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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

October 10, 2002

Michael J. Zamorski, Director
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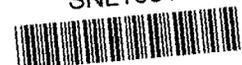
SUBJECT: NOTICE OF DEFICIENCY
PERMIT APPLICATION FOR RENEWAL
SANDIA NATIONAL LABORATORIES
EPA ID NO.: NM5890110518
TASK #: HWB-SNL-02-002

Dear Messrs. Zamorski and Eagan:

The New Mexico Environment Department (NMED) has reviewed for administrative completeness and technical adequacy the Department of Energy/Sandia National Laboratories (DOE/SNL) Permit renewal application dated February 2002, as required under the New Mexico Hazardous Waste Management Regulations 20.4.1 NMAC.

Pursuant to its authority under the New Mexico Hazardous Waste Act, N.M.S.A. 74-4-1 et seq., and regulations promulgated pursuant thereto, NMED has found the subject application to be administratively and technically incomplete. The enclosed notice of deficiency (NOD) lists the issues SNL should address and the additional information SNL should submit, before NMED can make a determination on the administrative and technical completeness of the subject permit renewal application.

SNL1001



Messrs. Zamorski and Eagan

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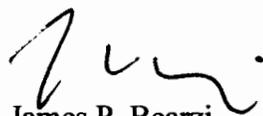
October 10, 2002

Please submit the requested information within sixty (60) calendar days from the date you receive this RSI. NMED may consider a petition for deadline extension, provided that a written justification and the expected submittal time are given.

Please, also provide the required information in four hard copies and on four CDs or 3.5" diskettes compatible with Microsoft Word.

If you have any questions please contact Cornelius Amindyas of my staff at (505) 841-9488 or at the above address.

Sincerely,



James P. Bearzi

Chief

Hazardous Waste Bureau

JP/ca

Enclosure

cc:

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ATTACHMENT

NOTICE OF DEFICIENCY

PERMIT RENEWAL APPLICATION, DOE/SNL, NEW MEXICO

GENERAL PART B PERMIT RENEWAL APPLICATION

October 9, 2002

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INTRODUCTION

The following comments from the New Mexico Environment Department (**NMED**) relate to Part B of the Department of Energy/Sandia National Laboratories (**DOE/SNL**) Resource Conservation and Recovery Act (**RCRA**) permit renewal application dated February 2002.

The quotations in bold are taken directly from the Permit Renewal Application.

GLOBAL COMMENT

Provide a consolidated description of all the facility-specific information contained in Attachments A through H by incorporating all the Attachments of Modules I through VI into Appendices A through H. For example Appendix B [Waste Analysis Plan (**WAP**)] should contain both the general and site-specific WAPs, in more detail in their respective sections, all under one umbrella. This will help third party readers to get all the information in one chapter instead of being referred to specific Modules, only to be kicked back to the appendix (in circles). Please do the same for inspection, security, contingency plan, closure plan, etc. The specific modules should only contain information on the design and operation of the various units, which SNL calls facilities.

VOLUME I, PART 2 -- PART B PERMIT APPLICATION

APPENDIX A: COMMENTS ON GENERAL FACILITY (SNL) DESCRIPTION

1. Section A.1, GENERAL SITE DESCRIPTION (20 NMAC 4.1.900/40 CFR 270.14[b][1]), Page SW-A-1:
 - a. For purposes of clarity, the first sentence should read: “SNL/NM is located immediately southeast of the Albuquerque city limits in Bernalillo County, New Mexico.”
 - b. The General Site Description provided is inadequate; the following should be addressed for the purpose of providing a complete site description (some of these were addressed in the Part B, but not all):
 - Type of facility and activity (i.e., onsite, offsite; storage, treatment, disposal).
 - New or existing.
 - Size (acres, numbers of units).
 - Location (see also Comments 3 and 4).
 - Name of company.
 - Name of owner/operator.
 - Activities conducted.
 - Waste types and quantities stored, treated, and/or disposed of.
2. Section A.2.1, Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i-ii]), Page SW-A-2 and SW-A-3. Additional information is needed regarding Kirtland Air Force Base (**KAFB**) and SNL Technical Area gates (20 NMAC

4.1.900/40 CFR 270.14(b)(19)(viii):

- a. The figures showing the locations of KAFB and SNL Technical Area controlled gates should be discussed in the text.
- b. Gate accessibility (visitor versus badged worker, contractors) should be discussed.
- c. The KAFB access gate locations including the South Gate should be labeled on Figure A-2.
- d. The Manzano Base access gate should be shown on Figure A-7.

3. Section A.4.2, Page SW-A-5, Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii]), 2nd and 3rd Sentences:

“SNL/NM is located in Bernalillo County, New Mexico, which is listed in Appendix VI of 20 NMAC 4.1.500/40 CFR 264.... None of the SNL/NM Units are located within 3,000 feet (ft) of any fault with Holocene displacements.... Therefore, the seismic standards...are not applicable to these units.”

The applicability of the seismic standard (40 CFR 264.14[a]) is not determined by the proximity of a facility to a fault with Holocene displacement, rather by its political jurisdiction’s listing in Appendix VI of 20.4.1.500 NMAC, incorporating 40 CFR Section 264. The last sentence of Section A.4.3 should read: “Therefore, all SNL/NM Units are compliant with the seismic standard.”

4. Section A.4.3, Page SW-A-5, Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii through v]), Second Paragraph, 2nd Sentence:

“The floodplain portion of Figure A-2 was derived from a U.S. Army Corps of Engineers map (COE 1979) prepared using Federal Emergency Management Administration guidelines that are equivalent to the mapping techniques used to prepare Federal Insurance Administration floodplain maps.”

- a. As required by 20.4.1.900 NMAC incorporating 40 CFR Section 270.14(b)(11)(iii), DOE/SNL must “include a copy of the Federal Insurance Administration (FIA) flood map, if used, or the calculations and maps used where an FIA map is not available.”

Second Paragraph, 3rd and 4th Sentences:

“None of the SNL/NM Units are located within a 100-year floodplain.... Therefore, floodplain regulations are not applicable to these Units.”

- b. The floodplain standard (40 CFR 264.18(b)) is applicable to all SNL Units. Each SNL Unit’s compliance is determined by the information required by 40 CFR Section 270.14(b)(11)(iii). The last sentence of Section A.4.3, second paragraph, should read: “Therefore, all SNL/NM Units are compliant with the floodplain standard.”

5. A.5, TOPOGRAPHIC MAPS (20 NMAC 4.1.900/40 CFR 270.14[b][19]), Page SW-

A-6:

20.4.1.900 NMAC incorporating 40 CFR 270.14[b][19] specifies the features that shall be on the topographic map of the facility (in this case, the total of SNL operations inside of Kirtland Air Force Base). These features are listed in 20.4.1.900 NMAC incorporating 40 CFR Section 270.14[b][19] [i-xii]; features that are missing or only partially addressed on the topographic map of DOE/SNL are:

- a. Surrounding land use
- b. Wind rose
- c. Access control (i.e., fences and gates – see also Comment 2)
- d. Storm and sanitary sewers
- e. Buildings and other structures (e.g., sanitary and storm sewers)
- f. SWMUs

DOE/SNL should provide these features on the topographic map or present a discussion as to why all of the requirements of paragraphs i-xii are not on the topographic map as specified above.

6. Figure A-2, Unit Location Map, January 2002, Sandia National Laboratories, New Mexico.

Figure A-2 has some inaccuracies:

- a. The “**Inhalation Toxicology Research Institute**” (ITRI -- at the bottom of the figure) is now the “**Lovelace Respiratory Research Institute**”.
- b. The RCRA-Regulated Waste Management Units shown include the Corrective Action Management Unit – this does not agree with Section A.5 or with Table 2 in Section 1.0, “**GENERAL SITE OPERATIONS**”, p. SW-5. Please make the appropriate corrections.
- c. Solid Waste Management Units should be located on the topographic map as required under 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14(d)(1)(i).

7. **Section A.5.1, Wells** (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix]), Page SW-A-6.

- a. Some Monitoring wells installed by the NMED located south of the “ITRI” on the Pueblo of Isleta are mislabeled or omitted:
 - IP-3 is mislabeled as “IP”
 - IP-5 is omitted; the State Plane coordinates for IP-5 are northing = 1,435,348.09 and easting = 423,115.34
- b. Details of design and construction should be provided for all monitoring wells.

8. **Section A.5.2, Wind Rose** (20 NMAC 4.1.900/40 CFR 270.14[b][19][v]), Page SW-A-7:

The wind roses found in Figure A-8 should be included on Figure A-2; there is adequate room on the figure to the left of Tech Area III.

9. Section A.5.3, Surrounding Land Use (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv]), Page SW-A-7:

- a. Private land holdings, residences, and residential areas located immediately north of KAFB and north of the U.S. Forest Service Withdrawn Area should be shown on Figure A-9.
- b. Residential land-use areas within KAFB should be shown on Figure A-10.

**VOLUME II, PART 3 ADDITIONAL INFORMATION REQUIREMENTS:
PROTECTION OF GROUNDWATER**

10. Section 1.0, Page 2, INTRODUCTION, First and Third Paragraphs, Page 1:

“This part provides information required by 20 NMAC 4.1.900/40 CFR 270.14(c)...[which] requires additional information related to protection of groundwater for facilities containing a regulated unit. A regulated unit defined in 20 NMAC 4.1.500/40 CFR 264.90(a)(2) is a ...landfill that received hazardous waste after July 26, 1982....The CWL qualified for interim status under 20 NMAC 4.1.900/40 CFR 270.70 and is now closing under interim status.”

The chemical waste landfill (CWL) is being closed under its own interim status closure plan. Volume II, Part 3 needs only a brief statement such as: “The CWL is an Interim Status TSD Facility as defined under 20.4.1.900 NMAC, incorporating 40 CFR Section 270 Subpart G that is undergoing closure under 20.4.1.600 NMAC, incorporating 40 CFR Section 265 Subpart G. The CWL has an approved Closure Plan with groundwater monitoring requirements.” The rest of Volume II, Part 3 should be deleted.

VOLUME II, PART 4, SOLID WASTE MANAGEMENT UNITS

11. Section 1.0, Page 1, INTRODUCTION:

SNL should provide a brief description of the methodologies used to determine whether or not a site or facility is a SWMU (e.g., the RCRA Facility Assessment and the RCRA Facility Investigation processes).

12. Section 2.0, Pages 1-450, SITE SUMMARY SHEETS:

Additional information is needed for some SWMUs and spills/releases. Comments 12.a and 12.b may or may not apply to each SWMU Site Summary Sheet.

- a. Site information for each SWMU should be updated with the most recent information current with the Comprehensive Part B Permit renewal application and the date noted for all site summaries.
- b. Under the section Waste Volume Estimated/Generated, SNL should describe the source(s) for each waste stream generated at each SWMU (e.g., from the septic tank,

- from surface cleanup, prior operations, etc.).
- c. SNL should include the following information requirements found in 20 NMAC 4.1.900/40 CFR 270.14(d)(2 and 3) for SWMUs 94 and 5 and for the Tijeras Arroyo Groundwater Investigation (NMED recognizes that the source for the nitrate and TCE in ground water near Tijeras Arroyo may or may not be from a SNL SWMU).
- A description of each release.
 - A description of the monitoring wells that SNL has installed (including well-construction diagrams) and a summary and discussion of the results obtained from analyses of ground-water samples from those wells.

APPENDIX B: GENERAL WASTE ANALYSIS PLAN (WAP)

13. The SNL WAP sections, found in Appendix B and module specific Attachment(s) B, have been reviewed within the context of regulatory requirements of:

40 CFR 264.13 and NMAC 20.4, as well as guidance provided in “*The Permit Applicants Guidance Manual for the General Facility Standards of 40 CFR 264*” (USEPA 1983) and “*Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste*” (USEPA 1994). Overall, the information contained in the General WAP (Appendix B) is insufficient to ensure compliance with promulgated New Mexico hazardous waste management regulations. Furthermore, the module specific WAPs (Attachment(s) B) also lack needed detailed information with the HWMF, RMWMF, HBWSF, AHCF and MSB WAPs simply referring the reader back to the General WAP. The presentation of material should be tiered, with sufficient detail, procedures and methodology in the general WAP, including organizational structures and lines of authority integrating generation and waste management groups, followed by further unit or specific information in the unit sections.

14. In light of the overall inadequacy of the submittal, SNL should revise the WAP for the next draft.

The revision should include reformatting the WAP with the combination of the general and unit specific WAPs as sections of a single Waste Analysis Plan, Appendix B. SNL should maintain the current WAP sections format, i.e., Site Description, Waste Analysis Parameters, Characterization Procedures, Off-Site Acceptance Procedures, and Special Procedural Requirements. However, the final WAP should be re-written fully and completely presenting the above information for the general site as well as each unit specific site (HWMF, TTF, RMWMF, HBWSF, AHCF and MSB) required by the permit.

GENERAL VERSUS UNIT-SPECIFIC WAP LANGUAGE

15. Please address the following issues:

Revise the Site-Wide WAP to include all waste characterization methodologies for the Facility as a whole. In addition, include the specific waste characterization procedures for unit specific modules such as the Thermal Treatment Facility (TTF).

It is appropriate to include in the site-specific modules an overview of the acceptable waste categories and waste acceptance criteria (WAC), the chemical and physical properties of the wastes accepted at the unit, a description of the operations that generate the wastes, a listing of any newly generated wastes at the specific unit, unit specific waste screening and verification procedures, unit specific Waste Disposal Request forms, and unit specific boundary conditions and process tolerance limits. However, the Site-Wide WAP must discuss the following waste characterization issues:

- a. address container requirements
- b. "waste generator written documentation",
- c. waste generation processes and control,
- d. waste characterization using knowledge of process (**KOP**) and justifying the use of KOP,
- e. addresses waste variability, and
- f. "derived from" wastes.

- g. Other issues referenced in the WAP-TTF required to be addressed more thoroughly in the Site-Wide WAP include; management of wash down and precipitation runoff wastes; the definition of "boundary conditions" and "process tolerance limits"; general waste screening and verification procedures; and general quality assurance/quality control processes.

- h. WAP-TTF Section B.2.2, third paragraph, states "**Ash residue from treatment of characteristic RCRA-regulated waste will be sent to a Subtitle D facility if it no longer exhibits hazardous waste characteristics**" is only correct if there are no underlying hazardous constituents at concentrations in excess of the universal treatment standards as specified at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9). Adjust the site-specific WAP accordingly and address the issue thoroughly in the Site-Wide WAP.

16. The Application Section titled *Overview, 1.0 (Background)*,

Page ii, refers to waste acceptance criteria (**WAC**) for the Radioactive and Mixed Waste Management Facility and the High Bay Waste Storage Facility. WACs are integral to a Waste Analysis Plan and therefore must be incorporated into the Site-Wide WAP. If DOE/SNL chooses not to incorporate the WACs into the Site-Wide WAP, the WAC for all permitted hazardous waste management units must be provided so that NMED may determine regulatory applicability.

17. The Site-Wide WAP must include the waste characterization procedures

for determining the type of samples collected (i.e., composite or grab), sampling device, method for selecting the location of a sample within a waste stream, and frequency, in sufficient detail to demonstrate compliance with 20.4.1.500 NMAC (incorporating 40 CFR Section 264.13), 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 and 268.9), and 20.4.1.900 NMAC

(incorporating 40 CFR Section 270.14).

18. Revise the Site-Wide WAP to replace discretionary terms such as "may" with mandatory terms such as "will," "must," or "shall".

NMED intends to attach the Site-Wide WAP to the Permit and it must be enforceable and consistent with associated permit conditions.

19. The Site-Wide WAP must identify all "physical" hazardous waste characteristics

and associated requirements relevant to managing hazardous wastes at SNL in conformance with the NMHWA. Section B.3.1, *Waste Characterization*, lists physical properties of wastes used to characterize "unknown wastes". SNL's 2001 Biennial Report lists "RCRA Waste – Tons Generated On-Site by Waste Form". DOE/SNL must include in the WAP a list of the "forms". Physical characteristics with associated regulations include, but are not limited to, the following:

- a. sludge (20.4.1.200 NMAC (incorporating 40 CFR Section 261.1))
- b. liquids with sorbents added
- c. scrape metal (20.4.1.200 NMAC (incorporating 40 CFR Section 261.1))
- d. waste mixtures (20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)))
- e. pure product residues (20.4.1.200 NMAC (incorporating 40 CFR Section 261.7, and 261.33))
- f. PCB contaminated wastes
- g. wastewater versus nonwastewater (20.4.1.800 NMAC (incorporating 40 CFR Section 268.2))
- h. soils (20.4.1.800 NMAC (incorporating 40 CFR Section 268.49))
- i. lab packs (20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (9)))
- j. debris categories (20.4.1.900 NMAC (incorporating 40 CFR Section 270.13 (n)))
- k. gas, vapor or liquid (20.4.1.900 NMAC (incorporating 40 CFR Section 270.25 (5)))
- l. light liquid, heavy liquid and vapor/gas (20.4.1.500 NMAC (incorporating 40 CFR Section 264.1061))
- m. regulatory subcategory footnote #1 of 20.4.1.800 NMAC (incorporating 40 CFR Section 268.40) *Treatment Standards Table*
- n. heterogeneous and homogenous waste (Site-Wide WAP, Section B.1.2)
- o. phase separations
- p. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.200 (C)(1)) Subpart X units must prevent releases by considering the physical and chemical characteristics of the wastes, including its potential for emission and dispersal of gases, aerosols and particulates
- q. liquids and solids (Site-Wide WAP, Section B.5.2).

20. Site-Wide WAP Section B.2.1, Proposed Analytical Parameters and Methods,

lists three categories of hazardous constituents (metals, VOCs, and SVOCs) as the analytes that will be measured when sampling and analysis occurs. SNL should identify specific parameters

and methods, and not simply state broad categories of hazardous constituents. Why would this information be addressed in the site wide WAP? It should be contained in the module specific section.

21. For quality assurance purposes, a waste analysis/characterization documentation checklist must be produced and attached to Appendix B.

The checklist must contain all required or committed documentation and be organized to reflect the various stages of waste management such as; the documentation required of the generator, documentation necessary to treat or store wastes, and documentation after waste has moved off-facility for ultimate treatment or disposal.

22. DOE/SNL must explain in both Appendixes B and H the relationship between the written operating record and the Waste Tracking Database referenced in Section B.3.1 and B.3.1.3, and measures used to ensure consistency.

23. DOE/SNL must provide the reason that the thermal treatment process code is identified as a X03 instead of a X01 in the Part A portion of the Application. The code appears wrong and is relevant to the State/U.S.EPA shared RCRA Information database.

24. DOE/SNL shall provide a definition of “waste stream”.

The term is used in the Site-Wide WAP Section B.1.2, *Stored Waste*, with respect to waste analysis requirements and the consistency of waste make-up (i.e., hazardous constituents and percentages).

25. U.S.EPA WAP guidance “Waste Analysis at Facilities the Generate, Treat, Store and Dispose of Hazardous Waste,

A Guidance Manual” (EPA 1994), Section 2.1, *Facility Description*, Subsection 2.1.2, *Identification/Classification and Quantities of Hazardous Wastes Generated or Managed at Your Facility*, suggests that a WAP list any wastes or waste properties that are known not to be manageable by the facility. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.13) requires that DOE/SNL’s WAP address how it will ensure that storage and treatment units will only receive allowable wastes (i.e., those wastes on the Part A). The Site-Wide WAP must specify how DOE/SNL will insure that only wastes listed on the Part A will be treated or stored at the permittable waste management unit. The WAP must also reference all other non-allowable waste types referenced in the New Mexico Solid Waste Regulations, 20.9.1 NMAC (11-30-95), including asbestos containing material, non-hazardous construction and demolition debris, non-hazardous ash, house or municipal solid waste, industrial solid waste, infectious waste, petroleum waste, other non-hazardous solid waste, and PCB or Dioxin containing material, and biodegradable sorbents.

26. EPA 1994 WAP guidance Section 2.1, *Facility Description*, Subsection 2.1.3, *Description of Hazardous Waste Management Units*,

suggests that if hazardous and non-hazardous wastes will be mixed or blended, the method for how these activities will be conducted should be described. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.13) requires that DOE/SNL's Site-Wide WAP must address if and how different wastes streams will be blended or mixed, and how the resultant blended waste will be characterized.

27. The Thermal Treatment Unit unit-specific WAP (**WAP-TTF**)

mentions a quality assurance/quality control (QA/QC) program at Section B.6. The Section refers to a process of assuring the documentation traceability to particular waste containers and mandated documentation for generator knowledge of process (**KOP**). As is recommended in EPA 1994, DOE/SNL must provide this and all other QA/QC procedure associated with hazardous waste analysis including a table of appropriate sample preservation techniques and holding times.

28. The Site-Wide WAP Section B.3.1.2.1, *Sample Handling, Preservation, and Storage*, refers to quality objectives for data.

DOE/SNL must elaborate on the waste analysis or waste characterization data quality objectives, particularly the identification of underlying hazardous constituents and attainment of LDR treatment standards.

29. DOE/SNL must state whether the Site-Wide WAP is meant to satisfy the WAP requirements for hazardous waste treatment occurring at generator sites in accordance with 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(5)).

