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EP2013-5059

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 15, 2013

Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Department of Energy
Los Alamos Site Office
3747 West Jemez Road, MS A316
Los Alamos, New Mexico 87454

Anthony R. Grieggs
Group Leader
Water Quality and RCRA Group
Los Alamos National Laboratory
P.O. Box 1663, M704
Los Alamos, New Mexico 87545

RE: DISAPROVAL
CLOSURE PLAN FOR TA-14-23 OB/OD UNIT AREA AND TA-39-57 OD UNIT
LOS ALAMOS NATIONAL LABORATORY
EPA ID# NM0890010515
HWB-LANL-12-053, HWB-LANL-12-054

Dear Messrs. Turner and Grieggs:

The New Mexico Environment Department has received the *Revised Closure Plans for Technical Area (TA) 39-57 Open Detonation Unit* (Enclosure 1) referenced by LA-UR-12-10332 and dated February 24, 2012. The Department has also received the *Revised Closure Plans for Technical Area (TA) 14-23 Open Burning and Open Detonation Unit* (Enclosure 2), *Revision 1.0*, referenced by LA-UR-12-10333, and dated February 24, 2012. The open burning (OB) and open detonation (OD) Closure Plans are submitted by the United States Department of Energy and the Los Alamos National Security, LLC (collectively the Permittees). The Permittees intend to close each of the TA-14-23 open burning and detonation units, and the TA-39-57 open detonation unit. The New Mexico Environment Department (the Department or NMED) hereby issues this Disapproval with the following comments.

Specific Comments OD TA-39-57:

1. **Section 2.2 Description of Wastes Treated at the Unit, page 2:**
   Provide descriptions of DU and RCT or include these terms in the List of Acronyms and Abbreviations (page v).

2. **Section 2.3 Description of Treatment Conducted at the Units, page 3:**
   Include a description of materials treated historically at the unit, (*e.g.*, bulk high explosives (HE) consisting of RDX, C4, HMX). Include a list of detonators and volumes and describe the methods for detonation of the waste in this sub-section.

3. **Section 3.0 Estimated Maximum Waste Treated, page 3**:
   An estimated average of 48 lbs were treated per year for 30 years (1973-2003) would generate 1,440 pounds of waste. Provide the calculations or rationale used to approximate 1,827 pounds maximum waste reported.

4. **Section 4.1, Closure Performance Standard, page 3:**
   This section may be shortened to reference the permit standards previously cited (40 CFR 265.111 and Permit Sections 11.4 and 11.5. Remove the discussion of the ground water monitoring activities since detectable constituents from the units likely cannot likely be differentiated from other nearby potential sources.

5. **Section 5.0 Closure Procedures, page 5:**
   Correct the typographical error in the sentence from "activities includes" to activities include".

6. **Section 5.1.2 Structural Assessment, page 6:**
   The Permittees state "a visual inspection was conducted to determine that no hazardous constituents were released" this conclusion is not possible based on a visible inspection. Re-vise this statement to state that a visible inspection was conducted to evaluate the unit for visible spills and debris. Include documentation, such as photographs or satellite imagery to document surface conditions. Update the closure procedures listed in Section 4.1 accordingly. Describe the condition of the equipment and structures assessed (*e.g.,* metal weather enclosure, wood flooring).

7. **Section 5.2.1 Equipment Used During Decontamination Activities, page 6:**
   Describe the "wash water solution". Describe in detail the proposed methods to decontaminate re-usable equipment, tools, and protective clothing. Describe the proposed characterization methods for to disposal of decontamination water.

8. **Section 6.0.3(b-d) Sampling and Analysis, page 7:**
   Provide a subsection describing, in detail, the rationale for the number, location, and type of samples proposed for this unit.

9. **Section 6.1 Sampling Activities, page 9**:

   a. Include a subsection that describes the proposed procedures for wipe sample and solid chip sample collection on the related equipment and structures. Revise the text and Table 5 accordingly.

   b. Provide a detailed description of the proposed methods to collect soil samples for analysis. Revise the text and Table 5.0 accordingly. Remove the statement that samples will be kept at depth temperature and revise the text to state that samples will be kept at cool at 4°C or lower.

10. **Section 6.2.1 Surface Water and Groundwater Sampling, page 8**:
    Update this section to include the status of IP monitoring near the vicinity of TA-39-57 which began in 2011.

11. **Section 6.2.3 Cleaning of Sampling Equipment, page 9:**
    Revise decontamination procedures to state that sampling equipment will be decontaminated prior to each use in accordance with Permit Section 11.10.2.11 and specifically Items 4 and 5.

12. **Section 6.2.2 Soil Sampling, page 10:**

    Provide a detailed description of the proposed methods to collect soil samples for analysis. Describe the proposed method for homogenization of subsamples. Remove the statement that samples will be kept at-depth temperature, and revise text to state that samples will be kept at cool at temperatures of 4°C or lower.

