stip.

202. Section 9.2 of the Proposed Permit (Closure Performance Standards) is a reasonable and necessary condition that specifies the closure performance standards for clean closure of permitted units at the Laboratory; and also specifies the closure performance standards for indoor and outdoor units if clean closure cannot be achieved.

203. Section 9.2 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.110(c), 264.111, 264.112 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

204. Nuclear Watch New Mexico stipulates that it agrees to the terms of Section 9.2 of the Proposed Permit. Second Stip.

205. Section 9.3 of the Proposed Permit (Closure Requirements for Regulated Units) is a reasonable and necessary condition that provides that closure of the regulated units, MDA G, MDA H, and MDA I, is governed by the March 1, 2005 Consent Order.

206. Section 9.3 of the Proposed Permit is authorized by 40 C.F.R. § 264.110(c) (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

207. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 9.3 of the Proposed Permit. Second Stip.

208. MDA G, MDA H, and MDA L is each a regulated unit within the meaning of the regulations at 40 C.F.R. § 264.90(a)(2) (2009), incorporated by 20.4.1.500 NMAC.

209. The March 1, 2005 Consent Order is an enforceable document within the meaning of the regulations at 40 C.F.R. § 270.1(c)(7) (2009), incorporated by 20.4.1.900 NMAC.

210. The Consent Order by its express terms can be enforced through an action for injunctive relief or civil penalties, or through stipulated penalties, or through an action to address an emergency situation. NMED Ex. 26 §§ III.G, III.T, III.U.

211. The Department has the enforcement authority set forth in the regulations at 40 C.F.R. § 271.17(e) (2009), incorporated by 20.4.1.1000 NMAC.

212. The Department has the statutory authority to assess civil penalties for violations of the HWA or the regulations under the HWA. NMSA 1978, § 74-4-10(C).

213. The Department has the statutory authority to issue an administrative order or seek injunctive relief for violations of the HWA or the regulations under the HWA. NMSA 1978, § 74-4-10(A).

214. The Department has the statutory authority to issue an administrative order or to seek injunctive relief to address an imminent and substantial endangerment under the authority of the HWA. NMSA 1978, §§ 74-4-13(A).

215. The Department has the statutory authority to assess civil penalties for violations of an imminent hazard order under the HWA. NMSA 1978, § 74-4-13(B).

216. Section 9.4 of the Proposed Permit (Closure Requirements for Indoor and Outdoor Units) is a reasonable and necessary condition that sets forth the closure requirements for indoor and outdoor units, including the schedule for closure; procedures for decontamination of surfaces, structures, and equipment; soil sampling; management of wastes generated during closure; a records review; a structural assessment; and a closure plan.

217. Section 9.4 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.112, 264.113, and 264.114 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

218. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 9.4 of the Proposed Permit. Second Stip.

219. Section 9.5 of the Proposed Permit (Closure Certification Report to the Department) is a reasonable and necessary condition that requires the Permittees, upon

completion of closure, to submit a closure report to the Department, describing all activities undertaken during closure.

220. Section 9.5 of the Proposed Permit is authorized by 40 C.F.R. § 264.115 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

221. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 9.4 of the Proposed Permit. Second Stip.

222. No party has met the burden of showing that any condition in Part 9 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

G. PART 10 OF THE PROPOSED PERMIT

223. Section 10.1 of the Proposed Permit (Post-Closure Care) is a reasonable and necessary condition that requires the Permittees to conduct post-closure care activities in accordance with the regulations, and provides for a post-closure plan.

224. Section 10.1 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.117 to 264.120 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

225. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 10.1 of the Proposed Permit. Second Stip.

226. Section 10.2 of the Proposed Permit (Notices and Certifications) is a reasonable and necessary condition that requires the Permittees to maintain records and, upon completion of post-closure care, to submit a post-closure report to the Department.

227. Section 10.2 of the Proposed Permit is authorized by 40 C.F.R. § 264.120 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

228. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 10.2 of the Proposed Permit. Second Stip.