30. Waste analysis procedures are addressed in the EPA guidance, "Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste,"

April 1994 (EPA 1994). This guidance is referenced in the Introduction of the Site-Wide WAP. EPA 1994 Section 2.1, Facility Description, Subsection 2.1.3, Description of Hazardous Waste Management Units, suggests that a WAP address all process considerations necessary to meet applicable permit-established performance standards. DOE/SNL's Site-Wide WAP fails to mention, at a minimum, the following anticipated permit-established performance standards:

- a. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.13 (c)(3)) method of assurance that sorbents added to wastes in containers are not biodegradable (this is not a regulation applicable to waste treatment or storage, but is information required to be kept in DOE/SNL's records),
- b. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.16) training required to carry out all requirements of 264, and maintenance of training records,
- c. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.73 (b)(1)) Treatment and Storage Facilities (**TSFs**) must keep a description and the quantity of each waste treated or stored,
- d. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.73 (b)(3)) records and results of waste analyses and waste determinations,

- e. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.73 (b)(12) and (16)) notice/record keeping requirements regarding waste's LDR status, wastewater/non-wastewater category, etc.,
- f. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.73 (b)(16)) waste certification requirements,
- g. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.172) compatibility of waste with container,
- h. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.193 (c)(1)) compatibility of wastes with tanks,
- i. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.193 (a)) waste characterization for the presence of free liquids,
- j. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.200 (C)(1)) Subpart X units must prevent releases by considering the physical and chemical characteristics of the wastes, including its potential for emission and dispersal of gases, aerosols and particulates,
- k. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1082) wastes subject to Subpart CC must be reviewed and updated at least every 12 months,
- l. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1083 (c)) determination of maximum organic vapor pressure of wastes in tanks,
- m. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(2)(i)) LDR – if treatment standard attainment is not known, generator requirement to provide treatment or storage facility certification statement regarding listed wastes in contaminated soils,
- n. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(2)(i)) LDR - generator requirement to provide treatment or storage facility the contaminated soils certification,
- o. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(3)(iii)) notice of waste process changes,
- p. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(7)) waste analysis information must be kept for three years,
- q. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (b)(4)) treatment facilities record of notice to disposal facility of proper treatment and no dilution,
- r. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (b)(4)(iv) and (v)) treatment facilities record of notice to disposal facility of underlying hazardous constituent status,
- s. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9 (b)) if waste is both listed and characteristic, special treatment standards,
- t. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9 (d)) de-characterized waste's underlying hazardous constituents,
- u. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.40 (c)) treatment for land disposal must attain the lowest applicable standard,
- v. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.49) alternative treatment standards for soils to be land disposed,
- w. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.50) prohibitions on storage of wastes unless LDR treatment standards have been met,
- x. 20.4.1.900 NMAC (incorporating 40 CFR Section 270.15 (b)(1)) Part B testing information for free liquids in containers,
- y. 20.4.1.900 NMAC (incorporating 40 CFR Section 270.23 (d)) analytical report on effectiveness of treatment in Subpart X unit.

GENERATOR CHARACTERIZATION

31. Information submitted in the WAP should include, but not be limited to:
- a. An expanded and more detailed discussion of waste types and waste generation activities at SNL. Describe waste production processes including raw materials, end products and intermittent sources of waste.
 - b. Identify historical or published information on the waste particularly relevant to the utilization of AK.
 - c. Describe site-specific representative sampling methods, including identification of grab or composite samples, the number of samples taken, use of random sampling or sampling of all discrete waste units.
 - d. A specific presentation of information submitted by waste generators and schedule of generator audits or inspections.
 - e. Indicate selected waste analysis parameters and rationale in the general site requirements and unit specific parameters and requirements as necessary.
 - f. Identify waste analysis procedures and methods for determining waste compatibility, including:
 - methods to show compatibility with other wastes
 - methods to show compatibility with equipment surfaces
 - methods to show compatibility with liners and leachate collection systems
 - methods to show waste treatability if the treated waste is considered non-hazardous after treatment
 - procedures for specifying allowable ranges on waste constituent concentrations.
 - procedures for rejecting waste with component concentrations outside the established tolerance levels or for rejecting otherwise restricted waste.
 - procedures and methods to obtain waste analysis data and develop necessary information to treat, store or dispose of the waste.
 - g. Specific requirements for waste management activities relative to the use of containers, tanks, surface impoundments, waste piles, land treatment and landfills, as necessary, including but not limited to:
 - procedures to assure and document compatibility of waste with container
 - procedures to characterize and manage accumulations in containment systems
 - procedures to detect free liquids
 - procedures to identify and manage ignitable, reactive and incompatible wastes
 - procedures to determine if containers which previously held wastes are contaminated with materials not compatible with present wastes
 - procedures to demonstrate decontamination at closure
32. Site-Wide WAP Introduction, second paragraph, states;

“The waste analysis information contained in this WAP is specific to storage and treatment in containers and treatment in miscellaneous units.” Because SNL relies heavily on

generators to characterize wastes, as is described at Site-Wide WAP Section B.3.1, *Waste Characterization*, and because only the generators are in a position of know particular characteristics of the waste, the WAP must elaborate on generator characterization procedures, including but not limited to the following:

- a. 20.4.1.300 NMAC (incorporating 40 CFR Section 262.11) and 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(2) and 268.9 (a)) determining whether a waste is hazardous, and if so, what its appropriate waste codes are,
- b. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(2)) and 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9 (a)) determining all underlying hazardous constituents,
- c. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(3)(iii)) notice of waste process changes,
- d. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(1)) determining what constitutes acceptable knowledge (AK) and when AK is sufficient to fully characterize wastes,
- e. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1083 (a)(1)) determining average VO concentration at the point of waste origination, and
- f. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1083 (a)(1)(ii)) perform new waste determination whenever changes to the source are likely to cause a change to the average VO concentration.

RE-EVALUATION

33. Further, information submitted in the WAP should include:

- a. A plan for, with frequency of reviewing and repeating, initial waste analysis, both on a routine basis and on a contingent basis as required by changes in waste form or generating processes.
- b. Parameters analyzed for each waste.

34. Since 20.4.1.500 NMAC, incorporating 40 CFR Section 264.13(a) requires that DOE/SNL repeat waste analysis when necessary to ensure its accuracy, the following information should be included:

- a. Site-Wide WAP Section B.3.1.3 must be revised for quality assurance purposes to include a commitment to perform comprehensive real-time laboratory analysis on all wastes streams originally characterized without comprehensive laboratory analysis (i.e., using process knowledge) at a rate of ten percent of all such waste streams received in a year selected on a rotational basis. Furthermore, the WAP must be revised for quality assurance purposes to include a commitment to perform annual, comprehensive, real-time laboratory analysis on all routinely generated waste streams (definition required). Revise all other Section language accordingly. Re-evaluation must also occur when there is a non-conformance report associated with a particular waste stream;
- b. Site-Wide WAP Section B.3.1.3 primarily contains procedures TSFs use to ensure the

accuracy of generator waste characterization information. These procedures are already addressed in another sections. The second and third paragraphs are simply reiterations of the initial characterization procedures described in Section B.3.1, third paragraph, and can be simply deleted. The fifth paragraph describes waste characterization associated with waste treatment. As Section B.1.2.11 implies, treatment residuals are newly generated wastes that must be characterized as such. Remove the fifth paragraph.

- c. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1082) requires that wastes subject to Subpart CC requirements be reviewed and updated at least every 12 months. Site-Wide WAP Section B.3.1.3 must recognize and commit to a process to comply with the Regulation.
- d. To demonstrate compliance with 20.4.1.500 NMAC (incorporating 40 CFR Section 264.13 (a)(3)(i)) and 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (a)(3)(iii) and 268.7 (b)(3)(i)), the DOE/SNL must provide a description of established Facility Procedures used to identify when processes or operations change for routinely generating hazardous wastes. If procedures do not exist, one must be created and maintained to identify (and flag) when there are changes to the waste generating process or to the raw materials used in the process.”

ACCEPTABLE KNOWLEDGE

35. Site-Wide WAP Section B.3.1.1.1

presents information on acceptable knowledge (AK), but does not clearly indicate mandatory information and processes that will be followed, how AK will be assessed for usability, and when sampling and analysis will occur if AK is not of sufficient quality. Section B.3.1.2 states that sampling and analysis is “generally performed when a waste lacks sufficient process information to adequately characterize the waste based on acceptable knowledge.” However, AK criteria to make such a determination are not presented in the Site-Wide WAP. Identify historical or published information on the waste particularly relevant to the utilization of AK.

36. NMED requires that the Site-Wide WAP must include specific and mandatory criteria

for determining when AK is acceptable for waste stream characterization. Criteria used to select AK instead of sampling and analysis must be well defined, mandatory, consistently applied, and of sufficient detail to ensure that the AK used is technically satisfactory. The discussion of AK must include waste stream identification, determination of hazardous constituents including underlying hazardous constituents, associated hazardous waste codes, data assembly and documentation requirements, data evaluation, quality assurance, adequacy decision criteria, and discrepancy resolution. Specify what actions are taken if verification analysis shows AK to be inaccurate. The Site-Wide WAP must discuss the feasibility of process knowledge being of sufficient detail to enable its use in determining attainment of LDR treatment standards. Site-Wide WAP Section B.3.1.1, *Acceptable Knowledge*, defines AK as process knowledge and supplemental wastes analysis data. If supplemental data or any other past analytical data is used to characterize wastes it shall be evaluated for conformance with the sampling and analysis

quality assurance/quality control (QA/QC) requirements of the Site-Wide WAP. In fact, NMED will consider that any past laboratory analytical data that meets the WAP QA/QC criteria to satisfy its above referenced policy of requiring characterization of hazardous wastes by sampling and analysis where feasible.

37. Site-Wide WAP Section B.5.3 fourth paragraph

states that sampling or AK will determine attainment of treatment standards. Revise the Site-Wide WAP to include very specific criteria for determining acceptability when AK is used to determine attainment of the very low concentration LDR treatment standards.

38. Information submitted in the WAP should also include the following:

- a. Rationale for site-specific selection of waste analysis parameters, including rationale and justification for utilizing acceptable knowledge (AK) in lieu of laboratory analysis.
- b. Analytical test methods used.
- c. Representative sampling methods including number of samples; grabs, composites; timing of sample collection, and related conditions.
- d. Waste analysis results and information provided by generators.
- e. Waste analysis procedures and methods for testing ignitability, reactivity, and compatibility.
- f. Methods and QA/QC requirements including (as necessary): QA organization and responsibilities, representative sampling procedures, chain of custody procedures and documentation, calibration procedures, analytical procedures, data validation, reporting and storage procedures, audit requirements, corrective action procedures.
- g. Waste analysis procedures for each waste movement, including: examples waste generator (DR) forms, screening of all wastes for consistency with manifest and associated sampling methods, procedures for verifying that received is the expected waste, and procedures for screening restricted waste.

TREATMENT

39. The permit Applicants must also provide information that addresses the following specific requirements

for waste management activities relative to the use of containers, tanks, surface impoundments, west piles, land treatment and landfills, as necessary, including but not limited to:

- a. Procedures to assure and document compatibility of waste with container
- b. Procedures to characterize and manage accumulations in containment systems
- c. Procedures to detect free liquids
- d. Procedures to identify and manage ignitable, reactive and incompatible wastes
- e. Procedures to determine if containers which previously held wastes are contaminated with materials not compatible with present wastes
- f. Procedures to demonstrate decontamination at closure.

40. The Site-Wide WAP and unit-specific Modules fail to describe DOE/SNL's hazardous waste treatment goals;

a factor that significantly influences which waste analysis regulatory requirements is applicable. The Site-Wide WAP must include a waste treatment section similar to that for stored waste (Section B.1.2). The treatment section must identify all waste streams (or general waste stream types) that will be treated, all possible treatment goals with respect to the chemical and physical characteristics of the waste, and specify what waste treatment residual characterization will be performed to verify that the goal has been accomplished.

41. Treatment of hazardous waste has numerous waste analysis regulatory requirements that must be addressed in the Site-Wide WAP, including but not limited to:

- a. 20.4.1.300 NMAC (incorporating 40 CFR Section 262.10 (h)) requirement that treatment facilities (i.e., units) abide by all regulations applicable to generators of hazardous wastes including the determination of whether the treatment residue is a hazardous waste and what waste codes apply,
- b. 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1083 (b)) requirement specifying the procedure used to determine average VO concentration for treated wastes,
- c. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (b)) requirement that treatment facilities specify in a WAP the waste testing frequency and whether the analytical method is performed on treatment residue or on an extract of the residue,
- d. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (b)(3)(ii)) requirement that a treatment facilities keep a record of a notice to a disposal facility containing the following information; the treated waste's new waste code, whether the new waste is subject to LDRs, the identification of underlying hazardous constituents, determination of the waste's wastewater/non-wastewater category, waste analysis data (when available), what hazardous constituents are in soils, and particular certification statement(s),
- e. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9 (b)) requirement specifying particular treatment standards for wastes carrying both listed and characteristic waste codes, and
- f. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.40) requirement addressing treatment standards in general including the requirement that mixtures of wastes attain the lowest applicable treatment standard.
- g. Site-Wide WAP fails to acknowledge that any ash or debris generated from the treatment of a waste stream containing a listed hazardous waste remains a "derived from" listed hazardous waste as specified at 20.4.1.200 NMAC (incorporating 40 CFR Section 261.3 (c)(2)(i)).
- h. Underlying hazardous constituents (UHC) are mentioned in Site-Wide WAP Section B.1.2.11, *Treated Wastes and Treatment Residuals*, as possible post-treatment analytes that may have been present in the untreated waste and potentially introduced by the treatment process. DOE/SNL must elaborate on how and what hazardous constituents might be introduced during the treatment process.

AIR EMISSIONS

42. Site-Wide WAP Section B.5.4 essentially reiterates a portion of the applicable regulations and provides little information on the procedures DOE/SNL will use to comply.

DOE/SNL must revise the Section to reference all applicable waste characterization requirements of 20.4.1.500 NMAC (incorporating 40 CFR Section 264, Subpart CC) and specify how it will comply with those regulations.

43. Section B.5.4 states that generators are responsible for determining Subpart CC compliance and may do so based on AK.

The Section does not reference the AK process specified at 20.4.1.600 NMAC (incorporating 40 CFR Section 265.1084 (a)(4)), as is required by 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1083 (a)(2)). Nor does the Section reference the direct sampling and analysis requirements at 20.4.1.600 NMAC (incorporating 40 CFR Section 265.1084 (a)(3)). DOE/SNL shall attach the waste analysis procedure for determining volatile organic concentrations referenced in GPB Section 1.1.6.6, *Preventing Releases to the Atmosphere*, Page SW-12 to the Site-Wide WAP.

44. DOE/SNL must clarify in the WAP which hazardous wastes are exempt

as suggested in the Site-Wide WAP Section B.5.4, third and sixth paragraphs. A hazardous waste management unit used *solely* (emphasis added) for mixed waste *in accordance with all applicable regulations* (emphasis added) under the Atomic Energy Act and the Nuclear Waste Policy Act is exempt from Subpart CC requirements under 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1080(b)(6)). WAP language has stretched the definition of “waste management unit” to include “waste management areas” within a unit. Provide justification for this interpretation. DOE/SNL must also explain in the WAP how it might demonstrate its compliance with all the above referenced applicable regulations.

45. Air emission issues are addressed in GPB Section 1.1.6.6, *Preventing Releases to the Atmosphere*.

The Section states DOE/SNLs do not regularly manage RCRA-regulated wastes with organic concentrations greater than 10 percent by weight in applicable process equipment, and that such equipment will be used for less than 300 hours per calendar year. DOE/SNL shall provide a listing of the above referenced process equipment together with their precise location as an attachment to the Site-Wide WAP.

46. GPB Section 1.1.6.6, *Preventing Releases to the Atmosphere*, Page SW-12, and GPB Appendix B, *Site-wide Wastes Analysis Plan*, Section B.5.4,

Procedures to Ensure Compliance with Air Emission Requirements, state that wastes subject to 20.4.1.500 NMAC (incorporating 40 CFR Section 264 Subpart CC) requirements are stored in primary containers with a design capacity less than or equal to 0.1 m³. Waste stored in container

with this volume are exempted from Subpart CC by 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1080 (b)(2)). DOE/SNL must clarify.

LAND DISPOSAL RESTRICTIONS (LDRS)

47. Revise the Site-Wide WAP to more thoroughly specify waste characterization requirements

and procedures required to comply with LDRs under 20.4.1.800 NMAC (incorporating 40 CFR Part 268), including but not limited to:

- a. The storage prohibitions at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.50). DOE/SNL must identify in the Site-Wide WAP those wastes it will not characterize for LDR standards in compliance with the Federal Facility Compliance Order mandated Site Treatment Plan (STP). Furthermore, if DOE/SNL does intend to store hazardous waste not listed in the STP for longer than one year, the Site-Wide WAP must recognize the waste characterization requirement to show that the wastes have attained LDR treatment standards.
- b. Characteristic waste analysis requirements at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9). DOE/SNL must specify in the Site-Wide WAP how generators will determine underlying hazardous constituents (UHC)s in compliance with 20.4.1.800 NMAC (incorporating 40 CFR Section 268.9 (a)).
- c. Testing frequency of treated waste at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7(b)). Testing frequency of treated waste must be specified in the Site-Wide WAP.
- d. UHC Certification Statements at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7 (b)(4)(iv) and (v)). Recognize in the Site-Wide WAP the record keeping requirements of the applicable certification statements.

48. Site-Wide WAP Section B.5.3 second paragraph

states that Permittees will comply with requirements to test treated wastes as stipulated at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7(b)) for off-site waste received at the Facility for treatment. 20.4.1.800 NMAC (incorporating 40 CFR Section 268.7(b)) applies to all waste treated at the Facility, not just off-site waste. DOE/SNL must alter the Application accordingly.

WASTE ANALYSIS PLAN SPECIFIC TO MIXED WASTES

49. The application states that mixed wastes will be managed at the Radioactive and Mixed Waste Management Facility and the Auxiliary Hot Cell Facility.

If this is the true, the application must categorically state that mixed wastes “will not” be managed at any other permitted location or unit.

50. The Site-Wide WAP must include a separate section on mixed-wastes

addressing the 20.4.1.500 NMAC (incorporating 40 CFR Section 264.1080 (b)(6)) Subpart CC exclusion of mixed wastes. Note that the Regulation excludes wastes managed in a unit used “only” for the management of radioactive mixed wastes. DOE/SNL must provide its reference regarding the exclusion extending to separate waste management areas within a unit mentioned in Section B.5.4, last paragraph. Also, if DOE/SNL wishes to make use of the exclusion, it must provide unit specific documentation that the wastes are managed in accordance with the Atomic Energy Act and the Nuclear Waste Policy Act.

51. Site-Wide WAP Overview Section 1.0, *Background*, page ii, last paragraph

states that some of the wastes stored at the Auxiliary Hot Cell Facility “are subject to the Federal Facilities Compliance Order (FFCO). The Application must categorically clarify whether mixed wastes are to be stored or treated at any other permitted hazardous waste management unit.

52. The FFCO allows SNL to store mixed wastes with hazardous constituents exceeding the land disposal treatment standards

stipulated at 20.4.1.800 NMAC (incorporating 40 CFR Section 268.50) beyond the one-year limit. Because of its implications for the waste analysis requirements for mixed waste, the FFCO and its associated Site Treatment Plan must be elaborated upon in the Site-Wide WAP.

REQUIREMENTS FOR IGNITABLE, REACTIVE, AND INCOMPATIBLE WASTE, GENERAL PART B, SECTION 1.1.3, PAGE SW-7;

53. Page SW-7, section 1.1.3, 3rd paragraph

states “**Containers holding ignitable or reactive waste are located at least 50 feet from the SNL/NM facility property line.**” Because of the large public population at SNL and Kirtland AFB that is not involved in hazardous waste operations, NMED requires that ignitable or reactive waste be stored at least 50 feet from the unit property (e.g. fence) line. Please provide updated scaled unit diagrams or data demonstrating the existence of this 50-foot buffer zone for each unit as required by 20.4.1.900 NMAC incorporating 40 CFR Section 270.15(c) and 20.4.1.500 NMAC incorporating 40 CFR Section 264.176.

54. Provide detailed description and documentation of the precautions taken to prevent accidental ignition or reaction of ignitable and reactive wastes.

Discuss how ignitable and reactive wastes are separated or protected from open flames, welding activities, etc., as required by 20.4.1.900 NMAC incorporating 40 CFR 270.14(b)(9) and 20.4.1.500 NMAC incorporating 40 CFR 264.17(a). In addition, discuss the precautions taken regarding protection of water reactive waste.

55. Discuss the precautions taken to prevent reactions

which generate extreme heat, explosions or violent reactions, produce uncontrolled toxic fumes or gases, or flammable fumes or other means that threaten human health or the environment as required by 20.4.1.500 NMAC incorporating 40 CFR 264.17(b).

56. Describe the grounding procedures and use of static straps used during the transfer of liquids.
57. Describe how ignitable, reactive or incompatible waste containers and the storage areas are identified and labeled to ensure that this waste is properly segregated.
58. Identify the section of the WAP that deals with the procedures for characterizing these wastes.
59. Identify the methods employed for estimating the potential consequences of mixing different wastes.
60. Discuss how compatibility is determined.
61. In the individual unit modules:
 - a. identify the potential sources of ignition and reactions present and discuss the precautions taken to prevent these sources from causing ignitions and reactions as required by 40 CFR 264.17.
 - b. list the ignitable, reactive and incompatible wastes handled, stored or treated at the units.
 - c. discuss where incompatible wastes are stored and how they are kept separated.

SECURITY PLAN

62. Site-Wide Security Procedures, Page SW-A-3, 1st paragraph;

Describe details of the fence and guards and patrols that are performed at the KAFB boundaries.

SITE-WIDE INSPECTION PLAN - APPENDIX C

63. Site-wide inspection schedule and forms may be used for a specific unit type (i.e. container storage, solidification unit). However, each management unit must have a specific inspection plan explaining in detail what, where, and how the inspection is performed for a particular unit.

64. The inspection form is lacking detail.

The form should identify all key pieces of equipment, structures and areas of operation covered

and how each item will be inspected and a justifiable frequency as required by 20.4.1.500 NMAC incorporating 40 CFR 264.15(b)(3) and (4).

65. The inspection criteria included in the inspection form is too general.

Use of the terms “present” and “good condition” do not adequately address what is inspected. The inspection schedule should list specific equipment and parts or areas to be checked under a given heading. For example, all spill control equipment and quantities of material should be listed on the form in order to ensure that the inspector has acknowledged that all are present.

66. Detail on the inspection procedures must be included.

A detailed description of what to look for or where to inspect must be included in the inspection plan as required by 20.4.1.500 NMAC incorporating 40 CFR 264.15(b)(3). For example, the loading/unloading area inspection criteria should include inspection of the pad, berms, sumps and surrounding areas for cracks, spills etc. Emergency evacuation routes, fire extinguishers, and emergency equipment should be inspected for accessibility and obstructions.