13. **Section 6.3.1 Sample Documentation, page 9:**
    The Permittees state that a logbook will be maintained detailing sample collection activities. Include the documentation of any deviations and justification for such deviations.

14. **Section 6.3.3 Sample Handling, Preservation and Storage, page 10:**

    a. Revise this section to include the methods that will be used to demonstrate that appropriate temperatures were maintained throughout the sample collection and shipping process (*e.g.,* temperature indicator strips, temperature blanks). Revise the text and Tables 5 and 6 accordingly.

    b. The Permittees propose that off-site transportation of samples will occur via contract, common motor carrier, air carrier or freight. Revise this section to reference Permit Section 11.10.2.9.

15. Section 7.0 Waste Management, page 12:
Revise this section to include a description of, and rationale for the methods that will be used to sample and characterize different types of waste prior to disposal.

16. Table 2, Hazardous Waste Constituents of Concern at TA-39-57 OD, page 16:

Revise Table 2 to include nitrates, PCBs, dioxans, and furans under Other Constituents of Concern or provide rationale for their exclusion. NMED noted in the closure plan for TA-16-399 listed cyanide as a constituent of concern. Revise Table 2 for this unit to include cyanide or provide a justification for cyanide's exclusion. Provide the rationale for omitting VOC analysis from the analytical suite.

17. Table 3, Potential Waste Materials, Waste Types, and Disposal Options, page 17:
Revise the table to exclude radioactive liquid waste and mixed waste from the waste type column, or provide justification for the presence of these waste types and the proposed sampling procedures.

18. Table 4, Summary of Analytical Methods, page 19:

a. Revise the detection limits in Table 4 to correspond to solid media rather than liquid media.

b. The list of analytes in Table 4 are inconsistent with the constituents listed in Table 2 (page 16) Constituents of Concern. Revise Tables 2, 4 and 5 and the text to propose analysis for high explosives, nitrates, and cyanide or provide justification for their exclusion. See comment 16 above and remove VOC analysis, if appropriate.

19. Table 5, Sample Containers, Preservation Techniques and Holding Times, Page 21:
Revise this section to remove references to aqueous sampling techniques from Table 5. See comments 16 and 18 above and remove VOC analysis if appropriate.

20. Figure 3, Sampling Locations for Closure of TA-39-57 OD Units, page 24:

a. Provide the figure on larger sized paper (11X17). Remove the 100 ft contour line indicated in the legend; this is a discrepancy from the contour lines shown on the map at its current scale.

b. Revise the map to depict the outlined locations of the open detonation unit shown in Figure 2.

c. Provide drainage locations, land marks (*e.g.,* Ancho Canyon, berms, rock check dams).

Specific Comments OB/OD TA-14-23:

1. **Section 2.2 Description of Wastes Treated at the Units, page 3:**
Revise (e.g.,., ignitability, toxicity for barium) to (e.g., ignitability, toxicity for barium) to correct the typographical error.

2. **Section 2.3 Description of Treatment Conducted at the Units, page 3:**

   a. Rename or divide this section into subsections describing treatment methods, waste types, and treatment volumes. Revise this section to include the estimated volume of kerosene or other fuels used per treatment.

   b. Include a description of materials treated historically at the unit, (*e.g.*, bulk high explosives (HE) consisting of RDX, C4, HMX). Include a list of ignition materials and volumes and describe the methods used for ignition of the waste in this subsection.

3. **Section 5.1.1 Records Review, page 6:**
In Section 2.1 the Permittees state that the units were in operation since 1944; however, in Section 5.1.1 Permittees state that there are only records of waste being treated from 1988 to 2003. Include an explanation for the missing records, and provide a description of the suspected types and volumes of waste treated prior to1988.

4. **Section 5.1.2 Structural Assessment, page 7:**
The Permittees state "a visual inspection was conducted to determine that no hazardous constituents were released" this conclusion is not possible based on a visible inspection. Re-vise this statement to state that a visible inspection was conducted to evaluate for visible spills and debris. Include documentation, such as photographs or satellite imagery to document surface conditions. Update the closure procedures listed in Section 4.1 accordingly. Describe the condition of the structures and equipment assessed (*e.g.,* metal weather enclosure, wood flooring).

5. **Section 5.2.1 Equipment Used During Decontamination Activities, page 7:**
Describe the "wash water solution". Describe the proposed methods to decontaminate re-usable equipment, tools, and protective clothing.

6. **Section 6.0.3(b-d) Sampling and Analysis, page 8:**
Provide a subsection describing, in detail, the rationale for the number, location, and type of samples proposed for this unit.

7. **Section 6.1 Sampling Activities, page 8:**

   a. Include a subsection that describes the proposed procedures for wipe sample and

solid chip sample collection on the related equipment and structures. Revise the text and Table 5 accordingly.

b. Provide a detailed description of the proposed methods, used to collect soil samples for analysis. Revise the text and Table 5.0 accordingly. Remove the statement that samples will be kept at depth temperature and revise to state that samples will be kept cool at temperatures 4°C or lower.