229. No party has met the burden of showing that any condition in Part 10 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

H. PART 11 OF THE PROPOSED PERMIT

230. Section 11.1 of the Proposed Permit (Corrective Action Requirements Under the Consent Order) is a reasonable and necessary condition that describes the March 1, 2005 Consent Order, and provides that nothing in the permit modifies the Consent Order.

231. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.1 of the Proposed Permit. Second Stip.

232. Section 11.2 of the Proposed Permit (Corrective Action Requirements Under the Permit) is a reasonable and necessary condition that sets forth the elements of corrective action that are to be performed under the permit, rather than the Consent Order.

233. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.2 of the Proposed Permit. Second Stip.

234. Section 11.3 of the Proposed Permit (General Conditions) is a reasonable and necessary condition that sets forth the basic corrective action requirements of the permit,

including groundwater monitoring; notification to the Department of detections of contamination; corrective action; reporting; corrective action beyond the facility boundary; off-site access; newly-discovered releases; field activities; and recordkeeping.

235. Section 11.3 of the Proposed Permit is authorized by 40 C.F.R. §§ 264.90 to 264.101 (2009), incorporated by 20.4.1.500 NMAC; and 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

236. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.3 of the Proposed Permit. Second Stip.

237. Section 11.4 of the Proposed Permit (Cleanup Levels) is a reasonable and necessary condition that sets forth the cleanup levels for soil, groundwater and surface water to be achieved by corrective action.

238. Section 11.4 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

239. Under the National Contingency Plan (NCP), the EPA regulations that govern cleanups under the federal Superfund program, EPA applies an acceptable cancer risk range of 10^{-4} to 10^{-6} . 40 C.F.R. § 300.430(e)(2)(i)(A)(2) (2009).

240. Section 11.5 of the Proposed Permit (Ecological Risk Evaluation) is a reasonable and necessary condition that requires the Permittees to conduct an ecological risk evaluation as part of corrective action.

241. Section 11.5 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

242. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.5 of the Proposed Permit. Second Stip.

243. Section 11.6 of the Proposed Permit (Variance from Clean-Up Levels) is a reasonable and necessary condition that provides for variances from the clean-up level requirements.

244. Section 11.6 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC; and 20.6.2.4103.E and F NMAC.

245. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.6 of the Proposed Permit. Second Stip.

246. Section 11.7 of the Proposed Permit (Permit Modification for Corrective Action Complete) is a reasonable and necessary condition that provides for permit modification upon completion of corrective action for each individual solid waste management unit and area of concern.

247. Section 11.7 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

248. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.7 of the Proposed Permit. Second Stip.

249. Section 11.8 of the Proposed Permit (Corrective Action Procedures) is a reasonable and necessary condition that sets forth the process for corrective action from release assessment through remedy completion.

250. Section 11.8 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

251. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.8 of the Proposed Permit. Second Stip.

252. Section 11.9 of the Proposed Permit (Approval of Submittals) is a reasonable and necessary condition that provides that documents submitted to the Department as part of the corrective action process are subject to Department approval.

253. Section 11.9 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

254. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.9 of the Proposed Permit. Second Stip.

255. Section 11.10 of the Proposed Permit (Methods and Procedures) is a reasonable and necessary condition that sets forth requirements for collecting and handling samples of environmental media as part of corrective action.

256. Section 11.10 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

257. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.10 of the Proposed Permit. Second Stip.

258. Section 11.11 of the Proposed Permit (Monitoring Well Construction Requirements) is a reasonable and necessary condition that sets forth requirements for constructing and developing groundwater monitoring wells.

259. Section 11.11 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

260. Nuclear Watch New Mexico, Natural Resources Defense Council, and Southwest Research and Information Center stipulate that they agree to the terms of Section 11.11 of the Proposed Permit. Second Stip.

261. Section 11.12 of the Proposed Permit (Reporting Requirements) is a reasonable and necessary condition that sets forth format for corrective action reports and work plans to be submitted to the Department.

262. Section 11.12 of the Proposed Permit is authorized by 40 C.F.R. § 270.32(b) (2009), incorporated by 20.4.1.900 NMAC.