67. Discuss the remedial action requirements addressed in 40 CFR 264.15(c) for equipment and structures and 40 CFR 264.171 for containers that are found to be deteriorated or leaking.

If outside agencies, such as fire department or SNL Emergency Response Organization, perform periodic inspections of emergency equipment this information should be explained in the inspection plan.

PERSONNEL TRAINING PLAN - APPENDIX D

General Comments:

The subject documents have been reviewed within the context of EPA guidance including “Permit Applicants Guidance Manual for the General Facility Standards of 20.4.1.500 NMAC, incorporating 40 CFR Section 264, and following review of the current Part B Training Requirements.

68. Review of Appendix D, the Preliminary Draft Personnel Training Plan,

and Unit specific Attachment(s) D finds that the preliminary draft documents appear to be generic boilerplate that do not provide the minimum information required of the Part B permit. Future revisions should provide additional information, as required, within the context of the entire permit application.

69. The training program described in this appendix should assure the regulator that SNL personnel will have the required training and management skills necessary to perform their jobs in a competent manner.

The more detailed the training program documentation, the more apparent it will be to the

regulators that DOE/SNL is providing its personnel with proper training.

70. Additional information should include:

- a. A brief description of how training will be designed to meet actual and/or Unit specific job tasks.
- b. Identification and qualifications of training program instructor(s).
- c. Appendix D should specify the organizational structure and lines of authority of Waste Management Operations Training personnel from the top to specific units. This should include names and titles of SNL staff, designees or contractors. An outline of the training program for each of the job positions at the facility or Unit. Table D-2 should reflect actual facility or unit specific jobs and titles.
- d. The training plan should recognize the potential for changes in waste management operations and the need for an integrated annual review and revision of training requirements.
- e. A description of procedures to insure all appropriate personnel receive required, initial training and annual training review.
- f. A description of records to be kept, their location and procedures to insure that are maintained as necessary.
- g. Appendix D and unit specific attachments should include job descriptions and training requirements in addition to job title.

71. Unit specific Attachment D(s) does not provide adequate detail

regarding training requirements. Unit specific attachments should identify unique operations and a description of all associated staff positions with their training requirements.

Specific Comments:

72. Section D-2 – New training requirements necessitated by changing compliance issues or activities should be reviewed annually.

73. Section D-4 – Emergency-training requirements should be reviewed annually.

CONTINGENCY PLAN – APPENDIX E

General Comments:

74. The Contingency Plan (CP) should be set up as instructions

to facility personnel and provide specific instructions regarding what to do, whom to notify, and in the case of off-site assistance, how to notify them and what those groups will and will not do during an emergency. The activities carried out during an incident should also be presented in a separate table laid out in chronological format so that personnel do not have to browse through the document to find it.

75. Pursuant to 20.4.1.500 NMAC, incorporating 40 CFR Section 264.51(b),

the CP must be carried out immediately whenever there is a fire, explosion or unplanned release. The CP as written does not distinguish between emergency procedures for fire, explosion or a release. Clarify whether or not emergency procedures presented in Sections E.5.1, E.5.2 and E.5.3 are the same for all three types of incidents. If not, separate emergency procedures must be presented for each type of incident. NMED believes there are sufficient differences between these types of incidents to warrant separate procedures. The November 1996 SNL Permit Application provides a decent example of the step-by-step procedures required.

76. Section 264.52(a)

The CP must describe in detail the action facility personnel must take in implementing the CP and emergency response procedures.

Specific Comments:

77. Introduction 2nd paragraph, page SW-E-1

This section states, **“The provisions of this Contingency Plan will be carried out immediately to minimize hazards whenever an imminent or existing fire, explosion, or unplanned sudden or non sudden release of RCRA-regulated waste or hazardous waste constituents to air, soil or surface water could threaten human health or the environment outside the Unit, as required by 20 NMAC 4.1.500/40 CFR 264.51(b).”** The regulations do not limit the implementation of the contingency plan to only those threats outside the unit but to any release to the air, soil, or surface water that could threaten human health or the environment. Please remove this language from the application.

78. Section E.1.1 Unit Description, page SW-E-1

This section states “Descriptions of each Unit... are provided in Attachment E of each Unit-specific module.” The units are not described in Attachment E. Please correct.

79. Section E.3.1 Emergency Coordinator, page SW-E-3:

This section indicates that there are **“Unit-specific Emergency Coordinators”** (EC) at each hazardous waste management facility. However, the same EC personnel are listed for the RMWMF, the HBWSF, and the MSB. Explain how this arrangement will provide adequate resources to all three units and how personnel should contact the ECs. Also, the plan should provide the time of day that the EC and alternatives are routinely available. The list should also contain an issuance date to ensure that the most current list is used. In addition to providing the names and telephone numbers in the CP, these numbers should be posted next to emergency phones.

80. Section E.3.1 Emergency Coordinator, page SW-E-3 and/or Unit-specific Contingency Plan Attachment E:

The discussion of the EC should include a brief bibliography of their qualifications and training in order to justify their selection as the EC and communicate how the authority to authorize the necessary funds to handle an emergency is granted.

81. Section E.2 Contingency Plan Distribution, page SW-E-3:

Provide the physical location of the SNL/NM Emergency Operations Center (EOC).

82. Sections E.3.2 Emergency Response Groups, page SW-E-3:

Provide more detailed description of the Emergency Response Organization and their functions and duties carried out during an emergency response. The CP must provide a description of the activities the EC, IC, EOC, or others will carry out in response to an emergency.

83. Section E.3.2 Emergency Response Groups, page SW-E-3:

The last sentence is cut off.

84. Section E.3.4 Support Agreements and Coordination with Outside Agencies, page SW-E-4

The CP must describe arrangements agreed to by local police, fire, hospitals and State or local emergency response teams and include copies of the written agreements as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.52(c). Written agreements were not included. In addition, these groups should be provided with copies of the CP as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.53(b) and be familiarized with the types of emergency situations and actions that they are required to handle pursuant to 40 CFR Section 264.37. Specific instructions must be provided that inform facility personnel on how to obtain and coordinate these services.

85. Section E.4 Emergency Equipment, Table E-2 and Unit-specific emergency equipment lists:

Provide information on who controls the equipment listed in Table E-2, page SW-E-5 and where it is located. For unit-specific attachments, list all equipment and include the location and discuss the capabilities of each piece listed. Terminology used in the unit-specific tables such as “near exit” and “building wide” is not specific. It is suggested that building diagrams showing the locations of all emergency equipment be provided and that these diagrams be posted at various locations throughout the facility. For the lists provided in the unit-specific plans, clarify how the sprinkler systems are activated. If they can be turned on manually, provide the locations of activation devices and criteria for when sprinklers should be used.

86. Section E.5.1. Emergency Response, page SW-E-6:

It is unclear whether or not there are any emergency procedures that are implemented by unit personnel or emergency personnel other than evacuation. This section should include a detailed step-by-step procedures implemented by either unit personnel, the EC or emergency personnel in controlling the spread of fires, explosions or releases at the facility. See general comments #1 and #2 above.

87. Section E.5.1 Emergency Response or Section E.5.2 Evacuation, page SW-E-6:

The EC must also assess whether local evacuation is advisable and immediately notify local authorities if this is necessary and be available to assist local official as required by 20.4.1.500 NMAC incorporating 40 CFR 264.56(d)(1).

88. Section E.5.1 Emergency Response or Section E.5.2 Evacuation, page SW-E-6:

If a release could affect human health outside the facility, the EC must report to the government official designated as the on-scene coordinator or to the National Response Center as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.56(d)(2).

89. Section E.5.2 Evacuation, page SW-E-7:

The evacuation plan should not combine procedures within a given bullet or contain extraneous information regarding the location of information. The evacuation plan should be a step-by-step procedure for the safe evacuation of personnel and include such steps as emergency shutdown of equipment, orderly exit from the building and assurance procedures that all persons are evacuated. In addition to the procedures, a list of emergency precautions used during an emergency should be included. These emergency evacuation procedures and evacuation routes should be posted at the facility.

90. Section E.8 Contingency Plan Amendment, page SW-E-8:

The CP should indicate how copies of the plan will be amended with emphasis on how off-site copies will be amended and how to ensure that the amendments are incorporated and the most current copy is used, as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.54.

CLOSURE PLAN – APPENDIX F

General Comments:

91. Generally, the information in the Site-Wide Closure Plan,

Appendix F, lacks the range of information and depth of detail to function as intended. In addition, it appears that the only unit specific information presented in module specific attachments F is data on the maximum volume of waste stored during the life of the facility.

92. DOE/SNL seems to know the regulatory drivers but needs to provide the details of how the closure of the various facilities will be conducted,

because the regulations do not provide the procedures that the facility is supposed to use as a cook book at closure. Please elaborate on the requirements by providing more information.

93. As required by the New Mexico Hazardous Waste Management Regulations 20.4.1.500 NMAC, incorporating Section 264.112(b)(4) and (5), the written plan should contain the following:

- a. Closure performance standards, and how these will be achieved;
- b. Amendment of Closure Plan, and the rationale for that, the time allowed should also be discussed;
- c. A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard; and
- d. A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground-water monitoring leachate collection, and run-on and run-off control.

This required information should be provided in the general closure plan, and commensurate with unit complexity and site-specific technical need in the module attachment(s) F.

Specific comments:

94. While it is commendable that SNL recognized and described the DQO process in support of sampling plan development,

again, both the general closure plan and in particular the unit specific attachments lack necessary detail and can not function as an approved, enforceable plan. The existing Appendix and Attachments should be revised to include all necessary detail to support implementation for closure or a statement should be included which clarifies that a unit specific closure plan shall be developed and submitted for approval in the future. An example of a substantial (and consistent) deficiency in the current plan(s) is the absence of site-specific sampling grid or sample location designation on a facility diagram. The closure schedule should also be revised to address this requirement.

CORRECTIVE ACTION MANAGEMENT UNIT

Volume III, Part 5 Corrective Action Units

95. Table of Contents (page i):

The title language states: **“Class III Permit Modification Request for the Management of Hazardous Remediation Waste in the Corrective Action Management Unit, Technical Area III, Sandia National Laboratories/New Mexico, Environmental Restoration Project. January 2002”**.

The title language should be revised to: “Permit Application for Management of Hazardous Remediation Waste in the Corrective Action Management Unit, Technical Area III, Sandia National Laboratories/New Mexico, Environmental Restoration Project. January 2002”.

96. Table of Contents (page i):

The title language states: **“Temporary Authorization Request for Low-Temperature Thermal Desorption Treatment Operations at the Corrective Action Management Unit, Technical Area III, June 1998”**.

The title language should be revised to: “Permit Application for Low-Temperature Thermal Desorption Treatment Operations at the Corrective Action Management Unit, Technical Area III, January 2002”. The document should be updated from that of June 1988 using current information.

97. Table of Contents (page i):

The title language states: **“Class II Permit Modification Request for the Temporary Unit Operations at the Corrective Action Management Unit. January 2002”**.

The title language should be revised to: “Permit Application for Temporary Unit Operations at the Corrective Action Management Unit. January 2002”.

98. The title language states:

“Class III Permit Modification Request for the Management of Hazardous Remediation Waste in the Corrective Action Management Unit, Technical Area III, Sandia National Laboratories/New Mexico, Environmental Restoration Project. January 2002”.

The title language should be revised to: “Permit Application for Management of Hazardous Remediation Waste in the Corrective Action Management Unit, Technical Area III, Sandia National Laboratories/New Mexico, Environmental Restoration Project. January 2002”.

99. List of Figures, page vi:

Figure 3-1 is missing. Please provide the figure.

100. List of Figures, page vi-vii:

Figures 3-7, 3-9, 3-10, 3-11, and 3-15 appear to be present in the document, but are not labeled with their respective figure numbers. Provide these illustrations labeled with the appropriate figure numbers.

101. Section 2.1.3, Traffic Patterns, page 2-4, 1st paragraph states:

“The number of employees at SNL/NM has not changed since 1984; therefore, SNL/NM has no reason to believe that the 1995 traffic pattern is significantly different from the 1984 traffic data”.

This information should be updated to reflect conditions present in the year 2002.

102. Section 2.1.3, Traffic Patterns, page 2-4, 4th paragraph, 3rd sentence states:

“Pennsylvania Avenue crosses Tijeras Arroyo on a concrete bridge, with a 40 ton load limit.”

A new bridge has been constructed across the Tijeras Arroyo. Does the 40-ton load limit still apply? If not, this sentence should be revised as necessary to reflect current limitations.

103. Section 2.2, Description of ER Site 107 and its Qualifications for CAMU Designation, page 2-6, 2nd paragraph, states:

“ER Site 107 was reportedly used for high explosives testing...”

Additional analytical data from surface-soil sampling has been acquired since May 1994. This paragraph should be updated with current information on contaminant concentrations and levels of risk associated with said contamination.

104. Section 2.2.1, Floodplain, page 2-6, last sentence states: “Floodplain regulations are not applicable to the CAMU”.

The CAMU is subject to RCRA regulations regarding floodplains (for example the information submittal requirements of 20.4.1.900 NMAC incorporating 40 CFR 270.14 (b)(11)(iii). This sentence should be deleted.

105. Section 2.2.2, Seismic Considerations, page 2-6, last sentence states: “Therefore, the CAMU is not regulated under 40 CFR 264.18(a)(1)”.

Even though the CAMU is not located within 200 ft from any known fault with Holocene displacement, the CAMU is subject to this specific regulation. This sentence should be deleted.

106. Section 3.0 CAMU Design, Operating, and Closure Standards, page 3-1, last two sentences state:

“Support structures and functions at the CAMU include storm water retention ponds, the less-than-90-day leachate collection tank for the containment cell, the administration trailers, the decontamination pad, emergency eye wash stations, and electrical and water hookups. These are not RCRA units subject to permitting requirements and therefore, are not described in detail in this section”.

The storm water retention ponds, the less-than-90-day leachate collection tank for the containment cell, the administration trailers, the decontamination pad, emergency eye wash stations, and electrical and water hookups are part of the CAMU unit. These support structures and functions are required by and regulated by RCRA and are subject to RCRA Permit conditions. The last of the two subject sentences should be deleted.

107. Section 3.1, Requirements for Remediation Waste Management, page 3-2, 2nd paragraph

This paragraph needs to be updated to reflect modifications to the existing CAMU Permit, which state: “Treatment is required if the total risk of carcinogens poses a potential direct risk from ingestion or inhalation at the site at or above 10^{-3} using an industrial scenario. Treatment is also required where the sum of the hazard quotients of all noncarcinogens (the hazard index) is equal to or exceeds 10 using an industrial scenario. Industrial risk must be calculated using the exposure parameters for inhalation and ingestion for the industrial scenario in the NMED HWB Technical Background Document for Development of Soil Screening Levels. The exposure parameters for dermal contact can be omitted from the calculations based on EPA guidance in the CAMU rule.”

These modifications to the existing CAMU permit were requested by SNL on October 11, 2001, and approved by the NMED on January 30, 2002.

108. Table 3-1, page 3-3:

The Chemical Waste Landfill, the expected source for most of the contaminated soil to be disposed of at the CAMU containment cell, has been fully excavated at this time. This table should be updated to reflect currently known contaminants and contaminant levels. Table 3.1 should be combined with Table 3.1a.

This modification of the subject tables was required by the NMED as a condition to granting a Class 1 Permit Modification to the existing CAMU Permit that was requested by SNL on February 19, 2002, and approved by the NMED on April 4, 2002.

109. Section 3.1.1, Physical and Chemical Characteristics of Waste to be Managed, page 3-11, 2nd paragraph, last sentence states:

“Hazardous remediation waste containing Toxic Substances Control Act (TSCA) contaminants ... may also be generated as a result of ER Project corrective action

activities; management of these remediation wastes at the CAMU requires compliance with TSCA regulations...and New Mexico Solid Waste Act regulations for asbestos-containing wastes.

Provide documentation that the necessary Permits and authorizations have been obtained from the U. S. Environmental Protection Agency and the New Mexico Environment Department Solid Waste Bureau.

110. Section 3.1.1, Physical and Chemical Characteristics of Waste to be Managed, page 3-12, Bullets #1 and #2:

The language should be revised for the two subject bullets to match that in comment #13 above.

111. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-12:

This section should be combined with section 3.1.1.

112. Section 3.1.1a, page 3-12, 1st paragraph, next to last sentence states:

“Treatment goals for the CAMU treatment units are based on threshold levels provided in prescribed guidance, promulgated rules, or SNL/NM site-specific data, when appropriate”.

Please explain what SNL/NM site-specific data are.

113. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-13, bullet 2, Ignitability, Corrosivity, and Reactivity Characteristics, last sentence states:

“Treatment of the remediation waste to remove these properties would render the material acceptable for placement in the CAMU containment cell, or for recycling or reuse”.

This sentence should be changed to: “Treatment of the remediation waste to remove these properties would render the material acceptable for placement in the CAMU containment cell, or for recycling or reuse as permitted by law”.

114. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-13, bullet 3, Toxicity Characteristic Leaching Procedure, next to last sentence states:

“Treatment of the waste to below the threshold level for the specific characteristic removes that hazard and would render the waste acceptable for placement in the CAMU containment cell or recycling or reuse”.

This sentence should be changed to: “Treatment of the waste to below the threshold level for the specific characteristic removes that hazard and would render the waste acceptable for placement in the CAMU containment cell or recycling or reuse as permitted by law”.

115. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-13 and 3-14, bullet 6,

Background Concentrations of Constituents of Concern to the Sandia National Laboratories/New Mexico Environmental Restoration Project and the Kirtland Air Force Base Installation Restoration Program (SNL/NM, as revised).

Provide the NMED-approved background levels in a table or set of tables.

116. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-14, bullet 7, SNL/NM CAMU Thresholds Levels:

The word “thresholds” should not be plural. Change the title to read: “SNL/NM CAMU Threshold Levels”.

117. Section 3.1.1a, Treatment Standards for Remediation Waste, pages 3-12 to 3-18

Incorporate into this section the treatment criteria in comment #13 above.

118. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-14, paragraph before bullet 1 at bottom of page, 5th sentence states: “

An initial determination will be made to determine the waste’s classification: listed or characteristically hazardous waste”.

Explain in the text what will be done for any hazardous waste streams that are both listed and characteristic.

119. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-14, bullet 1 at bottom of page, Listed Hazardous Waste, 1st sentence states:

“Treatment goals for the bulk placement of waste in the CAMU containment cell are the highest of: (1) the Superfund LDR Guide #6A levels, (2) threshold values for characteristically hazardous waste; ...”.

What are the threshold values for characteristically hazardous waste (reference the appropriate table(s) or regulations)? Also, please indicate whether threshold values for characteristically hazardous waste should be applied here correct given that the text in this bullet addresses *listed* hazardous waste.

120. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-17, bullet 2, Characteristically Hazardous Waste, 1st sentence states:

“Treatment goals for the bulk placement of waste in the CAMU containment cell are the highest of: (1) the Superfund LDR Guide #6A levels, (2) threshold values for characteristically hazardous waste; ...”.

What are the threshold values for characteristically hazardous waste (reference the appropriate table(s) or regulations)? Also, please change the title of the bullet to read “Characteristic Hazardous Waste”.

121. Table 3-1b, Explanation of Keyed Notes in Figure 3-1a, No. 2, next to last sentence states:

“If the characteristic (e.g. toxicity, reactivity) has been removed by treatment, the waste may also be managed at a solid waste facility or recycled for reuse.”

The sentence should be changed to read “If the characteristic (e.g. toxicity, reactivity) has been removed by treatment, the waste may also be managed at a solid waste facility or recycled for reuse as permitted by law”.

122. Table 3-1b, Explanation of Keyed Notes in Figure 3-1a, No. 2, last sentence states:

“However, the classification (i.e. listed vs. characteristic) will not impact treatment (see 4) since management in a CAMU is not subject to LDRs and other RCRA requirements”.

Hazardous waste not placed into the CAMU cell for disposal is subject to LDRs. All hazardous waste at the CAMU is subject to RCRA subtitle C requirements and the New Mexico Hazardous Waste Management Regulations. The subject sentence should be deleted.

123. Table 3-1b, Explanation of Keyed Notes in Figure 3-1a, No. 4

This note should be updated to reflect the treatment criteria mentioned in comment #13 above.

124. Table 3-1b, Explanation of Keyed Notes in Figure 3-1a, No. 5

The TCLP threshold mentioned in this note should be explained in detail the text of Section 3.1.1a (which should be integrated into section 3.1.1).

125. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-18, bullet 3, Hazardous Debris, 2nd and 3rd paragraphs:

The information in these two paragraphs suggests that gravel will be treated using an alternative method as permitted by 20.4.1.800 NMAC incorporating 40 CFR 268.42(b). The purpose of alternative treatment is to allow a different technology to be used to achieve the same treatment goal. However, the proposed treatment technology presented in the application is the same: high-pressure water wash.

The proposed change of the treatment goal (not the method) does not meet the intent of 20.4.1.800 NMAC incorporating 40 CFR 268.42(b). Therefore, the subject paragraphs should be deleted. Hazardous debris, including contaminated gravel, is subject to the full requirements of 20.4.1.800 NMAC incorporating 40 CFR 268.45 if not placed into the CAMU containment cell. Contaminated gravel that can not be treated pursuant to 20.4.1.800 NMAC incorporating 40 CFR

268.45 and that will not be placed into the CAMU containment cell needs to be managed as hazardous waste.

Alternatively, another treatment method may be specified which meets the intent of 20.4.1.800 NMAC incorporating 40 CFR 268.42(b). The applicant must demonstrate, among other requirements, that the method is protective of human health and the environment.

126. Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-18, bullet 3, Hazardous Debris, last sentence on page states:

“Test the treated debris according to the methods in Subpart C of Part 261 (or according to an equivalent method under 260.21)”.