8. **Section 6.2 Sample Collection Procedures, page 9**:
Include a subsection that describes proposed procedures for wipe sample and solid chip sample collection see Comment 7 above. Revise the text and Table 5 accordingly.

9. **Section 6.2.1 Surface Water and Groundwater Sampling, page 9:**
Update this section to include the status of IP monitoring near the vicinity of TA-14-23 which began in 2011.

10. **Section 6.2.3 Cleaning of Sampling Equipment, page10:**
Revise decontamination procedures to state that sampling equipment will be decontaminated prior to each use in accordance with Permit Section 11.10.2.11 and specifically Items 4 and 5.

11. **Section 6.2.2 Soil Sampling, page 10:**

a. Provide a detailed description of the proposed methods, and to collect soil samples for analysis. Describe the method of homogenization of the subsamples. Remove the statement that samples will be kept at-depth temperature, and revise to state that samples will be kept cool at temperatures 4°C or lower.

12. **Section 6.3.1 Sample Documentation, page 10:**
The Permittee proposes to maintain a logbook detailing sample collection activities. Include the documentation of any deviations and justification for such deviations.

13. **Section 6.3.3 Sample Handling, Preservation and Storage, page 12:**

a. Revise this section to include the methods that will be used to demonstrate that appropriate temperatures were maintained throughout the sample collection and shipping process (*e.g.,* temperature indicator strips, temperature blanks). Revise the text and Tables 5 and 6 accordingly.

b. The Permittees propose that off-site transportation of samples will occur via contract, common motor carrier, air carrier or freight. Revise this section to reference Permit Section 11.10.2.9.

14. Section 7.0 Waste Management, page 13:
Revise this section to include a description and rationale for, the methods that will be used to sample and characterize different types of waste prior to disposal.

15. Table 2, Hazardous Waste Constituents of Concern at TA-14-23 OB/OD, page 17:

a. List kerosene as a constituent of concern, and include diesel-range organics (DRO) as part of the analytical suite.

b. Revise Table 2 to include nitrates, under Other Constituents of Concern. NMED notes that the closure plan for TA-16-399 listed cyanide as a constituent of concern. Revise Table 2 to include cyanide or provide a justification for cyanide being excluded from this site's analysis.

c. Provide a rationale for omitting VOC analysis from the analytical suite.

16. Table 3, Potential Waste Materials, Waste Types, and Disposal Options, page 17:
Revise the table to exclude radioactive liquid waste and mixed waste from the waste type column, or provide justification for the presence of mixed waste and propose sampling procedures.

17. Table 4, Summary of Analytical Methods, page 20:

a. Revise the detection limits in Table 4 to correspond to soil media rather than liquid media.

b. The list of analytes in Table 4 are inconsistent with the constituents listed in Table 2 (page 16) Constituents of Concern. Revise Tables 2, 4 and 5 and the text to propose analysis for high explosives, nitrates, ignition sources such as kerosene, and cyanide or provide justification for their exclusion. See Comment 15, Item C above and remove VOC analysis, if appropriate.

18. Table 5, Sample Container, Preservation Techniques and Holding Times, Page 21:
Revise this section to remove references to aqueous sampling techniques from Table 5 or adjust the sample methods to include the aqueous sampling described in Table 5. See also Comment 15, Item c, above.

19. Figure 3, Sampling Locations for Closure of TA-14-23 OB OD Units, page 25:

a. Provide the figure on larger paper (11X17). Remove the 100 ft contour line indicated in the legend; this is a discrepancy from the contour lines shown on the map at its current scale.

b. Revise the map to depict the outlined locations of the open burning unit and open detonation unit shown in Figure 2.

c. Revise the polygonal road lines located in the Northwest corner near structure #2 to indicate a complete road system or provide justification for gap.

d. Provide drainage locations, land marks (*e.g.,* Q Site, Firing Mound 3, berms).

The Permittees must address all comments and submit a revised Enclosure 1 and 2 by June 12, **2013.** As part of the response letter that accompanies the revised OB OD Closure Plan, the Permittees must include a table that details where all revisions have been made to the OB OD Closure Plan and that cross-references the Department's numbered comments. All submittals (including maps and tables) must be in the form of two paper copies and one electronic copy. In addition, the Permittees must submit a redline-strikeout version that includes all changes and edits to the OB OD Closure Plan (electronic copy) with the response to this disapproval.

Please contact Siona Briley of my staff at (505) 476-6049 or Siona.Briley@state.nm.us should you have any questions

Sincerely,

John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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File: LANL, TA-39-57 Closure Plan, 2012;
LANL-12-053

LANL, TA-14-23 Closure Plan, 2012
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