263. Nuclear Watch New Mexico stipulates that it agrees to the terms of Section 11.12 of the Proposed Permit. Second Stip.

264. No party has met the burden of showing that any condition in Part 11 of the Proposed Permit is inadequate, improper, or invalid. *See* 20.1.4.400.A(1) NMAC.

III. THE NOTICE OF INTENT TO DENY

265. Open burning is “the combustion of any material without the following characteristics: (1) control of combustion air to maintain adequate temperature for efficient combustion; (2) containment of the combustion in an enclosed device to provide sufficient residence time and mixing for complete combustion; and (3) control of emission of the gaseous combustion products.” 40 C.F.R. § 260.10, incorporated by 20.4.1.100 NMAC.

266. The Applicants have not met their burden of demonstrating that the permit should be issued and not be denied for the hazardous waste open burn treatment units at TA-16. See 20.1.4.400.A(1) NMAC.

RECOMMENDATION AND CONCLUSION

Based on the entire administrative record, including all of the post hearing submittals, I recommend that Applicant's request for a ten year Hazardous Waste Facility Permit for Los Alamos National Laboratory be granted in accordance with these Findings of Fact and Conclusions of Law in substantially the form proposed by the Department in its draft dated July 2010 (Withdrawn September 2010) the objections of the Applicants and Other Parties to various sections of that draft notwithstanding. However it is my recommendation that those provisions of the Draft Permit requiring Financial Assurance in Part 2 of the Permit be deleted in accordance with these Findings and Conclusions. It is my further recommendation that, as a matter of environmental justice, that the Applicant be required to establish and maintain a physical as well as a virtual Information Repository despite the objection on the Applicant to this requirement. I also recommend that the Department not include in the Permit provisions allowing the Open Burn Units TA16-388 and TA16-399 for the reasons contained in these Findings of Fact and Conclusions of Law.

Respectfully submitted,



The Honorable A. Joseph Alarid
Hearing Officer

DRAFT

**STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT**

**IN THE MATTERS OF THE APPLICATION OF
THE UNITED STATES DEPARTMENT OF ENERGY
AND LOS ALAMOS NATIONAL SECURITY, LLC
FOR A HAZARDOUS WASTE FACILITY PERMIT
FOR LOS ALAMOS NATIONAL LABORATORY
AND THE NOTICE OF INTENT TO DENY A PERMIT
FOR OPEN BURN UNITS TA-16-388 AND TA-16-399 FOR
LOS ALAMOS NATIONAL LABORATORY**

**No. HWB 09-37(P)
HWB 10-04(P)**

FINAL ORDER

This matter come before the Secretary of the Environment following a hearing before the Hearing Officer over a period of fifteen days between April 6, 2010 and May 7, 2010 in Santa Fe, Pojoaque, Espanola, Los Alamos, and Albuquerque, New Mexico.

The Applicant the United States Department of Energy and Los Alamos National Secretary LLC seek a Hazardous Waste Facility Permit for Los Alamos National Laboratory. The New Mexico Environment Department (Department) supports the issuance of the permit with conditions necessary to protect the public health and welfare and the environment, and proposes to deny a permit for open burn units TA16-388 and TA16-399 for Lost Alamos National Laboratory.

Having considered the administrative record in its entirety, including the Proposed Finding of Fact and Conclusions of Law, Closing Arguments, and all post hearing submittals submitted by the Applicant the Department and other parties to these proceedings, and the Hearing Officer's Report; and being otherwise fully advised regarding this matter;

THE SECRETARY HEREBY ADOPTS THE HEARING OFFICER'S REPORT, PROPOSED FINDING OF FACT AND CONCLUSIONS OF LAW AND RECOMMENDED CONIDITIONS. IT IS THEREFORE ORDERED:

The Application of the United States Department of Energy and Los Alamos National Security LLC for a Hazardous Waste Facility Permit for Los Alamos National Laboratory is granted subject to the conditions set out in the Hearing Officer's Report.

RON CURRY
Secretary of Environment