Testing using an equivalent method must be approved in advance by the NMED. The applicant must petition to use an alternative method and must submit the information required in 20.4.1.100 NMAC incorporating 40 CFR 260.20(b) and 260.21(b). Such an approval will not be granted by the NMED without serious consideration. For this reason, the subject sentence should be changed to: “Test the treated debris according to the methods in Subpart C of Part 261”.

127. Section 3.1.3, Treatment Area, page 3-21, 2nd paragraph, 1st sentence states:

“The physical layout of the treatment area (Figure 3-8) includes a treatment pad ... as well as the treated waste staging areas discussed in Section 3.1.2.1.4”.

The section cited is incorrect. Change the citation from Section 3.1.2.1.4 to Section 3.1.2.4.

128. Section 3.1.4 Containment Cell, page 3-22, 3rd paragraph, 1st sentence states:

“The containment cell includes an engineered liner system designed to prevent migration of hazardous constituents from leachate, contaminated runoff, and hazardous decomposition products to adjacent geologic materials or to groundwater or surface water during CAMU operations and the post-closure period”

Delete the words “contaminated runoff” and “surface water” from the subject sentence, or explain how the *liner system* prevents leachate from impacting surface-water runoff during operations and post-closure.

129. Section 3.1.4 Containment Cell, page 3-22, 4th paragraph:

The subject paragraph should be updated and revised to reflect that the liner system and Leachate Collection and Removal System (LCRS) have already been installed.

130. Section 3.1.4.2.1, Protective Cover Soil, page 3-24, 3rd and 4th paragraphs:

The subject paragraphs should be updated and revised to reflect that the protective soil cover has already been installed.

131. Section 3.1.4.2.2, Leachate Collection and Removal System, page 3-28, nominal value for Schedule 80 PVC pipe:

The maximum “working pressure” for 10-inch pipe is defined as “NA”. Define the term “working pressure” and explain why the value is specified as “NA”.

132. Section 3.1.4.6.1 Components of the Leachate Collection and Removal System, page 3-37, 1st paragraph, 2nd sentence states:

“The trench traverses the bottom of the containment cell from the south to the north and will be sloped approximately 1 percent towards the north.”

The subject sentence should be updated and revised to reflect that the Leachate Collection and Removal System (LCRS) have already been installed.

133. Section 3.1.4.6.1 Components of the Leachate Collection and Removal System, page 3-37, 3rd paragraph, last sentence states:

“A 1.25-inch-diameter nylon tube will be connected to the submersible pump to deliver leachate to the above-ground leachate collection tank, which will be managed in accordance with applicable requirements of 40 CFR 262.34(a).”

The subject sentence is confusing and should be revised to: “A 1.25-inch-diameter nylon tube will be connected to the submersible pump to deliver leachate to the above-ground leachate collection tank; the leachate should be managed in accordance with applicable requirements of 40 CFR 262.34(a). The latter requirements limit storage, without a permit, of hazardous waste in tanks to no more than 90 days”.

134. Section 3.1.4.6.1, Components of the Leachate Collection and Removal System, page 3-38, 1st paragraph, last sentence states:

“After the pipe was installed and the bedding and drain aggregate placed, the interior of the pipe was inspected for proper installation”.

Provide the results of the inspection.

135. Section 3.1.4.6.2, Components of the Leachate Collection Area, page 3-38, 2nd paragraph, 5th sentence states:

“A high level sensor will be installed through an opening in the top of the leachate collection tank.”

Indicate whether the sensor has already been installed. If so, revise the language of the subject sentence to reflect that that device has been installed.

136. Section 3.1.4.6.2, Components of the Leachate Collection Area, page 3-38

Provide information on the frequency of inspections for leachate and how the inspections will be conducted.

137. Section 3.1.4.7 Final Cover, page 3-39, 1st bullet on top of page states:

“Have an unsaturated hydraulic conductivity less than or equal to that of any bottom liner system or natural subsoils.”

Given that the CAMU does have a bottom liner system, this sentence should be revised to “Have an unsaturated hydraulic conductivity less than or equal to that of the bottom liner system”.

138. Section 3.1.5.1, Bulk Waste Management Operations, page 3-40, 2nd paragraph, 1st sentence states:

“At the bulk waste staging area, bulk RCRA-regulated listed hazardous waste will be segregated from bulk RCRA-regulated characteristic hazardous waste to eliminate cross-contamination.”

Explain what will happen if hazardous waste is both listed and characteristic.

139. Section 3.1.5.1, Bulk Waste Management Operations, page 3-41, 2nd paragraph, 2nd sentence states:

“The bulk waste will remain covered (e.g. with plastic sheeting) while awaiting treatment to reduce fugitive dust and potential exposure by human or environmental receptors”.

Explain specifically the means by which the bulk waste will be covered. Additionally, there is no mention of the retractable cover that has been installed at the bulk waste management area. Provide information on the retractable cover.

140. Section 3.1.5.1, Bulk Waste Management Operations, page 3-42, 4th paragraph, 1st sentence states:

“Treated bulk waste that is not derived from listed waste and no longer exhibits hazardous waste characteristics may be used as fill in the containment cell or may be used as fill for SNL/NM Facilities construction activities at SNL/NM sites only”.

The subject sentence should be revised to: “Treated bulk waste that is not derived from listed waste and no longer exhibits hazardous waste characteristics may be used as fill in the containment cell or may be used as fill for SNL/NM Facilities construction activities at SNL/NM sites only as permitted by law”.

141. Section 3.1.5.1, Bulk Waste Management Operations, page 3-42, 4th paragraph, last sentence states:

“Only treated characteristic wastes that meet specified treatment standards may be emplaced in the CAMU containment cell.”

Reference the location of the “specified treatment standards” in the Permit application.

142. Section 3.1.5.1, Bulk Waste Management Operations, page 3-42, last paragraph states:

“Disposition of waste generated during the treatment of the bulk hazardous remediation waste (i.e. loaded carbon absorption unit from a thermal desorption treatment unit) will be addressed in a permit modification request to be submitted for CMTUs”.

There is no need to provide this information later, as the treatment technologies to be employed at the CAMU are already known. Provide information now on the disposition of waste generated from the treatment of hazardous waste at the CAMU.

143. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-43, 2nd paragraph:

This paragraph discusses the blending of wastes, based on whether a hazardous waste is listed or characteristic. Discuss what happens to any hazardous waste that is both characteristic and listed.

144. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-43, 3rd paragraph, end of 3rd sentence states:

“...or to transport the treated containerized non-RCRA hazardous waste (i.e. treated characteristic hazardous waste) off-site for use by SNL/NM Facilities in construction activities.”

The end of the 3rd sentence should be revised to: “...or to transport the treated containerized non-RCRA hazardous waste (i.e. treated characteristic hazardous waste) off-site for use by SNL/NM Facilities in construction activities as permitted by law.”

145. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-44, 2nd paragraph, 1st sentence states:

“Treated containerized waste that is derived from listed waste and no longer exhibits hazardous waste characteristics may be used as fill in the containment cell or may be used as clean fill for the SNL/NM Facilities construction activities at SNL/NM sites only.”

The subject sentence should be revised to: “Treated containerized waste that is derived from listed waste and no longer exhibits hazardous waste characteristics may be used as fill in the

containment cell or may be used as clean fill for the SNL/NM Facilities construction activities at SNL/NM sites only as permitted by law.”

146. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-44, 2nd paragraph, 2nd sentence states:

“Only treated characteristic wastes that meet specified treatment standards may be emplaced in the CAMU containment cell.”

Reference the location of the “specified treatment standards” in the Permit application.

147. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-44, 2nd paragraph, last sentence states:

“Disposition of waste generated during the treatment of the containerized hazardous remediation waste (i.e. loaded carbon absorption unit from a thermal desorption treatment unit) will be addressed in a permit application or modification request to be submitted for CMTUs”.

There is no need to provide this information later, as the treatment technologies to be employed at the CAMU are already known. Provide information now on the disposition of waste generated from the treatment of hazardous waste at the CAMU.

148. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-44, last paragraph, in part reads:

“If the treated waste meets negotiated treatment standards, or if the treated characteristic waste no longer exhibits the RCRA-regulated hazardous characteristics, the treated waste may be placed in the containment cell. If the waste does not meet the negotiated treatment standards or continues to exhibit hazardous waste characteristics, the waste is containerized and placed in the containment cell.”

Clarify what is meant by the subject sentences, which seem to imply that no matter what the situation may be, waste will be placed into the containment cell.

149. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-45, 2nd paragraph:

Please clarify if soil “used as structural fill” is the same as soil placed as backfill between and around containers.

150. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-45, 4th paragraph, 3rd sentence states:

“At the end of each treatment campaign when placement of waste into the containment cell is to be interrupted by more than several weeks, the bulk waste placed into the cell will be

covered with approximately 18 inches of clean fill (e.g. native soil removed from the cell during excavation)”.

The phrase “more than several weeks” is too vague. State specifically the time period intended. Revise the following sentence in the text to also reflect the time period intended. After an interruption is first identified, indicate how much time will pass before clean fill is placed into the containment cell.

151. Section 3.1.5.2, Containerized Waste Management and Phased CAMU Operations, page 3-45 to 3-46, starting with last paragraph on page 3-45 which states:

“When treatment operations resume from a longer interruption, approximately 9 inches of clean fill is removed and segregated at the side of the cell. Additional treated waste is placed in the cell as stated above. If the treatment operations are again interrupted for a long duration, the approximately 9 inches of clean fill is placed on the treated bulk waste, and approximately 9 additional inches of clean fill is placed in the cell. Removal and placement of clean fill in the cell is conducted using metered poles placed along the sidewalls and survey techniques to ensure bulk waste material in the containment cell is not disturbed.”

Placement operations have not yet begun at the CAMU containment cell. Revise the subject language to: “When treatment operations resume from a longer interruption, approximately 9 inches of clean fill is to be removed, segregated, and stockpiled at the side of the cell. Additional treated waste is placed in the cell as stated above. If the treatment operations are again interrupted for a long duration, the stockpiled soil at the side of the cell will be placed on the treated bulk waste, and approximately 9 inches of additional clean fill will be brought in and placed in the cell. Removal and placement of clean fill in the cell will be conducted using metered poles placed along the sidewalls and survey techniques to ensure bulk waste material in the containment cell is not disturbed.”

152. Section 3.1.6.1, Protection of Groundwater, page 3-47, 1st paragraph states:

“The closest well field is located approximately 4.5 miles north-northwest and downgradient of the proposed CAMU, and the closest downgradient water-supply well is KAFB-4”.

State the distance from the CAMU to KAFB-4.

153. Section 3.1.6.1, Protection of Groundwater, page 3-47, 2nd paragraph, 2nd sentence states:

“The types of barriers at the CAMU include asphaltic concrete at the bulk waste staging area, base course at the containerized waste storage area, concrete at the Sprung™ structures, and a liner system associated with the containment cell”.

Base course is not a barrier to contaminant migration. Revise the language to read: “The types of barriers at the CAMU include asphaltic concrete at the bulk waste staging area, concrete at the

Sprung™ structures, and a liner system associated with the containment cell”.

154. Section 3.1.6.1, Protection of Groundwater, page 3-47, 2nd paragraph, 3rd sentence states:

“In addition, administrative and operational controls have been instituted at the CAMU to minimize the potential for environmental contamination that would result from precipitation contacting hazardous remediation waste or from the direct contact of hazardous remediation waste and surface soil.”

Provide information on the administrative and operational controls.

155. Section 3.1.6.2, Protection of Surface Water, page 3-47, last paragraph on page, 3rd sentence states:

“Administrative and operational controls will be followed at the CAMU to minimize the potential for environmental contamination that would result from precipitation contacting hazardous remediation waste.”

- a) The CAMU has been built, and waste is stored on site. The subject sentence should be revised to “Administrative and operational controls are followed at the CAMU to minimize the potential for environmental contamination that would result from precipitation contacting hazardous remediation waste.”
- b) Please provide information on the administrative and operational controls.

156. Section 3.1.6.3 Protection of Surface Soil, page 3-48, 3rd paragraph, 2nd sentence states:

“The types of barriers at the CAMU include asphaltic concrete at the bulk waste staging area, concrete at the Sprung™ structures, base course at the containerized waste storage area, and a liner system at the containment cell.”

Base course is not a barrier to contaminant migration. Revise the language to read: “The types of barriers at the CAMU include asphaltic concrete at the bulk waste staging area, concrete at the Sprung™ structures, and a liner system at the containment cell.”

157. Section 3.1.6.3 Protection of Surface Soil, page 3-48, 3rd paragraph, 3rd sentence states:

“In addition, administrative and operational controls are followed at the CAMU to minimize the potential for environmental contamination that would result from precipitation contacting hazardous remediation waste or from the direct contact of hazardous remediation waste and the surface soil, limiting the pathway and exposure routes.”

Provide information on the administrative and operational controls.

158. Section 3.1.6.4, Protection of the Atmosphere, page 3-49, 2nd paragraph:

Provide additional information on other common wind directions and speeds. For example, winds from the west to southwest are common in this part of New Mexico.

159. Section 3.1.6.4, Protection of the Atmosphere, page 3-49, 3rd paragraph, 4th sentence states:

“Preventative measures included in the administrative and operational controls are good housekeeping procedures, decontamination procedures, waste mound maintenance....”

Explain “waste mound maintenance.”

160. Section 3.1.6.4, Protection of the Atmosphere, page 3-49, last paragraph, 1st sentence states:

“The CAMU containment cell is not a municipal landfill and, as such, is not subject to the requirements for municipal landfills, particularly the requirements for landfill gas venting and management.”

Although it is true that the CAMU is not regulated under RCRA subtitle D, the CAMU is still subject to air emissions requirements under RCRA Subtitle C. The subject sentence should be deleted.

161. Section 3.1.6.4, Protection of the Atmosphere, page 3-49, last paragraph, 2nd sentence states:

“However, the generation of landfill gases (e.g. methane, hydrogen sulfide) is not expected to occur at the CAMU containment cell and thus, is not expected to present an exposure hazard.”

Small amounts of organic materials (such as wood and paper) will likely be disposed of in the CAMU containment cell, which will generate methane and other landfill gases as they rot. Thus, the subject sentence should be revised to: The generation of significant amounts of landfill gases (e.g. methane, hydrogen sulfide) is not expected to occur at the CAMU containment cell and thus, is not expected to present an unacceptable exposure hazard.”

162. Section 3.1.6.4, Protection of the Atmosphere, page 3-50, bullet 1 states:

“The treated waste placed in the containment cell will consist only of solids (no liquids will be accepted for disposal).”

Waste, whether solid or liquid, can generate landfill gases. The subject bullet should be deleted.

163. Section 3.1.6.4, Protection of the Atmosphere, page 3-50, bullet 2 states:

“During containment cell operations, the cell will be open and will preclude the existence of an anaerobic environment required for landfill gas generation.”

Organic materials can decay or emit gases while sitting on the surface of the earth under aerobic conditions. The subject bullet should be deleted.

164. Section 3.1.6.4, Protection of the Atmosphere, page 3-50, bullet 3 states:

“An aqueous environment is required for the anaerobic degradation of waste and consequent methane generation. During containment cell operations and after closure, the LCRS will effectively remove all free liquids and preclude an aqueous environment.”

Saturation of waste in water is not necessary for the formation of landfill gases, which, in this case, includes not only just methane from the breakdown of organic materials, but also gases originating from volatile and semi-volatile compounds included in the waste stream.

The subject bullet should be deleted.

165. Section 3.2.1, 24-hour Surveillance, page 3-51, last sentence states:

“Consequently, because the CAMU will be located within TA III, the site is in compliance with the requirements of 40 CFR 264.14(b)(1).”

The CAMU has already been constructed. The subject sentence should be revised to: “Consequently, because the CAMU is located within TA III, the site is in compliance with the requirements of 40 CFR 264.14(b)(1).”

166. Section 3.3, Inspections, page 3-52, 2nd paragraph, 2nd sentence states:

“CAMU personnel use inspection forms that are functionally equivalent to that shown in Tables 3-2 and 3-3.”

The CAMU is already undergoing operations. Provide copies of the actual inspection forms used.

167. Section 3.3, Inspections, page 3-52, 3rd paragraph, 3rd sentence states:

“If waste is not present at the CAMU or in a specific waste management area of the CAMU, inspection frequency will be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction, or any operator error, goes undetected between inspections.”

Waste is present at the CAMU. Regulations require inspection of various aspects of the CAMU to be inspected daily or weekly, without regard to whether a specific waste management area is currently being utilized. Therefore, the inspection frequency should be as specified in the regulations. The subject sentence should be deleted.

168. Table 3-2, Corrective Action Management Unit Daily Inspection Form

The inspection form shown in Table 3-2 should be replaced with the actual inspection form (see comment 167). The inspection form should include the security system (such as locks, fencing, and signs) and the leachate collection tank (20.4.1.500 NMAC incorporating 40 CFR 264.15(a) and 20.4.1.600 NMAC incorporating 40 CFR 265.95).

169. Table 3-3, Corrective Action Management Unit Weekly Inspection Form

The inspection form shown in Table 3-3 should be replaced with the actual inspection form (see comment 167). The inspection form should include inspection of the integrity and safety features of the Sprung structures, the waste treatment areas, treated waste staging areas, decontamination pad, and the exposed liner sidewalls (20.4.1.500 NMAC incorporating 40 CFR 264.15(a)).

170. Section 3.3, Inspections, page 3-56, 1st paragraph, 2nd sentence states:

“If an inspection of the CAMU reveals that a non-emergency problem (e.g. safety and emergency equipment, security devices, or operational equipment are found to be damaged or non-operational) has developed, remedial action including repairs, maintenance, and replacement will be completed as soon as practical to preclude further damage and reduce the possibility that emergency repairs will be needed.”

The phrase “as soon as practical” is not specific enough. The subject sentence should be revised to: If an inspection of the CAMU reveals that a non-emergency problem (e.g. safety and emergency equipment, security devices, or operational equipment are found to be damaged or non-operational) has developed, remedial action including repairs, maintenance, and replacement will be completed within 3 days, unless circumstances beyond the control of SNL/NM cause further delay. SNL/NM should limit any such delays to as short a time period as reasonably possible. The repairs will be made to protect human health and the environment, and to preclude further damage and reduce the possibility that emergency repairs will be needed.”

171. Section 3.3, Inspections, page 3-56, 1st paragraph, last sentence states:

“Any remedial action taken pursuant to an inspection will be noted on the inspection form (Tables 3-2 and 3-3 or functional equivalents).”

The CAMU is already undergoing operations.

- a. Provide copies of the actual inspection forms used.
- b. The subject sentence should be revised to: “Any remedial action taken pursuant to an inspection will be noted on the appropriate inspection form (Tables 3-2 or 3-3).”

172. Section 3.5.2, Run-off/Run-on Controls, page 3-57, 1st paragraph, last sentence states:

“Storm water retention ponds at the CAMU are constructed to accommodate a 25-year, 24-hour storm event.”

Provide the calculations used to design the storm-water retention ponds.

173. Section 3.5.2, Run-off/Run-on Controls, page 3-59, 1st paragraph, 2nd sentence states:

“Soil and debris mounds are covered (e.g. with plastic sheeting which will be anchored with sandbags).”

The subject sentence should be updated to acknowledge the retractable cover system employed at the bulk waste storage area.

174. Section 3.5.2, Run-off/Run-on Controls, page 3-59, 3rd paragraph, 1st sentence states:

“All storm water discharges are subject to the New Mexico Water Quality Control Commission regulations or the City of Albuquerque public works regulations.”

- a. Storm water discharges at the CAMU are also subject to RCRA subtitle C. The subject sentence should be revised to: “All storm water discharges are subject to the New Mexico Hazardous Waste Management Regulations, the New Mexico Water Quality Control Commission regulations, and City of Albuquerque public works regulations.”
- b. Requirements for sampling storm water and obtaining a “contained in” determination for said water are addressed in NMED’s letter of January 24, 2002.

Also, cite specifically the City of Albuquerque regulations that apply.

175. Section 3.5.3, Water Supplies, page 3-59, 1st paragraph, 3rd sentence states:

“The potential for any contamination of water supplies will be controlled/minimized by administrative and operational procedures and the physical location of the CAMU”.

Provide information on the administrative and operational controls.

176. Section 3.5.3, Water Supplies, page 3-59:

Provide information on the components of the water-supply system at the CAMU.

177. Section 3.5.6, Releases to the Atmosphere, page 3-60, 1st paragraph, 2nd sentence states:

“The primary mechanism of wind protection to reduce fugitive dust generation is covering uncontainerized hazardous remediation waste, either through the use of inflatable tents or anchored covers.”

The subject sentence should be updated to acknowledge the retractable cover system employed at the bulk waste storage area.

178. Section 3.5.6, Releases to the Atmosphere, page 3-60, 2nd paragraph, 2nd sentence states:

“The prevailing wind direction at the CAMU is from the east (SNL/NM, 1994).”

Provide information on other common wind directions and speeds. See comment # 158.

179. Section 3.6, Container Management, page 3-61, 2nd paragraph, 2nd sentence to end of paragraph:

The subject text is unclear. SNL should revise this language to improve clarity.

180. Section 3.6, Container Management, Aisle Space, page 3-62, last sentence states:

“Bulk waste staging areas are also be configured and managed to maintain unobstructed evacuation of facility personnel, spill cleanup, and emergency response access.”

The language is unclear. The subject sentence should be revised to: Bulk waste staging areas are configured and managed to maintain unobstructed evacuation of facility personnel, and to provide spill cleanup and emergency response access.”

181. Section 3.10, Record Keeping, page 3-65, 5th bullet states:

“Quarterly progress reports will be submitted to the EPA Administrator, Region VI and to the Secretary of the NMED beginning no later than ninety (90) calendar days from the effective date of the CAMU operations permit...”

The CAMU is already operating under a RCRA permit. Update the subject section.

182. Section 3.11, Quality Assurance Measures, page 3-65, 1st paragraph states:

“The Quality Assurance Plan for the construction of the CAMU cell is presented in Appendix F. The Quality Assurance Plan identifies those measures that will be implemented to ensure that the cell was constructed as designed”.

This section needs to be updated to reflect that the liner and leachate collection systems have already been built at the CAMU. A general discussion on the as-built quality of the latter components should be included in the text.

183. Section 3.11, Quality Assurance Measures, page 3-66, last paragraph, last two sentences state:

“Significant changes to the operating procedures will be reported in the quarterly progress reports (see section 3.10). Changes to the operating procedures will not require a permit modification unless directed in writing by the administrative authority.”

Operational and other types of changes require modification of the Permit (20.4.1.900 NMAC incorporating 40 CFR 270.42(d)(2)(iii)). The two subject sentences should be deleted.

184. Section 4.0, Requirements for Groundwater Monitoring, page 4-1, 2nd paragraph, 2nd through 5th sentences state:

“Vadose zone monitoring is superior to ground water monitoring for detection and characterization of potential leaks of hazardous remediation wastes from the CAMU containment cell. Although the intent of vadose zone monitoring is the same as groundwater monitoring, more rigorous and useful results are achievable with vadose zone monitoring. Vadose zone monitoring is capable of providing real-time data on the CAMU containment cell performance and will detect a leak much more quickly than is possible with groundwater monitoring.”

Vadose-zone monitoring is not superior to groundwater monitoring in all cases; the two monitoring methods are different and may serve different purposes. Thus, the subject language should be revised to: “Vadose-zone monitoring at the CAMU is designed to detect and characterize potential leaks of hazardous remediation wastes from the CAMU containment cell. In this case, vadose-zone monitoring is expected to detect a leak much more quickly than is possible with groundwater monitoring.”

185. Figure 3-1a, Treatment Goals Decision Logic-Flow Diagram:

Explain what happens if waste is both characteristic and listed. Revise the subject logic-flow diagram to include the treatment criteria discussed in comment # 13 above.

186. Figure 3-13, Corrective Action Management Unit (CAMU) General Waste Material Flow: Point of Acceptance to Disposition:

Revise the subject logic-flow diagram to include the treatment criteria discussed in comment # 13 above.

187. General comments on Leachate Collection and Removal System (LCRS) – Above-Ground Leachate Collection Tank:

Little information is provided in the application that addresses the LCRS tank. Any leachate pumped into the above-ground leachate collection tank is to be handled as an F-39 listed hazardous waste. Given that the tank is to be managed as a ≤ 90 day storage unit:

- a) Provide information on how the tank will be managed in accordance with 20.4.1.300 NMAC incorporating 40 CFR 262.34(a)(1)(ii). Include information on the

applicable requirements of subparts J and CC of 20.4.1.600 NMAC incorporating 40 CFR 265.

- b) Provide information on how the tank will be managed in accordance with 20.4.1.300 NMAC incorporating 40 CFR 262.34(a)(2), which requires start accumulation dates.
- c) Provide information on how the tank will be managed in accordance with 20.4.1.300 NMAC incorporating 40 CFR 262.34(a)(3), which requires that each tank be labeled with the words “Hazardous Waste”.
- d) Provide information on how the tank will be managed in accordance with 20.4.1.300 NMAC incorporating 40 CFR 262.34(a)(4), which requires a contingency plan and personnel training, as well as requirements for preparedness and prevention pursuant to with 20.4.1.600 NMAC incorporating 40 CFR 265 Subpart C.
- e) Provide information on how F-39 waste will be disposed of.
- f) Provide information on how the pre-transport requirements of 20.4.1.300 NMAC incorporating 40 CFR 262.30 - 262.33 will be met.
- g) Provide information on how the manifest requirements of 20.4.1.300 NMAC incorporating 40 CFR 262 Subpart B will be met.
- h) Provide information on how the record keeping requirements of 20.4.1.300 NMAC incorporating 40 CFR 262.40 will be met.

188. General Comments on Inspections of Leachate Collection and Removal System (LCRS)
– Above-Ground Leachate Collection Tank:

The proposed inspection schedule (Table 3-2, page 3-54 through 3-55) does not meet regulatory requirements.

- a. The LCRS tank should be inspected at least once per operating day as required by 20.4.1.300 NMAC incorporating 40 CFR 262.34(a)(1)(ii) and 20.4.1.600 NMAC 40 CFR 265.195(a). The text in *Section 3.3 Inspections* should be revised to reflect said daily inspections. Additionally, the inspection form that will replace that shown in Table 3-2 (page 3-53) should also be revised to require tank inspection on a daily basis (see also comment #72).
- b. Provide information in *Section 3.3 Inspections* discussing how inspections will be conducted to meet 20.4.1.600 NMAC incorporating 40 CFR Section 265.195(a)(1), which requires inspection of overflow/spill equipment. Additionally, the inspection form that will replace that shown in Table 3-2 (page 3-53) should also be revised to reflect this requirement.

- c. Provide information in *Section 3.3 Inspections* discussing how inspections will be conducted to meet 20.4.1.600 NMAC incorporating 40 CFR 265.195(a)(2), which requires inspection of aboveground portions of the tank system. Additionally, the inspection form that will replace that shown in Table 3-2 (page 3-53) should also be revised to reflect this requirement.
- d. Provide information in *Section 3.3 Inspections* discussing how inspections will be conducted to meet 20.4.1.600 NMAC incorporating 40 CFR 265.195(a)(3), which requires evaluation of monitoring data. Additionally, the inspection form that will replace that shown in Table 3-2 (page 3-53) should also be revised to reflect this requirement.
- e. Provide information in *Section 3.3 Inspections* discussing how inspections will be conducted to meet 20.4.1.600 NMAC incorporating 40 CFR 265.195(a)(4), which requires inspection of construction material and the area immediately around the tank. Additionally, the inspection form that will replace that shown in Table 3-2 (page 3-53) should also be revised to reflect this requirement.

189. Section 3.5.5, Personnel Protection, page 3-60:

Provide details on procedures, structures, and equipment that will be used to prevent exposure of personnel to hazardous waste management operations in accordance with 20 .4.1.900 NMAC incorporating 40 CFR 270.14(b)(8)(v).

190. Section 3.1.5, Waste Management Operations, page 3-39:

If waste is reactive or ignitable, describe how the handling process will prevent reaction or ignition at the containment cell.

191. Comment on Section 1.0, Purpose, page 1-1, 1st paragraph:

A sentence should be added at the end of this paragraph stating that the EPA issued the existing CAMU permit for approximately 5 years, starting on September 25, 1997, and expiring at midnight on September 20, 2002.

192. Comment on decontamination pad:

Explain how used decontamination fluids are managed as waste. Include a section in the Waste Analysis Plan for the CAMU.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units, Appendix A

WASTE ANALYSIS PLAN FOR THE CORRECTIVE ACTION MANAGEMENT UNIT

193. Section 2.0, page 8:

Demonstrate that waste is compatible with container construction materials pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.172. This information might be best organized under a new subsection (2.4).

194. Section 2.0, page 8:

For the LCRS tank, demonstrate that F-39 waste is compatible with tank construction materials pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.191(b). This information might be best organized under a new subsection (2.4).

195. Section 2.1, Description of Facility Activity, page 8, 2nd to last sentence states:

“The CAMU is a staging, treatment, and containment area designed to manage hazardous remediation wastes generated during ER Project activities as a result of site investigations, voluntary corrective measures, and RCRA corrective actions undertaken in accordance with Module IV of the Hazardous Waste Facility Operating Permit NM5890110518-1, issued to SNL/NM by the New Mexico Environment Department on August 6, 1992.”

EPA approved the CAMU permit in 1997. The subject sentence should be revised to: “The CAMU is a staging, treatment, and containment area designed to manage hazardous remediation wastes generated during ER Project activities as a result of site investigations, voluntary corrective measures, and RCRA corrective actions undertaken in accordance with Module IV of the Hazardous Waste Facility Operating Permit NM5890110518-1; the CAMU permit was approved by the EPA on September 25, 1997.”

196. Section 2.3, On-Site Generated Waste, page 10, paragraph 2 states:

“The principle by-products of the treatment processes and management of those by-products will be addressed in CAMU mobile treatment unit-specific information to be submitted in a separate RCRA Subtitle C permit application or modification request and prior to mobilization of treatment campaigns.”

The types of treatment to be utilized are now known. Thus, this information should be submitted now.

197. Section 2.3, On-Site Generated Waste, page 10, paragraph 3:

This paragraph needs to be revised to reflect the contained-in ruling made by the NMED on by letter to DOE/SNL on January 24, 2002.

198. Section 3.3, Special Parameter Selection Requirements, page 13, next to last sentence states:

“These wastes would be small volume and exceptions to the wastes routinely managed at the CAMU.”

Provide specific information on what is meant by “small volume”.

199. Section 4.1, Sampling Strategies, page 13:

Indicate where sampling will be conducted.

200. Section 4.1, Sampling Strategies, page 14, 4th bullet on page states:

“For solid wastes with compositions that may exhibit toxic characteristics, such as contaminated equipment, a sample may be taken and analyzed from a nonwaste item that is similar to the waste item.”

Clarify what the subject sentence means.

201. Section 4.4, Establishing Quality Assurance/Quality Control Procedures, page 15:

- a. Provide information on the types and frequencies of field and laboratory quality control samples that will be collected for each analysis and waste type.
- b. Provide information on quality control goals (sample completeness, representativeness, accuracy, and precision).

202. Section 5.2.1 Using Sampling and Analysis, page 21, last sentence states:

“Methods other than “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” SW-846 (EPA, 1986) may be used if the nature of the sample or improvements in analytical technology warrant the alternative method and the method has been approved by the EPA Regional Administrator.”

The subject sentence should be revised to reflect NMED and EPA authority. The sentence should be revised to: “Methods other than “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” SW-846 (EPA, 1986) may be used if the nature of the sample or improvements in analytical technology warrant the alternative method and the method has been approved by the NMED and EPA Regional Administrator.”

203. Section 5.2.2, Using Acceptable Knowledge, page 21, bullet 3 states:

“Health and safety risks to personnel would not justify sampling and analysis.”

The subject sentence is not specific enough and should be revised to: “Sampling and analysis are not justified in cases where health and safety risks are so severe that they represent an unacceptable threat to personnel.”

204. Section 6.0, Selecting Waste Evaluation Frequencies, page 25, 1st sentence states:

“As described in Section 5.2, all wastes managed in the CAMU undergo initial characterization to obtain information which must be known to safely and responsibly stage, treat, or dispose of the waste.”

Explain where the initial characterization is done.

205. Section 6.0, Selecting Waste Evaluation Frequencies, page 25, 2nd paragraph states:

“Furthermore, treated wastes to be placed into the CAMU containment cell are sampled and analyzed to determine treatment effectiveness and achievement of treatment standards.”

Provide information on the frequency of sampling.

206. Section 7.1, Procedures for Receiving Wastes Generated Off-Site, page 26, last sentence states:

“Therefore, special waste analysis procedures for off-site wastes are not necessary for this WAP.”

The subject sentence seems to conflict with the preceding sentence. Please provide clarification.

207. Section 7.2 Procedures for Ignitable, Reactive, and Incompatible Wastes, page 26:

Explain where and how such wastes will be stored.

208. Section 7.3, Provisions for Complying with Land Disposal Restrictions (LDR) Requirements, page 26, 2nd paragraph:

Although this paragraph refers to Superfund LDR Guide #6A treatment standards, it does not mention other standards that apply to the CAMU. Provide the information or refer to it by reference in the main document of the CAMU application.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units, Appendix B, Attachment G

CORRECTIVE ACTION MANAGEMENT UNIT SUPPLEMENT TO SITE-WIDE CONTINGENCY PLAN

209. Table 1, page 6:

Explain the relationship between the emergency coordinator position discussed in the training plan and this contingency plan.

210. Table 1, page 6:

Provide the home addresses of the emergency coordinator and the first and second alternates as required by 20.4.1.500 NMAC incorporating 40 CFR 264.52(d).

211. Table 2, page 7

Provide a brief description of each major piece of emergency equipment as required by 20.4.1.500 NMAC incorporating 40 CFR 264.52(e).

212. Waste Disposition, page 9, 1st paragraph, 1st sentence states:

“Hazardous remediation wastes that no longer exhibit the hazardous waste characteristic may be used by SNL/NM Facilities Department in construction activities.”

The subject sentence should be revised to: “Hazardous remediation wastes that no longer exhibit the hazardous waste characteristic may be used by SNL/NM Facilities Department in construction activities as permitted by law.”

General Comment:

213. Provide information on how SNL will comply with 20.4.1.500 NMAC incorporating 40 CFR 264.53(a), which requires maintaining a copy of the contingency plan at the facility.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units, Appendix C

PERSONNEL TRAINING PLAN FOR THE CORRECTIVE ACTION MANAGEMENT UNIT

214. Section 1.1, Training Director, page 5:

Explain who will be the training director. State whether the training director is someone who will work routinely at the CAMU.

215. Section 1.2, Relevance of Training to Job Position, page 5:

This section is too brief and should contain more detail on how training will be relevant to each job position.

216. Section 1.2, Relevance of Training to Job Position, page 6, last sentence of last paragraph:

“The Training Director or designee will determine the exact content and duration of training required for individual employees.”

- a. List the qualifications needed by a person to be designated by the Training Director to fulfill the responsibilities of the Training Director.
- b. State whether Section 2.2, and Tables 2.1 and 2.2 apply to all workers at the CAMU, or whether these proposed the Training Director can modify training requirements.

217. Section 2.2, Training Content, Frequency, and Techniques, page 6, 1st paragraph, last sentence on page states:

“All on-site personnel also participate in a minimum of 8 hours annual refresher training, which may include a review of the materials presented during the initial training as listed in Table 2-2, and other site-specific information such as the contingency plan.”

Annual review of initial training (20.4.1.500 NMAC incorporating 40 CFR 264.16(a)), including that related to the contingency plan is required (20.4.1.500 NMAC incorporating 40 CFR 264.16(c)).

The subject sentence should be revised to: “All on-site personnel also participate in a minimum of 8 hours annual refresher training, which should include a review of the materials presented during the initial training as listed in Table 2-2, and other site-specific information including the contingency plan.”

218. Section 2.2, Training Content, Frequency, and Techniques, page 15, last sentence states:

“The Emergency Coordinator and CAMU Project Leader are not considered on-site employees.”

- a) Explain why these job positions are not considered to be on-site employees.
- b) Explain how the Emergency Coordinator can coordinate a response to an emergency if he/she is not on-site.

219. Table 2-1, Required Training for Each Job Title, page 12:

Justify why the CAMU Project Leader and the Emergency Coordinator do not need initial and refresher OSHA HAZMAT training.

220. Section 2.3, Emergency Training, page 15:

Explain how this training relates to that listed in Table 2-2.

221. Section 2.3, Emergency Training, page 15, item 1 states: “Emergency notification procedures.”

The subject statement should be revised to “Emergency notification procedures, including location and use of alarms and communication devices”.

222. Section 2.3, Emergency Training, page 15:

Justify why training is not required to respond to a ground-water contamination incident, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.16(a)(3).

223. Section 3.0, Training Records, page 16, last sentence states:

“All other training records and documentation are maintained by the Training Director or designee at a centralized facility location.”

State the name and place of the “centralized facility location.”

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units,

CLOSURE PLAN - APPENDIX D

224. Section 2.2, Description of the CAMU, page 10, last two sentences state:

“Support areas at the CAMU include an equipment decontamination pad; storm water retention ponds; a less-than-90-day leachate collection tank for the containment cell; and administration trailers. Figure 2-2 presents the areal configuration of the CAMU. Only those CAMU waste management areas subject to RCRA permitting and associated closure requirements are described in the following sections.”

All structures within the CAMU boundary, including the equipment decontamination pad, the storm water retention ponds, the leachate collection tank, and the administration trailers are subject to RCRA (subtitle C) and RCRA closure requirements. The last sentence of the subject language should be deleted.

225. Section 2.2, Description of the CAMU, page 10:

Subsections of Section 2.2 (similar to 2.2.1 through 2.2.3) should be provided containing general information on the equipment decontamination pad, the storm water retention ponds, the leachate collection tank, and the administration area. See comment # 224.

226. Section 2.2.3, Containment Cell, page 12, 1st paragraph:

The subject paragraph should be revised to reflect that waste has not yet been placed into the CAMU containment cell.

227. Section 4.0, Closure Methods, page 15, 1st paragraph below three bullets at top of page, starting with the 2nd sentence states:

“In order to achieve the closure performance standards listed in Section 1.0 of this plan, and in accordance with 40 CFR 264.552(e)(4)(ii)(a), (b), and (c), the following activities are proposed.”

The subject activities and the process by which they are to be implemented (as discussed in the application) are not sufficient to ensure protection of human health and the environment. The current proposal says that decontamination might be conducted only if random sampling indicates that contamination exists. Furthermore, the areas proposed for sampling do not include all elements of the CAMU (for example, the equipment decontamination pad, the storm water retention ponds, the leachate collection tank, and CAMU roads are not included).

The closure plan should be revised to indicate that all elements of the CAMU will be decontaminated and sampled as outlined below. All asphalt pads, all concrete pads, the

decontamination pad, the walls of the Bulk Waste Storage Area, roll-off boxes (containers), and the walls of the Sprung Structures should be swept clean, wiped down using a detergent/water solution, then rinsed with clean water. The leachate collection tank should be cleaned in the same way after post closure. Used detergent/water solution and rinse water should be sampled by TCLP methods. If such washwaters are hazardous, they should be disposed of accordingly and the decontamination process repeated for the area of concern. If the washwaters are not hazardous, then the decontamination process for the given area is complete.

Dirt areas and areas covered with road base should be sampled and excavated (if necessary) to remove unacceptable levels of contamination (this includes sediments in the bottom of and below the storm water retention ponds). Random sampling should follow excavation and removal of contaminated media at these areas to determine if remaining levels of contamination are acceptable. Determinations of acceptable (or unacceptable) levels of contamination should be based on standard risk assessment techniques.

The closure plan should also specify what will be done with the Bulk Waste Storage Area, the Sprung Structures, the administration trailers, the equipment decontamination pad, and all concrete and asphalt pads when the CAMU closes.

228. Section 4.1, Phase 1 - Application of the DQO Process, page 15:

While application of the DQO is a good idea, there is no reason why this should not have already been done to generate this Closure Plan. Implement the DQO process meeting the requirements in comment # 4, and revise the Closure Plan accordingly.

229. Section 4.1.3, Identify Inputs to the Decision, page 17, 3rd sentence states:

“Location-biased sampling (see Section 5.1.1) will be performed on the potentially contaminated areas and the samples will be analyzed for the hazardous constituents of concern managed at the area as identified in an area-specific sampling and analysis plan (SAP), to be submitted as a closure plan modification.

A SAP is a vital part of all closure plans. A SAP should be submitted as part of this closure plan; not later as a closure plan modification. The SAP should address all major elements of the CAMU, such as the Bulk Waste Staging Area, the Sprung Structures, the Containerized Waste Staging Area, the Treated Waste Staging Area, the Treatment Area, the equipment decontamination pad, the storm water retention ponds, the leachate collection tank, the administration area, and CAMU roads. See comment # 227.

230. Section 4.1.4, Define the Study Boundaries, 2nd sentence states: “Wall surfaces will be considered for sampling up to a height of 5 feet above pad surfaces.”

A height of 5 ft may or may not be adequate. The subject sentence should be revised to: Wall surfaces will be considered for sampling up to a height of 5 feet above pad surfaces; however, sampling will be conducted to greater heights above pad surfaces if warranted by the presence of stains or residual soil above 5 ft, or if warranted by other evidence.”

231. Section 4.1.4, Define the Study Boundaries, next to last sentence states: “Therefore, adjacent ground surfaces are not included in this investigation.”

This proposal to limit sampling to a few specific areas within the CAMU boundary is unacceptable. All elements of the CAMU (including the Bulk Waste Staging Area, the Sprung Structures, the Containerized Waste Staging Area, the Treated Waste Staging Area, the Treatment Area, the equipment decontamination pad, the storm water retention ponds, the leachate collection tank area, the administration area, and the CAMU roads) are subject to decontamination and sampling as part of Closure. Areas outside these elements and within the CAMU boundary are also subject to decontamination and sampling. Areas outside the CAMU boundary will also be included if there is evidence of release from the CAMU that extends beyond the CAMU boundary.

232. Section 4.1.5, Develop the Decision Rule, page 18, 2nd paragraph, 1st sentence states:

“Analytical results of wipe sampling from pads or walls that show detected positive results above laboratory-reported limit of detection are evaluated against similar results for field blank samples.”

For the most part, there are no standards for the collection, handling, analysis, and evaluation of swipe samples and swipe sample results. For this reason, see comment # 227.

233. Section 4.1.5, Develop the Decision Rule, page 18, 2nd paragraph, 2nd sentence states:

“If investigatory samples show greater than ten times the associated field blank samples, those results are considered positive indicators of contamination.”

See comment # 227.

234. Section 4.1.5, Develop the Decision Rule, page 18, 4th paragraph, 1st sentence states:

“Surface soil samples will be collected from the 0- to 6-inch depth interval and analyzed for total concentrations of hazardous constituents of concern managed at the waste management area.”

This statement is vague. The subject sentence should be revised to “ Surface soil samples will be collected from the 0- to 6-inch depth interval and analyzed for total concentrations of hazardous constituents of concern at the Treated Waste Storage Area, the Containerized Waste Storage Area, the storm retention ponds, and all other areas at the CAMU where the surface is covered with soil or base course.”

See also comment # 227.

235. Section 4.1.5, Develop the Decision Rule, page 18, 4th paragraph, 3rd sentence states:

“Analytical results above accepted background levels (as established by baseline sampling and analysis at the SNL/NM CAMU site) for hazardous constituents of concern would be considered a positive indication of contamination.

There are no NMED-approved background levels for the CAMU. Thus, the Closure Plan should be revised to indicate that the NMED-approved site wide background levels will be used for comparison with inorganic constituents. See comment # 227.

236. Section 4.1.5, Develop the Decision Rule, page 18, 4th paragraph, 4th sentence states:

“Positive indicators of contamination are evaluated against the performance closure standards”.

See comment # 227.

237. Section 4.1.6, Specify Limits on Decision Errors, page 19, last sentence states:

“The consequences of making either type of decision error when performing regulatory closure of the CAMU will be discussed in the SAP.”

See comment # 229 above.

238. Section 4.1.7, Analytical Data Measurement, page 19:

The seventh step of the DQO process is *optimizing the Design for Obtaining Data*, not *Analytical Data Measurement*. The Closure Plan should be revised to include step 7 as corrected above. The current language in Section 4.1.7 more appropriately belongs in section 4.1.3, where it should be moved.

239. Section 4.2, Phase II – Performance of Hazardous Remediation Waste Surveys, page 19:

Waste streams are known sufficiently to produce a SAP. See comment # 229 above.

240. Section 4.2, Phase II – Performance of Hazardous Remediation Waste Surveys, page 19, last sentence on page states:

“Development of a detailed plan in the future, when operations and waste streams are known with more certainty, will enable the preparation of SAP that reflects the most current characterization technologies/EPA guidance and fully addresses any physical modifications to the CAMU unit or spills/releases (if any) during the operational period.”

See comment # 229 above. Also the phrase “EPA guidance”, here and where ever else it occurs in the document, should be replaced with the phrase “EPA and State of New Mexico guidance”.

241. Section 4.3, Phase III – Decontamination, page 20, 1st paragraph, 1st sentence states:

“Decontamination of the waste staging area pads and wall surfaces, and the treatment pad will be performed if contamination is found during the hazardous waste survey.”

See comment # 227 above.

242. Section 4.3, Phase III – Decontamination, page 20, 1st paragraph, 2nd sentence states:

“The methods to be used during closure activities include sweeping, washing/wiping pad and wall surfaces, removing surface soil at the treated waste and containerized waste staging areas, and closing the containment cell with waste in place.”

The subject sentence should be revised to: “The methods to be used during closure activities include, but are not limited to, sweeping, washing/wiping pad and wall surfaces, removing contaminated surface soil and base course where necessary, and closing the containment cell with waste in place.”

243. Section 4.3, Phase III – Decontamination, page 20:

A bullet should be added that states: “If necessary, contaminated concrete or asphalt pads, and contaminated soil and basecourse that can not be adequately decontaminated should be removed and properly disposed of.”

See also comment # 227.

244. Section 4.3, Phase III – Decontamination, page 20, 2nd bullet:

With regard to sampling concrete and asphalt, see comment # 227.

245. Section 4.3, Phase III– Decontamination, page 20, bullet #4, last sentence states:

“The underlying soil will be resampled and analyzed until the surface soil no longer exhibits or contains hazardous remediation waste or hazardous constituents.”

Not all levels of hazardous constituents represent a significant threat to human health or the environment. This sentence should be revised to: “The underlying soil will be resampled and analyzed until the surface soil no longer exhibits or contains hazardous remediation waste or hazardous constituents at levels that are a significant threat to human health or the environment.”

246. Section 4.3, Phase III– Decontamination, page 21, 3rd paragraph, 1st sentence states:

“Prior to decontamination, a sample of unused wash-down solution will be collected.”

See comments # 227 and # 232 above. In general, the entire paragraph starting with the first sentence is inconsistent with comment # 227 and should be revised.

247. Section 4.3, Phase III– Decontamination, page 21, 3rd paragraph, 2nd sentence states:

“Prior to operations, samples of surface soil will be collected at the containerized waste staging area and....”

See comment # 235 about NMED-approved soil background levels.

248. Section 4.3, Phase III– Decontamination, page 21, 3rd paragraph, 4th sentence states:

“The unused wash-down solution, the baseline surface soil samples, and the baseline asphaltic concrete samples will be analyzed using the toxicity characteristic leaching procedure (TCLP) for hazardous constituents of concern based on the wastes known to have been staged in each area”.

The TCLP test is used only for waste characterization. Site characterization shall be based on total concentrations. The Closure Plan should be revised to indicate that samples of soil, basecourse, concrete, and asphalt should be compared to total concentrations. See also comment # 246.

249. Section 4.3, Phase III– Decontamination, page 21, 4th paragraph, 3rd sentence states:

“At final closure, the containerized cleanup materials and equipment will be transported to the containment cell, if appropriate, or to a permitted treatment, storage, or disposal facility.”

Unless all equipment is to be expendable, the sentence should be revised to: “At final closure, containerized cleanup materials and expendable equipment will be transported to the containment cell, if appropriate, or to a permitted treatment, storage, or disposal facility.”

250. Section 4.3, Phase III– Decontamination, page 22, 4th paragraph:

See comments # 227, # 235, # 246 and # 249.

251. Section 4.3, Phase III– Decontamination, page 22, 4th paragraph, last sentence states:

“The presence of statistically significant concentrations of hazardous constituents in the used wash water, surface soil, asphaltic concrete in comparison to background will be determined using methods defined in Chapter 9, Sampling Plan, Volume I in “Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods,” SW-846 (EPA, 1986).”

See comment # 227.

252. Section 4.3, Phase III– Decontamination, page 23, last 3 bullets after 1st paragraph:

With respect to all references to “baseline soil samples”, see comment # 12.

253. Section 4.4 Phase IV – Closure Certification and Survey Plat, page 23, 1st paragraph, last sentence states:

“SNL/NM will provide this report with the closure certification letter within 180 days of closure.”

The certification-of-closure notice should be submitted within 60 days of final closure in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.115. The subject sentence should be revised to: “SNL/NM will provide this report with the closure certification letter within 60 days of completion of final closure.”

254. Section 4.5, Containment Cell Final Cover, page 25, 1st paragraph, 3rd sentence states:

“The integrity of the final cover system was analyzed based on a 25-year, 24-hour (i.e. 2.48 inches/day) design basis rainfall event.”

Provide detailed information on the modeling mentioned in the subject sentence. Infiltration that may occur during a 1-day event is not particularly meaningful.

255. Section 4.5, Containment Cell Final Cover, page 25, 1st paragraph, 6th sentence states:

“Based on modeling and SNL/NM studies, infiltration of the filter sand into the pea gravel layer is typically only about 1 inch; therefore, geotextile will not be needed between the filter sand and pea gravel layers.”

Intrusion of finer materials into the pea gravel will be detrimental to the function of the capillary barrier. Provide detailed information on the modeling and the SNL/NM studies that were conducted in support of the subject statement.

The same issue here applies to the boundary between the pea-gravel layer and the underlying bedding sand.

256. Section 4.5, Containment Cell Final Cover, page 25, 2nd paragraph:

- a) Indicate the frequency of Atterburg Limits tests that will be conducted to ensure that the foundation material is suitable for the cover foundation.
- b) Provide a specification for compaction of the foundation cover (% maximum dry density, moisture content), testing methods to be employed, and the frequency of such testing.

257. Section 4.5, Containment Cell Final Cover, page 25, 3rd paragraph, 4th sentence states:

“Transition slopes will range from 8.1:1 to 3:1.”

A slope of 3:1 is too steep and will be subject to excessive erosion. The subject sentence and the grading plan should be revised to: "Transition slopes will range from 8.1:1 to 4:1".

258. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 26, Top Soil Layer, 2nd paragraph, 1st through 3rd sentences state:

"A minimum of 6-inch thick layer of topsoil will be placed over the entire extent... The fill will be placed in lifts not to exceed 8 inches in thickness...."

- a. Indicate in the above language whether thickness is measured as loose or compacted thickness.
- b. Provide the frequency of testing of the topsoil layer to ensure compaction to 85% or more of maximum dry density.
- c. State how many samples will be tested by ASTM 1557 in the borrow area to establish the maximum dry density of the topsoil.
- d. State the moisture content that will be considered acceptable for top soil placement.

259. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 26, Native Soil Blend Layer, specifications:

With regard to the No. 4 screen, as much as 50% gravel can be retained based on the proposed specifications. This specification allows too much gravel, which can result in soil with a saturated hydraulic conductivity that is too high and storage that is too low. The proposed specification (50-100% percent passing by weight) should be changed to 90-100 percent passing by weight).

260. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 26, Native Soil Blend Layer, 2nd paragraph, 1st sentence states:

"The minimum 30-inch-thick lift of native soil will be placed above the bedding sand layer in lifts not to exceed 6 inches in thickness".

- a. Revise the sentence to indicate whether lift thickness is measured based on compacted or loose thickness.
- b. Also revise the phrase "minimum 30-inch-thick lift of native soil" to "minimum 30-inch-thick layer of native soil".
- c. Finally, revise the phrase "bedding sand layer" to "filter sand layer".

261. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for

Final Cover System Components, page 26, Native Soil Blend Layer, 2nd paragraph:

- a. Explain how the wire mesh will be installed to make it “continuous”.
- b. Indicate the degree of overlap between sections of wire mesh, and how the sections will be joined.
- c. SNL should consider not using the wire mesh.

262. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 27, Native Soil Blend Layer, 2nd paragraph:

- a. Indicate how many samples will be tested by ASTM 1557 in the borrow area to establish the maximum dry density of the native soil.
- b. Provide the compaction requirements for native soil (density and moisture).
- c. Indicate how many samples will be tested for grain size by ASTM D 422 in the borrow area to ensure that the native soil specifications will be met.
- d. The saturated hydraulic conductivity (Ksat) of the soil should also be tested in the borrow area and during construction of the containment cell cover. Ksat of the native soil layer should not exceed 1×10^{-5} cm/s. Indicate how many samples will be tested in the borrow area and during the construction of the containment cell cover to ensure that this Ksat specification is met.

263. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 28, Filter Sand/Pea Gravel layers:

Indicate the type and frequency of testing for the filter sand and pea gravel layers.

264. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 28, Filter Sand/Pea Gravel Layers, 1st paragraph, 1st through 3rd sentences state:

“A minimum 6-inch-thick lift of pea gravel will be placed above the bedding sand layer. The pea gravel layer will be blanketed by an approximately 4-inch-thick lift of filter sand material. Pea gravel and filter sand material will be placed in 6- to 8-inches-thick lifts.”

- a. For clarity, revise the subject language to indicate whether lift thickness is measured based on compacted or loose thickness.
- b. Also revise the phrase “lift of pea gravel” to “layer of pea gravel”.
- c. Revise also the phrase “lift filter sand material” to “layer of filter sand material”.

265. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 28, Bedding Sand Layer:

Indicate the type and frequency of testing for the bedding sand layer.

266. Section 4.5.1 Materials Properties, Installation Procedures, and Construction QA for Final Cover System Components, page 28, Bedding Sand Layer, 2nd paragraph, 2nd sentence states:

“Bedding fill material will consist of bedding/filter sand and will be placed into a 10- to 12-inches-thick lift and compacted to 90 percent of maximum dry density per ASTM D 1557.”

Revise the sentence to indicate whether lift thickness is measured based on compacted or loose thickness.

267. Section 4.5.2 Water Balance Modeling, page 29:

This section should be expanded to present fully the modeling results from the HELP model. The HELP model, despite some of its shortcomings, is the standard landfill performance model used by the EPA and the NMED. Based on modeling, infiltration and subsequent percolation through the bottom of the cover system should be limited to no more than 2.5 mm per year. Provide and justify all modeling parameters used.

268. Section 4.5.2 Water Balance Modeling, page 30, 2nd paragraph, 3rd sentence states:

“The approach taken here is to demonstrate via modeling that the proposed cover system is expected to produce no percolation.”

Not only is the language unclear, the subject sentence is not true, as all cover systems leak to some degree. The subject sentence should be revised to “The approach taken here is to demonstrate via modeling that the proposed cover system will reduce significantly the amount of potential percolation through the waste contained in the landfill.”

Similar language (“no percolation”) is pervasive throughout this section on water balance. Each place where this occurs should also be revised in a similar fashion.

269. Section 4.5.2 Water Balance Modeling, page 30, 2nd paragraph, last sentence states:

“Additionally, inherent in this design is natural durability in the Albuquerque climate (e.g., no relatively wet compacted clay layer is included in this design).”

Explain what the subject sentence means. In addition, the silt and clay size fraction of the compacted native soil layer ranges up to 50% by weight. Explain why any native soil layer with such a large amount of fines would have “natural durability in the Albuquerque climate”.

270. Table 4-1, page 31:

- a. The saturated hydraulic conductivity (Ks) for the native soil layer, as proposed (presumably 1.4×10^{-4} cm/s but shown as 1.4 E4) is too high and will hinder adequate storage of water in the upper part of the cover system. Thus, the Ks of the native soil layer should not exceed 1×10^{-5} (1E-5) cm/s.
- b. The Ks values for some of the cover layer components are obviously incorrect. The values are likely 1.7E-3, and 2.1E-2 for the native topsoil and filter sand, respectively. Please correct the table.
- c. Provide the units for the parameters theta-s and theta-r.
- d. The thickness of the pea gravel should be 6 inches (equals 15.24 cm, see Figure 4-1). The thickness shown in Table 4-1 is 25.40. Correct the table, or the figure and the text throughout the closure plan.
- e. List also the field capacities of the cover layers.

271. Section 4.5.3, Vegetation Selection, Application, and Maintenance for Final Cover System, page 33, 2nd paragraph, last sentence states:

“Operation and maintenance procedures will also be used to limit the growth of deep tap-root plants.”

Provide a description of the operation and maintenance procedures that will be used to limit the growth of deep taproot plants.

272. Section 4.5.3, Vegetation Selection, Application, and Maintenance for Final Cover System, page 33, 3rd paragraph, last sentence states:

“Desert plant seed mixtures are specified.”

Provide information on the seed mixture and certification.

273. Section 4.5.3, Vegetation selection, Application, and Maintenance for Final Cover System, page 34, 1st and 3rd paragraphs, transition slopes:

See comment # 257.

274. Section 5.0, Sampling Strategies and Sampling Locations, page 35, paragraphs 1-2:

These two paragraphs should be revised to reflect the requirements in Comment # 227 above.

275. Section 5.1.1, Location-Biased Sample Locations, page 35:

- a. This section should be revised to acknowledge that pad areas and walls will be decontaminated (see comment # 227 above).
- b. Describe the difference between location-biased sampling (Section 5.1.1) and random sampling (Section 5.1.2).

276. Section 5.1.1, Location-Biased Sample Locations, page 35, 3rd bullet, 2nd sentence states: Filter-wipe samples will be collected...”

See comments # 227 and # 232.

277. Section 5.2, Sampling Procedures, page 38:

The information to be included in the SAP should be provided now. See comments # 227 and # 229.

278. Section 5.3, Sample Custody and Documentation, page 38:

The information to be included in the SAP should be provided now. See comments # 227 and # 229.

279. Section 5.4, Laboratory Operations and Analytical Procedures, page 38:

Provide information on “established laboratory procedures” for sample custody, analysis, data management, reporting, analytical procedures, and sample disposal. The information to be included in the SAP should be provided now. See comments # 227 and # 229.

280. Section 5.5, Data Reduction, Validation, and Reporting, page 38:

The information to be included in the SAP should be provided now. See comments # 227 and # 229.

281. Section 5.6, Quality Control, page 38:

The information to be included in the SAP should be provided now. See comments # 227 and # 229.

282. Section 6.0, Sampling and Analysis Plan for the Treated Waste Staging Areas, page 39, 1st paragraph, next to last sentence states:

“Sample results will be compared to site-specific baseline and site-wide background data.”

See comments # 4 and #12 above. The subject sentence should be revised to: Sample results will be compared to NMED-approved site-wide background levels.”

283. Section 6.1, Sampling and Analytical Procedures, page 39, 1st paragraph, 2nd and 3rd

sentences state:

“The chemical data will be compared to site-wide background data and/or site-specific baseline data. Baseline data will include data collected from the treated waste staging area prior to compaction.”

See comments # 4 and # 12 above. The 2nd sentence should be revised to: The chemical data will be compared to NMED-approved site-wide background levels. The 3rd sentence should be deleted.

284. Section 6.1, Sampling and Analytical Procedures, page 39, 1st paragraph, last sentence states:

“Due to the anticipated treatment effectiveness and the arid region environment, organic analyses are not anticipated; however, if treated waste characterization data show organic constituents to be present in sufficient concentrations, additional analyses may be conducted.”

The subject statement is unacceptable. The treated waste staging area should be sampled for all constituents of concern: metals, radionuclides (including tritium), VOCs, SVOCs, and PCBs.

285. Section 6.1, Sampling and Analytical Procedures, page 39, 2nd paragraph, 1st sentence states:

“For each treated waste staging area, samples will be collected on a grid not to exceed 50 ft (See Figures 6-1 and 6-2).”

- a. The grid spacing is too wide. The subject sentence should be revised to: For each treated waste staging area, samples will be collected on a grid not to exceed 15 ft (See Figures 6-1 and 6-2).”
- b. Figures 6-1 and 6-2 should also be revised to reflect a grid spacing of 15 ft.

286. Section 6.1, Sampling and Analytical Procedures, page 39, 2nd paragraph, 2nd sentence states:

“Two samples will be collected at each sample location; one surface soil sample (0 to 6 inches) and one sample at a depth of 2 feet.”

The sample taken at 2 ft is too deep as an initial screen for contamination. The subject sentence should be revised to: “Two samples will be collected at each sample location; one surface soil sample (0 to 6 inches) and one sample at a depth of 1 foot.”

287. Section 6.2, Soil Sample Collection, page 39, 1st paragraph, 1st sentence states:

“Soil sampling will be conducted according to this SAP and may follow FOP 94-52 (Spade and Scoop Method for Collection of Soil samples) and FOP 94-54 (Surface Sediment/Soil Sampling).”

The word “may” is too vague. Indicate whether soil sampling will or will not follow the two cited FOPs. Describe in more detail the basic procedures of the method(s) of soil sampling that will be employed.

288. Section 6.3, Sample Handling and Documentation, page 40:

Describe in more detail the basic procedures outlined in FOP 94-34 and AOP 96-16.

289. Section 6.4, Analytical Procedures, page 41, last sentence states:

“Requested analyses will be determined based on review of potential constituents of concern managed at the two treated waste staging areas but will include at a minimum total RCRA metals.”

See comment # 284 above.

290. Section 6.5, Field and Laboratory Quality Assurance/Quality Control, page 41, 1st paragraph, 1st sentence states:

“Field and laboratory quality assurance (QA) samples will be collected per OP requirements and may include duplicate samples, trip blank samples, field blanks, equipment rinsate blanks, and matrix spike samples.”

- a) The word “may” is vague. List specifically the types of field and laboratory quality control samples that will be submitted to or used by the laboratory.
- b) Define the abbreviation “OP”.
- c) Indicate the frequency that QC samples will be submitted.
- d) Define the quality assurance goals (desired levels of accuracy and precision) for each major group of analytes (such as metals, VOCs,...).
- e) Explain what will happen if any quality assurance goals are not met.
- f) Indicate what constitutes a representative sample for an area of interest
- g) Indicate what constitutes a complete sample for an area of interest.

291. Section 7.0, Closure Schedule, page 41, 2nd paragraph, 1st sentence states:

“CAMU closure activities will commence on or before the expiration date of the CAMU operating permit.”

The CAMU will not likely be closed on or before the expiration date of the current operating permit (which is September 20, 2002). Thus, the subject sentence should be deleted.

292. Table 7-1, Proposed Closure Schedule for the Corrective Action Management Unit, page 42:

- a) SNL should submit a Final Closure Report in addition to the certification letter by day number 240. The Final Closure Report will describe the closure activities completed, including decontamination efforts, and will document that all hazardous waste has been removed from the site or placed into the CAMU containment cell. The Final Closure Report will also document the construction of the final cover over the containment cell, and will include a summary evaluation of construction quality assurance data. The Final Closure Report will also include sampling data used to verify that decontamination of CAMU structures and surfaces is adequate to protect human health and the environment.
- b) The table should be revised to reflect the decontamination and sampling process outlined in comment # 4.

293. Section 8.0, Post-closure Care, page 42, 2nd bullet following 1st paragraph states:

“Continue to operate the leachate collection and removal system (LCRS) until leachate is no longer detected.”

The subject sentence implies an assumption that leachate will not be generated once the cover has been installed. However unlikely, the generation of leachate sometime during the post-closure period cannot be positively ruled out. Thus, the subject sentence should be revised to: “Continue to operate the leachate collection and removal system (LCRS) throughout the post-closure period.”

294. Section 8.2, Amendment of the Post-closure Care Plan, page 43, 1st Paragraph:

Update each sentence containing the phrase “Regional Administrator” by replacing said phrase with “NMED”.

295. Section 8.2, Amendment of the Post-closure Care Plan, page 43, last paragraph on page, last sentence continuing on to page 44:

Update the phrase “Regional Administrator” by replacing said phrase with “NMED”.

296. Section 8.3, Post-closure Notices, page 44, 1st paragraph, 1st sentence; and subbullet #3 of bullet #1:

Revise the subject sentence and bullet to identify specifically the local zoning authority.

297. Section 8.4, Monitoring Activities and Frequencies, page 44, 5th and 6th sentences state:

“In the very unlikely event of a catastrophic failure of all these systems, contingency measures would include remediation using the VZMS access tubes and/or groundwater monitoring. A discussion of these measures is contained in Section 1.0 of Appendix E.”

Add the language “Any failure of the subject systems shall be remediated and/or repaired as deemed necessary by the NMED to protect human health and the environment”.

The VZMS access tubes may or may not be useful for remediating a catastrophic failure of the CAMU monitoring or barrier systems.

298. Section 8.4.4, Vadose Zone Monitoring, Quarterly Vadose Zone Detection Monitoring, page 47, 1st paragraph, 1st sentence states:

“Upon closure of the CAMU there will be limited leachate production from inside the containment cell for the following reasons: 1) no liquid wastes or sludges will be placed in the containment cell; 2) rain or melt water, if any, will be removed from the containment cell prior to placement of the final cover, and 3) the final cover will allow no percolation of meteoric water into the waste containment cell.”

Cover systems are not perfect and should not be expected to prevent all moisture from entering the containment cell. The subject sentence should be revised to: “Upon closure of the CAMU there will be limited leachate production from inside the containment cell for the following reasons: 1) no liquid wastes or sludges will be placed in the containment cell; 2) rain or melt water, if any, will be removed from the containment cell prior to placement of the final cover, and 3) the final cover will significantly limit the amount of meteoric water infiltrating into and percolating through the waste containment cell.”

299. Section 8.5, Maintenance Activities and Frequencies, page 48, 1st sentence states:

“Maintenance activities will be performed on a regularly scheduled basis to maintain the integrity of the waste containment cell.”

Sections 8.5.1 and 8.5.2 state that maintenance of the cover and drainage structures will be conducted “as needed”, rather than on a regularly scheduled basis (which makes sense in these cases). The subject sentence should be revised to: “Maintenance activities will be performed to maintain the integrity of the waste containment cell, the LCRS, drainage diversion structures, and the monitoring systems.”

300. Section 8.5.4, VZMS Maintenance, page 49, 1st paragraph, 2nd sentence states:

“In general, the PSL may be susceptible to false-positive detection caused by in-pipe moisture buildup.” Also 2nd paragraph, last sentence states: “The VSA subsystem will

assist in discerning if moisture increases in the PSL are a false positive detection or an actual release.”

Explain how the VSA subsystem can be used to determine if moisture increases in the PSL are indicative of a false-positive detection or an actual release.

301. Section 8.6, Certification of Completion of Post-closure, page 49, 3rd sentence states:

“Documentation supporting the independent registered professional engineer’s certification of post-closure will be furnished to the Regional Administrator upon request.”

The subject sentence needs to be updated; also the NMED will require documentation of post-closure activities. The subject sentence should be revised to: “Documentation supporting the independent registered professional engineer’s certification of post-closure will be furnished to the NMED.”

302. Section 8.6, Certification of Completion of Post-closure, page 50, last sentence states:

“This post-closure report will be provided within 180 days of the end of the post-closure care period.”

There is no reason why the report cannot be finalized and submitted earlier. The subject sentence should be revised to “This post-closure report will be provided within 30 days of the end of the post-closure care period”.

303. Section 10, Potential for Exposure, page 50, bullet 2 following the 1st paragraph states:

“All waste emplaced in the proposed containment cell will meet negotiated treatment standards, resulting in extremely low or nondetectable concentrations of hazardous constituents.”

The concentrations of hazardous constituents, including PCBs and metals, may not be that low. The subject sentence should be revised to: “All waste emplaced in the proposed containment cell will meet negotiated treatment standards.”

304. Section 10, Potential for Exposure, page 50, bullet 3 following the 1st paragraph states:

“Engineered barriers will prevent migration of liquids from entering the proposed containment cell and prevent precipitation events from migrating outside the proposed containment cell.”

The subject sentence is unclear. The subject sentence should be revised to improve clarity.

305. Section 7, Closure Schedule, page 41:

Include in the closure plan language that states that a time extension for closure may be requested from the NMED pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.113(a) and (b).

306. Section 4.5.2 and 4.5.3, pages 29 and 33:

Provide information and calculations demonstrating that significant erosion will not destroy the integrity of the cover system, and calculations that show appropriate sizing of the ditches and storm retention ponds.

307. Section 4.5.2 and 4.5.3, pages 29 and 33:

Provide information and calculations demonstrating that significant subsidence will not be caused by the anticipated maximum loading of the containment cell.

308. Section 4.5.2 and 4.5.3, pages 29 and 33:

Provide information on the average depth of frost penetration and describe the effects on the freeze/thaw cycles of the cover.

309. Section 8.5.3, page 48:

Describe how the LCRS tank will be decontaminated and state whether the tank is to be removed at the end of the post-closure period.

310. Section 8.5.5, page 49:

Demonstrate that the containment cell and its cover system will not be disturbed by post-closure land use in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.117(b) and (c).

311. Comment on storm retention ponds:

Develop a sampling and analysis plan that describes how sediments at the bottom of the storm retention ponds will be sampled for hazardous waste and hazardous waste constituents at the time of closure.

312. Comment on length of post-closure period:

Suggest a reasonable time period for the length of post closure.

313. Section 8.4.4, Vadose Zone Monitoring, page 47, subtitle Quarterly Vadose Zone Detection Monitoring:

Reference Table 4-1 in Appendix E somewhere in this subsection so that the frequencies and types of vadose zone monitoring that will be conducted during post closure is clearer to the reader.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units,

ALTERNATIVE TO GROUNDWATER MONITORING FOR THE CORRECTIVE ACTION MANAGEMENT UNIT – APPENDIX E

314. List of Figures, page 4, Figure 4-6, Vertical Sensor Array (VSA) Integration with Final Cover:

The subject figure does not show how the VSA is integrated with the final cover. Provide the correct figure.

315. Section 1.0, Introduction, page 7, last paragraph, 2nd sentence, states:

“SNL/NM’s Alternative to Groundwater Monitoring is vadose zone monitoring, which is a superior system for detecting and subsequently characterizing potential leaks of hazardous remediation wastes from the containment cell.”

Vadose zone monitoring is not necessarily superior to monitoring ground water. The two methods have advantages and disadvantages, and have different uses. Thus, the subject sentence should be deleted.

316. Section 1.0, Introduction, page 8, 1st bullet, states: “More rigorous and useful results”.

See comment 216. The subject bullet should be deleted.

317. Section 1.0, Introduction, page 8, 1st paragraph following bullets at top of page, 2nd sentence states:

“Because the CWL is up-gradient from the containment cell, groundwater monitoring for the containment cell would not provide useful information (i.e., it would not be possible to determine if the contaminant source is the CWL or the containment cell.”

Groundwater monitoring can be reliably used to determine whether contamination comes from the CWL or the CAMU. Because the subject statement is incorrect, it should be deleted.

318. Section 1.0, Introduction, page 9, 1st paragraph, 2nd sentence states:

“Vadose zone characteristics at the site include low gravimetric moisture content (1.0 to 1.6 percent at 48 feet below ground surface) and low saturated hydraulic conductivity (7.0 x 10⁻⁶ to 7.9 x 10⁻⁵ feet per second at 48 feet below ground surface)(AEE, 1996).”

- a. Provide data to support characterizing soil at the CAMU as having in general *low* gravimetric moisture content and *low* saturated hydraulic conductivity.

- b. Convert the reported hydraulic conductivity values to units of cm/s.

319. Section 1.0, Introduction, page 9, 1st paragraph, 3rd sentence states:

“Unsaturated hydraulic conductivity values are typically in the range of 2.8×10^{-7} feet per day (1×10^{-10} centimeters per second) or lower.”

Provide all available data to support characterizing soil at the CAMU as having typical unsaturated hydraulic conductivity values of 1×10^{-10} or lower.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units,

QUALITY ASSURANCE PLAN FOR THE CAMU CONTAINMENT CELL - APPENDIX F

320. Section 2.0, Responsibility and Authority, page 2-1, 1st two bullets completing 1st sentence:

EPA is now the review agency. NMED is now the permitting agency. Change the roles of the two agencies.

321. Section 2.1, Permitting Agency, page 2-1, 1st sentence states:

“The permitting agency, EPA, has the authority to issue a permit for the construction and operation of the CAMU facility.”

As in comment # 1 above, the subject sentence should be revised to: “The permitting agency, now the NMED, has the authority to issue a permit for the construction and operation of the CAMU.”

322. Section 6.1.3.3, Field Tests – Compacted Native Soil, page 6-5:

- a. Explain what happens if a test sample fails.
- b. State how many failed samples will be allowed, if any.

323. Section 8.9, Document Control, page 8-5, 1st sentence states:

“During construction of the CAMU, this QA Plan will be maintained by IT under a document control procedure to provide for convenient replacement of pages.

Explain how SNL will ensure that NMED will have access to the records maintained by IT.

324. Comment on construction quality control (CQC) for the liner system:

Because the liner system has already been installed, the CQC requirements for the liner system are not needed in the permit application.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units,

OPERATING PROCEDURES (CAMU) - APPENDIX G

No comment or response required for Appendix G.

PART B PERMIT APPLICATION

Volume III, Part 5 Corrective Action Units,

DOE UNAUTHORIZED LIMIT FOR UNRESTRICTED USE - APPENDIX H

No comment or response required for Appendix H.

ACTIVE TEST SITES AND ACTIVE SOLID WASTE MANAGEMENT UNITS

325. In the general part of the Permit application, provide a tabulated list of all outdoor active test sites and active Solid Waste Management Units.

The list should include the name of each active test site or SWMU, their location, and a general description of the type or types of testing (for example: Building 6532 Test Site, approximately 100 ft east of Building 6532, Technical Area 3, small-scale explosives testing).

The NMED plans to use this information to conduct future RCRA Facility Assessments (RFAs) to ensure that such sites, when decommissioned by SNL, are left in a condition that is protective of human health and the environment. SNL can also use the list to track sites that may need periodic sampling and analysis to protect site workers and the environment.

RECORD KEEPING

326. Introductory Section, page SW-H-2:

This section states, “**The following records are maintained at the SNL/NM Records Center:**” **Please** provide the physical address of the SNL/NM Records Center.

MODULE I: HAZARDOUS WASTE MANAGEMENT FACILITY (HWMF)

General Comments Maps and Figures

327. Figures A-5, A-6 and E-2 show an additional waste management area (WMA) that is not discussed within the text.

Please verify and correct the figures or discuss this unit within the text of the HWMF module.

328. There is a discrepancy between the numbers of buildings shown on the various figures presented for the HWM Facility.

Correct this discrepancy.

329. At a minimum, figures 2 and A-2 showing the layout of the HWMF, must be presented as scaled drawings in order to provide an accurate layout of the facility and demonstrate compliance with 40 CFR 264.176 and 177 for verifying distance and location requirements for ignitable and reactive waste.

330. There is no distinction between buildings and the storm water catchment pond as represented in the site drawings.

Update the figures so that there is a clear distinction between the two.

331. Figure A-4 Topographic map requirements

The surrounding land use was not addressed as required under 40 CFR 270.14(b)(19)(iv). Either discuss surrounding land use within the text under section A.5 or present the information on the topographic map (fig. A-4).

332. Provide the street names for the roads surrounding the facility, particularly those roads used to access the facility. Verify whether O Street is actually Hardin Boulevard.

333. HWMF General Unit Operation, Section 1.0, page HWMF-1 or HWMF General Unit Description, Section A.1, page HWMF-A-1:

NMED requires additional detail on the facility description as required by 20.4.1.900 NMAC incorporating 40 CFR 270.14(b)(1).

The following items should be addressed:

- a. unit status, i.e. permitted or interim;
- b. details on location within SNL/KAFB complex;
- c. size/area of the HWMF within the fence boundary;
- d. detailed description of activities conducted;
- e. details on the waste types and quantities of waste handled.

- f. discuss surrounding land use and distance from nearest residential areas.

Designated Waste Management Areas, Section 1.1

334. Section 1.1.1, Building 959, page HWMF-2;

Clearly state that the floors of all cells and packaging areas include recessed floors and metal grating. Figure 3 does not show all cells with grated floors. In addition, it is unclear in figure 3 whether or not the grated area in the workspace area has the same 7-inch step down as indicated for the holding cells.

335. Section 1.1.1, Building 959, page HWMF-2;

This section states, “**The floor and lower wall surface of each recessed area are covered with a chemical-resistant coating.**” Provide more detail on the chemical-resistant coating and on how high up the wall the coating covers. Also, discuss how this coating protects and prevents spilled liquids from penetrating floors and cracks as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(1).

336. Section 1.1.2 Building 958, page HWMF-3;

This section does not discuss whether or not the floors in this building are sealed. Provide this information.

337. Sections 1.1.1 Building 959 and Section 1.1.2 Building 958, page HWMF-2 and 3:

Provide calculations for determining secondary containment capacities and discuss drum capacities and stacking arrangements for each of the cells as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(3) and 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(3).

338. Section 1.1.3 Modular Storage Buildings, page HWMF-3;

Provide details on the construction and design of these units, including building dimensions and secondary containment size, depths and capacities and demonstrate compliance with 20.1.4.900 NMAC incorporating 40 CFR 270.15(a) and 20.4.1.500 NMAC incorporating 40 CFR 264.175.

339. Section 1.2.2 Containment Systems, page HWMF-4;

This section does not describe the containment systems as the section heading suggests but instead describes how accumulated liquids are handled. Either change this section heading to reflect what is address in this section or move all the discussion of secondary containment to this section and address all the requirements contained in 20.4.1.500 NMAC incorporating 40 CFR 264.175.

340. Section 1.2.2 Containment Systems, page HWMF-4 or Section 1.1.1 Building 959, page HWMF-2;

This section should discuss all secondary containment systems used at the facility. During the site visit, the shelves used to hold small containers within the cells in Building 959 were designed with a raised rim that will contain liquids on the shelves. Although these shelves are not engineered to be secondary containment system for the cells, they do act as secondary containment and therefore must be included in the description of the secondary containment systems and inspected for accumulation of liquids during inspections. In addition, discuss how the shelves are designed to drain or remove liquids resulting from leaks and spills or how containers are protected from contact with accumulated liquids as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(2).

341. Section 1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes

See comments addressed under the General section.

342. Section 1.2.6.1. Preventing Hazards in Unloading, page HWMF-5:

Provide a description of each loading and unloading area used for the waste management units and discuss how the design of the loading/unloading areas and procedures used reduces hazards associated with this operation. The equipment used both for transport and loading/unloading operations should be discussed. In addition, identify potential hazards that exist or could result during loading/unloading operations and the procedures implemented to minimize the likelihood of their occurrence.

343. Section 1.2.6.2 Preventing Runoff or Flooding, page HWMF-6:

Discuss the facilities design in regards to run-on/run off controls and provide a facility diagram with sufficient detail to demonstrate that run-on/run-off is prevented from entering into waste handling areas. Such things as roof design, location of downspouts, curbs, surface grading around buildings, diversion around the facility, and size and capacity of the catchment pond should be addressed.

344. Section 1.2.6.3 Preventing Contamination of Water Supplies, page HWMF-6:

This section should include a discussion regarding the location and design of the water supply lines at or near the facility.

345. Section 1.2.6.6 Preventing Releases to the Atmosphere, page HWMF-6:

This section discusses the use of fume hoods and drum vacuum hoods. What, if any, emission control equipment are on these hoods.

346. Section 1.2.6.6. Preventing releases to the atmosphere, page HWMF-6:

Identify each container management area subject to the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart CC and what Container Level standards apply to these areas.

347. Section 1.2.6.6 Preventing Releases to the Atmosphere, page HWMF-6:

Provide certify that the requirements of this subpart are met in accordance with 40 CFR 270.27(a)(2).

348. Section 1.3.2 Container Handling, page HWMF-7P:

Provide information on waste acceptance criteria and information on waste tracking at the unit.

349. Section 1.3.2.2 Aisle Space and Storage Configuration, page HWMF-7;

Provide a detailed description of the aisle spacing and storage configurations including stacking height used at each of the HWMF storage areas.

350. HWMF Security Procedures, Section A.2, page HWMF-A-2;

The text states there is only one entrance located on the east side of the unit. However, site diagrams show two entrances into the unit. Provide details for the controls and security for both. Discuss all security procedures and devices used such as building controls, and signage used at entrances, etc.

The discussion on warning signs should include spacing requirements around the perimeter and locations on buildings within the unit. In addition, signs on the perimeter fence must also be presented in Spanish.

351. Section A.3, HWMF Traffic Controls, page HWMF-A-2 and -3;

Provide information on road construction criteria for the access road into the HWMF unit and within the unit itself. Also, discuss control signals along the access road from the unit to the main road (P Street) and provide an estimated daily, weekly or monthly volume of traffic into or out of the unit.

352. Attachment E, Contingency Plan and Table E-1

Spill control and decontamination equipment – Provide a complete list of all spill prevention material and equipment used at the site, the storage location for this equipment and discussion that this equipment and quantity of supplies on hand is sufficient to provide adequate control of releases.

353. Fire Suppression

Specify whether sprinklers are automatic or manual and if automatic, provide information how the system is set to operate. Provide information on spacing and coverage for the sprinkler heads. For fire hydrants, provide information on water volumes and pressure required to supply

adequate water hose streams in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.32(d).

MODULE II: THERMAL TREATMENT FACILITY (TTF)

GLOBAL COMMENTS

354. Module II, Page TT-F-2, Section 1.1: General Description of the Facility, as required by 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14 (b)(1).

Please avoid reproducing in each Attachment the description of the Thermal Treatment Unit (over and over again) and the regulations that require that information in DOE/SNL's permit renewal application, since the unit's description had already been given at the beginning of the Module. For example, apart from the description given on Page TT-F-2, quoted above from Section 1.1, the same information is repeated elsewhere four times, (i.e., in Module II Attachment A, Page TTF-A-1; Attachment E, Page TTF-E-1; Attachment F, Page TTF-F-1, and Attachment G, Section G.1).

355. Page Numbering of Figures in Module II:

Please number all the pages of Figures 1 through 4, and Figures A-1 through A-6, and other parts of the document where illustrations are not paginated, in order to expedite third party review of the document.

356. Provide a list of all remote off-site research testing facilities and active solid waste management units (SWMUs).

357. Submit information on off-site generated waste accepted for treatment, storage or disposal at DOE/SNL.

TRAFFIC PATTERNS FOR THE TTF

358. Module I, Attachment A, Page TTF-A-2: In accordance with 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14(b)(10). Submit to NMED additional information as follows:

- a. Provide an estimate of the number and types of vehicles at and around the TTF OBU unit, not the whole DOE/SNL as presented in Appendix A of the Permit Application;
- b. Provide information about hazardous waste transfer or pick-up stations and the loading/unloading procedures;
- c. Include a description of the quantity of waste moved per movement per vehicle; and
- d. Present a description of the road surface composition and load bearing capacity.

WASTE ANALYSIS PLAN FOR THE TTF

359. Submit documentation of compliance with 20.4.1.600 NMAC (incorporating 40 CFR Section 265, Subpart P), and 20.4.1.900 NMAC, incorporating 40 CFR Section 270.32(b)(2):

Section 265.375 Waste Analysis: Provide sufficient information regarding quantity, physical, and chemical characteristics of the waste specific to the TTF OB unit. Provide more detail on waste description than that included in the General Part B Permit Application Waste Analysis Plan. Include the halogen content in the waste and concentrations in the waste, of silver, lead, mercury, cadmium, chromium, arsenic, and barium, unless there is documented data that show that these elements are not present.

Submit documentation of compliance with Section 265.381, i.e., Closure Requirements.

360. Submit evidence that all the hazardous waste burned at the TTF has the potential to detonate (including waste with low levels of high explosives, i.e., less than 10 percent).

Acceptable evidence should include test results such as *EPA Publication SW 846, Test Method for Evaluating Solid Waste, Subsection 6-2, Definition of Explosive Material, or the Bureau of Mines Gap Test or Deflagration/Detonation Transition Test*. This information is required because RCRA precludes open burning of hazardous waste that is not detonable. [20.4.1.600 NMAC (incorporating 40 CFR Section 265.382), 52 FR 46946, 46952 (12/10/87)]

361. DOE/SNL must assure compliance with the requirements for minimum distance from open burning to the property of others, [20.4.1.600 NMAC (incorporating 40 CFR Section 265.382)].

362. Submit an explanation of why the wastes treated or disposed of by open burning at the TTF cannot be treated or disposed of by other methods more protective of human health and the environment.

Open burning should be used for treatment only when no other option is available that is more protective of human health and the environment.

363. Submit the Storm water Pollution Prevention Plan for the TTF, including details of storm water sampling conducted at the burn site.

364. Submit data and analysis that demonstrate compliance with performance standards under 20.4.1.500 NMAC

(incorporating 40 CFR Section 264.601(a)(7), (a)(8), (a)(9), (b)(10) (b)(11), (c)(1), (c)(2), (c)(6), and (c)(7)) for deposition of contaminants to soil at the TTF from ash or entrained particles resulting from the burning of hazardous waste. This submittal shall include a consideration of

the following information:

- a. submit summaries of ash sampling results and an assessment of the potential risk from ash deposition to soil;
- b. submit an analysis of possible degradation products of high explosives (HE) that may be generated and the potential risk from levels of the degradation products likely to be found in soil around the burn areas;
- c. submit information on whether VOC's are released during burning and what are potential quantities of VOC's released;
- d. submit a comparison of potential levels of contaminants in soil from ash on human health soil screening levels and DOE/SNL ecological screening levels;
- e. submit representative ash sampling data conducted for the purpose of waste disposal characterization.

365. Include information into the WAP Section: "DOE/SNL shall analyze for all explosives compounds treated at the TTF OB unit during closure,"

to include metals, VOCs, SVOCs, and explosives, silver, perchlorate and the following compounds, unless a demonstration can be made that these compounds were not treated at the TTF:

- a. RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine),
- b. HMX (Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine),
- c. TNT (2,4,6-Trinitrotoluene), DNT (2,4- and 2,6-Dinitrotoluene),
- d. DNB(1,3-Dinitrobenzene),
- e. HCE (Hexachloroethane), Tetryl (Methyl-2,4,6-trinitrophenylnitramine),
- f. TNB (1,3,5-Trinitrobenzene), Nitrocellulose,
- g. TNG (Trinitroglycerol [nitroglycerin]),
- h. PETN (Pentaerythritol tetranitrate), Nitroglycerin,
- i. NQ (Nitroguanidine),
- j. WP(White phosphorus), and
- k. EGDN (Ethylene glycoldinitrate)."

366. Provide a sampling and analysis plan including sampling locations, number of samples, depths and analytes for the TTF during its permitted life.

367. **Module II, Attachment B**, Section B.1.1, Page TTF-B-2, Top paragraph, First sentence

"Description of Acceptable Waste Categories"; "Liquid Wastes contaminated with explosives that may be treated in the TTF include water, alcohols, and solvents (e.g. acetone)."

Provide reaction diagrams showing the combustion by-products of acetone, and measures to control their wind dispersal, as required by 20. 4.1.500 NMAC, incorporating 40 CFR Section 264.13(b) and 20. 4.1.900 NMAC, incorporating 40 CFR Section 270.14(b)(3). Further, it should be explained that liquids WILL be treated at the TTF, NOT "liquids may be treated at the TTF". This is to avoid being vague about the proposed treatment of reactive waste at the TTF.

368. Section B.1.2, Chemical and Physical Properties, Second Sentence

"The RCRA-regulated constituents in the explosive wastes to be treated at the TTF largely consist of the following: ..."Reactive compounds (i.e., high explosives, propellants, pyrotechnics)."

Since the information in General Part B, Waste Analysis Plan only mentions explosives without additional information, please provide a detailed list of all the waste propellants, explosives, and pyrotechnics that DOE/SNL will treat at the OB unit. Include a summary of historical information on the volume and composition of these explosives contaminated wastes. Further, provide a description of the solubility of these wastes in water, mobility in soil and ground water, physical and molecular properties, and sorption properties of the waste relative to environmental media. [NOTE: The list and description presented on page 1-4, in Permit Attachment 1 of the current TTF Operating Permit contains the type of information needed to meet these requirements].

369. Describe the parameters for which each waste stream at the TTF will be analyzed, since these were not mentioned in Appendix B of the General Part B Permit application.

Explain why KOP will be used in lieu of chemical analysis of the wastes to be treated at the TTF.

370. Specify where copies of the Waste Analysis Plan (WAP) will be located at the TTF.

Identify the designated personnel position(s) and organization responsible for updating the WAP.

INSPECTION AND SECURITY PLANS FOR THE TTF

371. Module II, Attachment C, Page TTF-C-1, "Inspection Plan for the Thermal Treatment Facility, "Miscellaneous Unit Inspection", as required by 20.4.1.500 NMAC, incorporating 40 CFR Section 264.15.

[NOTE: The current TTF Operating Permit contains some of the kind of detailed information on the OB unit that could satisfy these requirements]:

372. Present a Table specific to the inspection of the TTF and the types of problems to be looked for,

including, but not limited to malfunctions, cracks in coatings or welds, and deterioration of the equipment. Provide information on the TTF "Safety and Emergency Equipment" that explains whether or not the following items are present, operational, and in good condition: Personnel protective equipment, telephone, red warning beacons, water spigot and hose, burner control warning bell, public address system, first aid kit, eye wash and safety shower, and spill control equipment.

Include in the table of inspected equipment the following operational and structural equipment, and their inspection criteria, as well as the frequency of inspection of the TTF:

- a. Burn Pan, using criteria such as whether it is present, leak free, and in good condition;
- b. Burn pan lid, is it operational and in good condition?
- c. Burn cage: is it present and in good condition?
- d. Burn cage door: is it operational, and in good condition?
- e. Steel-lined concrete pad, filter element, and catchments tank: are they free of leaks, and in good condition?
- f. Condition of the surrounding area: Is it clean and free of weeds?
- g. Loading/unloading are: Is it clean, free of spills, and in good condition.

373. Include, in the inspection schedule, the frequency at which each of the equipment of the TTF mentioned in the above items a. and b. will be inspected.

374. Include in the inspection schedule whether there will be hazardous waste on-site in the generating room from which it will be remotely fed to the TTF,

and if the waste containers are leak free, labeled, closed, and in good condition.

375. Explain where the containers with the OB waste will be located, how far they will be from sources of ignition, or heat and the distance of the OB pan will be from the TTF perimeter fence.

376. Provide a stand-alone security plan TTF similar to the plan in the current TTF operating permit.

STANDARD OPERATING PROCEDURES AT THE TTF

377. Module II, Attachment G, Page TTF-G-1, Section G.1, "Treatment Operations":

Provide Standard Operating Procedures, including inspection, monitoring, and maintenance plan for the TTF including the OB pan, as required by 20.4.1.900 NMAC, incorporating 40 CFR Section 270.23(a)(2). [Note: The current operating permit, Permit Attachment 9, Pages 9-2 through 9-3 "*Waste Management Operations*" contains the type of detail needed to meet this requirement].

378. Provide the following information on the step-by-step directions on TTF open burning procedures, [i.e., the Standard Operating Procedures]:

- a. Explosive limits, the annual OB treatment and net explosive weight quantity, based on net explosive weight (NEW);
- b. Personnel limits during open burning e.g., at least 2 ("Buddy" system);
- c. Location of the TTF Open burn pan relative to electric power lines, adjacent facilities including the RMWMF;
- d. Safety precaution, like no smoking during operations;
- e. Fire fighting equipment to combat grass, brush, or equipment fires;
- f. Sequence of operation, starting from debriefing of explosive ordnance disposal personnel at the beginning of the operation, loading the burn pan (with waste first, then the donor

charge), pouring of the propellant with extreme care to prevent the occurrence of spills, telephone or two-way radio communication during the entire operation, personnel protective cover, raising the flag at the beginning of operations, and notification of other agencies before the burn time;

- g. Checking treatment effectiveness by inspecting the burning device to ensure that all munitions have been burned;
- h. Removal and management of ashes, and how soon (i.e., how many hours) after each burn event. Explain how as soon as possible means in the following sentence from paragraph 5, Page TTF-G-3, "**Ash and particulate matter (residues) from the thermal treatment process are removed from the burn pan as soon as possible, and the pan is covered between treatments.**"

379. Description of the TTF OB Treatment Unit, as required by 20. 4.1.900 NMAC, incorporating 40 CFR Section 270.23.

Explain how the TTF OB Unit will be managed to control the releases of propellants, explosives, pyrotechnics as well as wind dispersal of ash and particulate matter to the environment, in order to meet the standards required by 20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(a) and 20. 4.1.900 NMAC incorporating Section 270.23(c). In addition, explain what waste management activities the tank that is located outside the TTF between the waste generating building and the OB unit will be used for , since during the site tour of April 24, 2002 DOE/SNL personnel mentioned to NMED personnel that it wasn't currently used to hold hazardous waste destined for, and during burn activities.

380. Provide a description of methods to control the deterioration of the open burning device, and the installation of a newer cover to prevent the accumulation of precipitation in the OB device during periods of inactivity, since site visit to the OB unit indicated that the cover is deteriorating due to the effects of rust/oxidation.

381. Provide a description of ancillary equipment such as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of the explosive waste from its point of generation to the OB treatment pan.

382. **Module II, Attachment G, Page TTF-G-3, Paragraph 6, second sentence,**

"If the catch tank is nearing maximum capacity (175 gallons) and the water IS NOT SUSPECTED of being derived from the treatment of RCRA-regulated waste, the water will be discharged to the City of Albuquerque sewer treatment system." Explain how accumulation of precipitation in the OB container device will be managed and disposed of, as required by 20.4.1.900 NMAC, incorporating 40 CFR Section 270.23(a)(1) and (2). Further, explain why DOE/SNL would use guesswork /suspicion, rather than chemical analysis of the precipitation water to determine whether it is hazardous before reaching a decision on the water quality and the method of disposal without chemical data.

383. Provide an estimate of maximum waste inventory in storage and treatment during the permitted life of the TTF (10 years), as required by 20.4.1.500 NMAC, incorporating 40 CFR

Section 264.112(b)(3).

In addition, explain the discrepancy in the waste amounts presented in the following sections of the TTF application: Module II, Page TTF-2, Section 1.1, last sentence, "The maximum volume of RCRA-regulated wastes in the TTF burn pan at any time is 20.8 gallons", and Page TTF-E-1, Paragraph 3, First sentence, "The TTF is used to thermally treat (i.e., burn) small quantities (i.e., less than 190 pounds of waste and other solids/liquids combined) of waste substances, waste liquids(e.g., water, solvents) contaminated with explosive substances, and waste items (e.g., rags, wipes, swabs...)" . How much is less than 190 pounds?

CONTINGENCY PLAN FOR THE TTF

Pursuant to 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14(b)(7) and 20.4.1.500 NMAC, incorporating 40 CFR Section 264.53, submit information that:

- 384. identifies where copies of the Contingency Plan will be located; and
- 385. describes a schedule of remedial action.

SOIL AND VADOSE ZONE MONITORING

386. Provide the following additional information on soil and vadose zone monitoring program at the TTF, as required by 20.4.1.500 NMAC, incorporating 40 CFR Section 264.278; Section 264.601(b) and Section 264.13(b).

- a. Describe sample collection, sample preservation, shipment, sampling and analysis procedures, and chain of custody control,
- b. Provide details of the sampling and analysis plan for monitoring the vadose zone during treatment operations and for the potential of waste constituents to migrate into the ground water as required by 20.4.1.500 NMAC, incorporating 40 CFR 264.273,
- c. Describe how background soil samples will be taken, the appropriate locations of the background samples, and depths from which the samples will be obtained.

CLOSURE AND POST-CLOSURE PLANS

In accordance with the requirements contained in 20.4.1.500 NMAC, incorporating 40 CFR Section 264.112 through Section 264.115, Section 264.117-118, and 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14(b):

- 387. Explain why closure activities specific to the TTF are not described in detail, as contained in the current operating Permit issued in 1994.

Provide information on TTF closure addressing the following topics: Closure procedures, Soil and liquid sampling procedures, sample handling and documentation, sample shipping, analysis, and decontamination verification.

388. Provide information on the TTF OB Unit which should include the following:
- Submit an outline of the procedures for removal of hazardous waste, residues or post investigation derived waste, and contaminated soils as well as the location of disturbed soils when removed;
 - Provide the estimated year of closure of the OB Unit;
 - Submit a description of the location and number of copies of the Closure and Post-Closure Plans for the TTF OB pan;
 - Name the personnel responsible for storage, updating of facility copies of the Closure and Post-Closure Plans, and the procedure for updating all other copies of the subject plans.
 - Explain the potential request for extension of closure time.
389. Submit a detailed contingency Post-Closure Plan and Post-Closure Care mechanisms as per 20.4.1.500 NMAC, incorporating 40 CFR Section 264.603 in order to fulfill the requirements of 40 CFR Section 264.601. This required information was not included in the Permit Renewal Application.
390. Present a detailed Quality Assurance/Quality Control Program (QA/QC), or QA/QC Management Plan that will be applied during soil sampling and analysis at closure, to ensure that representative discrete soil samples are taken at, and around the TTF.
391. Provide a sketch drawing of the TTF showing the locations where confirmatory soil samples will be taken, and the proposed number of samples.

PROTECTION OF GROUND WATER

392. Hydrology as required by 20. 4.1.900 NMAC, incorporating 40 CFR Section 270.23(b).

The Permit Applicant must provide a detailed description of the hydrology below the TTF. (This may be available through published or private reports. Include a copy or copies of the references used.).

393. Provide site-specific data for initially characterizing the OB Unit and the surrounding area.

Any saturated zones must be identified. Discuss appropriate spatial and temporal intervals for data collection prior to initiating any data collection program.

394. Prevention of Releases

Explain what measures will be incorporated into the OB treatment unit design to exclude water from entering the units. [Direct rainfall entering the open burn device could cause a hydraulic head that would drive waste constituents into the vadose zone.

395. Provide information on the nearest ground water monitoring well.

List the indicator parameters and hazardous waste constituents that are analyzed for. Include an account of how background values for each proposed monitoring parameter or constituent were determined to meet the requirements contained in 20.4.1.900 NMAC, incorporating 40 CFR Section 270.14(c)(6)(iii).

396. Describe how DOE/SNL determine the direction of ground water flow at the TTF, the rate of flow. [20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(a)(5)].

397. Provide an account of the precipitation patterns at the TTF,

proximity to, and withdrawal rates of current and potential ground water users, as required by 20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(b)(3) and 40 CFR Section 264.601(b)(5).

398. Include an account of water quality standards, water quality data and uses.

These data will allow NMED to evaluate the impact of the activities at the OB Unit on surface aquatic environment in compliance with the requirements of 20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(b)(7), and 40 CFR Section 264.601(b)(8).

AIR QUALITY ASSESSMENTS

Please submit the following information to NMED, as required in 20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(c)(1) and 20.4.1.900 NMAC, incorporating 40 CFR Section 270.23(b):

399. Provide a description of the operating conditions of the OB Unit on a case-by-case basis.

[Examples are: not to expose ash residues from the OB unit to the open air when wind speed is greater than 15 miles per hour (24 km/hr), allowable quantities of waste at the OB pan per event, operating time frames, acceptable meteorological conditions (e.g., how many inches of rain does the area where TTF is located receive per year), ambient air monitoring requirements, meteorological monitoring etc.].

400. Submit a description of the effectiveness and reliability of any systems and structures used to reduce or prevent emissions of hazardous constituents to the air.

This may be demonstrated by semi-annual sampling and analysis programs following the last waste treatment event [20.4.1.500 NMAC, incorporating 40 CFR Section 264.601(c)(2)].

RISK ANALYSIS

Provide a Risk Analysis that covers the four main components of risk assessment i.e., Hazard identification, Dose-Response Assessment, Exposure Assessment, and Risk Characterization. Include a discussion of the following issues:

401. A description of the existing air quality, other sources of contamination and the potential cumulative impact on human health and the environment.

Present an estimate of the individual excess lifetime cancer risk.

402. An outline of the potential for health risks caused by human exposure (including the explosive ordnance OB personnel) to hazardous waste constituents;

403. A discussion of potential damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to hazardous waste constituents from the OB Unit.

Discuss other exposure pathways such as: plant ingestion by herbivores, prey consumption by carnivores, and water ingestion pathways;

404. Provide an ecological risk assessment considering the presence of the following endangered or threatened species at or around the TTF OB treatment unit, including, but not limited to the following species:

- a. Bald Eagle (*Haliaeetus leucocephalus alascanus*);
- b. Burrowing Owl (*Strix Occidentalis lucida*);
- c. American Peregrine Falcon (*Falco peregrinus anatum*);
- d. Whooping Crane (*Grus americana*);
- e. Southwestern Willow Flycatcher [*Empidonax ludovicianus* (3ssp.)];
- f. Gray Vireo (*Vireo vicinior*); and
- g. Meadow Jumping Mouse (*Zapus hudsonius luteus*)

405. A description of any sensitive receptors within a 2 kilometer radius, and an estimate of exposed individuals living and/or working on the OB premises;

406. Calculations of the lifetime cancer risk as a function of downwind concentrations, unit risk value, and exposure duration;

407. An explanation of how atmospheric air quality will be monitored to detect air borne hazardous and energetic waste contaminants and constituents during the active life of the OB Unit.

408. Provide a detailed network of receptor points to permit the estimation and identification of receptor points that are exposed to maximum contaminant concentrations.

409. Provide a detailed estimation of the exposed population. The non-inhalation pathways (ingestion and dermal) must be addressed using appropriate pathway exposure models.

410. If operating procedures will require wetting of the open burn area before and after each operation, describe how this will be accomplished and what measures will be taken to minimize release of hazardous waste to the environmental media.

411. Provide a brief historical description of TTF and the OB areas, and the presence of any archeological sites.

POTENTIAL PATHWAYS OF EXPOSURE AND POTENTIAL EXPOSURE MAGNITUDE

412. Please describe the potential for the public and personnel working nearby to be exposed to hazardous wastes, as required by 20.4.1.900 NMAC, incorporating 40 CFR Section 270.23(c). Include the following:

Information on how long waste will remain in the unit before it is burned, the length of time after operation of the unit before re-entry of personnel to the detonation site is allowed, and procedures for management of ash residues, unexploded ordnance, and post-detonation soils.

HEALTH AND SAFETY PLAN

413. Provide a stand-alone health and safety plan for routine operations at the OB Unit.

The information may be in a section titled "health and safety procedures" during reactive waste management operations.

NOISE CONSIDERATIONS

414. Describe how noise from open burning activities will be controlled, since noise will be carried in the direction of the wind towards the nearby office buildings, such as the High Bay Waste Storage and the Auxiliary Hot Cell Facilities, and the RMWMF. Provide the distance of the TTF OB Unit from these office buildings, and also the minimum safety distances to the property of others, as required by 20.4.1.600 NMAC, incorporating 40 CFR Section 265.382.

WASTE MINIMIZATION

415. Please present a plan that addresses the following items which shall be required of DOE/SNL in writing annually by December 1, for the previous year ending September 30, as required by 20.4.1.300 NMAC, incorporating 40 CFR Section 262.41(a)(6-7) and 20.4.1.500 NMAC, incorporating 40 CFR Section 264.75(h) and (i).

Include in the plan an indication that:

- a). DOE/SNL has a program in place to reduce the volume and toxicity of all hazardous and energetic wastes which are generated by the Facility operations to the degree determined to be economically practicable; and the proposed method of treatment is the most practicable method currently available to DOE/SNL which minimizes the present and future threat to human health and the environment. This certified plan must address the items below:

- i). Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the Facility;
- ii). Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;
- iii). Any source reduction and/or recycling measures implemented in the last five years or planned for the near future;
- iv). An itemized list of the dollar amounts of capital expenditures and operating costs devoted to source reduction and recycling of hazardous waste;
- v). Factors that have prevented implementation of source reduction and/or recycling;
- vi). Sources of information on source reduction and/or recycling received at the Facility (e.g., local government, trade associations, suppliers, etc.);
- vii). An investigation of additional waste minimization efforts which could be implemented at the Facility. This investigation shall analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means, and an assessment of the technical feasibility, and potential waste reduction for each option;

b). The certified plan shall also include:

- i). A flow chart or matrix detailing all hazardous wastes the Permittee's Facility produces, by quantity and type and by building/area;
- ii). A written determination that demonstrates the need to use those processes which produce a particular energetic/reactive waste due to a lack of alternative processes, available technology, or available alternative processes that would produce less volume of hazardous waste.

LAND DISPOSAL RESTRICTIONS

416. Provide information on how DOE/SNL plans to comply with all land disposal restrictions at the TTF,

and how DOE/SNL will manage and treat energetic wastes restricted from land disposal, and the treatment requirements listed in 20.4.1.800 NMAC, incorporating 40 CFR Section 268.40 for explosives subcategory D003 wastes deactivation and attainment of the treatment standards for constituents listed in 40 CFR Section 268.48, as required under 20.4.1.800 NMAC, incorporating 40 CFR Section 268 Subpart D.

MODULE III: RSI COMMENTS ON THE RMWMF

417. Module III, Section 1.2.2, Containment Systems. "Design and operation of container storage areas."

Liquids that accumulate in spill pallets or sumps must be analyzed and removed, as required by 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(5). The statement that accumulated liquids "**may be sampled and analyzed as needed**" is insufficient.

418. Module III, Section 1.2.2, Containment Systems. "Secondary containment requirements."

This section should demonstrate that the spill pallets and sumps used at the RMWMF do meet containment requirements, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175. Specifically, clarify that the performance requirements presented in 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(1) through (b)(5) are satisfied.

419. Module III, Section 1.2.2, Containment Systems. "Number and specifications for containers."

To demonstrate compatibility of waste with containers, the number of containers, sizes, and specifications should be provided to verify compliance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.172. Describe how specific containers are resistant to the specific types of wastes that will be managed at the RMWMF.

420. Module III, Section 1.2.2, Containment Systems. "Container storage area design."

Provide drawings for container storage areas that adequately demonstrate compliance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.175 and 20.4.1.900 NMAC incorporating 40 CFR Section 270.15(a). A statement that storage areas are curbed and paved and "**slopes toward the water retention pond**" is insufficient.

421. Module III, Section 1.2.2, Containment Systems. "Container storage area design."

Demonstrate that the base of container storage areas are impervious to the waste stored and precipitation, as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.175(b)(1) and 20.4.1.900 NMAC incorporating 40 CFR 270.15.

422. Module III, Section 1.2.6.2, Containment Systems. "Container storage area drainage."

Design drawings should be presented that demonstrate that the container storage areas will drain liquids resulting from leaks, spills, or precipitation in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(2) and 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(2).

423. Module III, Section 1.1.5, Outdoor Storage Area. "Storm water run-on."

Demonstrate that run-on from storm water is prevented or containment system has sufficient excess capacity in accordance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.175(b)(4) and 20.4.1.900 NMAC incorporating 40 CFR Section 270.15(a)(4).

424. Module III, Section 1.2.2, Containment Systems. "Removal of accumulated liquids."

Provide a description of the time period that qualifies as "**as soon as practicable**" in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(5) and 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(5). This time period must be sufficient to prevent overflow of the containment system.. It should be clarified that the procedures, equipment, and personnel required to remove accumulated liquids are available to ensure that overflows do not occur.

425. Module III, Section 1.2.2, Containment Systems. "Test for free liquids."

Provide a description of the tests that will be performed to test for free liquids in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.15(b)(1).

426. Module III, Table E-1. Emergency Equipment. "Sprinklers and fire hydrants."

Specify whether sprinklers are automatic or manual, and specify whether the fire hydrants are capable of providing adequate water and pressure required to supply water hose streams in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.32(d). Also, the specific location of telephones and intercoms should be presented.

427. Module III, Attachment E. Contingency Plan. "Arrange to familiarize local authorities with facility."

Arrangements to familiarize local police, fire departments, and emergency response teams with the facility must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(1).

428. Module III, Attachment E. Contingency Plan. "Arrange to familiarize local hospitals."

Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from a fire, explosion, or release must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(4).

429. Part 2, Section 1.1.6.6. Contamination of Personnel. "Procedures used to prevent contamination of personnel."

Describe procedures or safety plans used to prevent or eliminate the possibility of contamination of personnel in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(8)(vi).

430. Part 2, Section 1.1.3. "Requirements for Ignitable, Reactive, and Incompatible Waste." Designation of safe areas and posting of hazards.

The owner/operator must designate safe areas for smoking and open flames and post signs where hazards exist in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(9) and 40 CFR 264.17(a). Section 1.1.3 states: **“Ignitable or reactive waste is separated and protected from open flames, welding activities, hot surfaces, frictional heat, sources of sparks, spontaneous ignition, and radiant heat.”** If these hazards exist within waste management areas at the RMWMF, they should be confined to safe areas and hazard signs should be posted.

431. Part 2, Section 1.1.6.6. "Preventing Releases to the Atmosphere." Wastes subject to Part CC.

It is stated that a determination of volatile organic concentration will be made to establish whether wastes are above the 500 ppmw standard provided in 20.4.1.500 NMAC incorporating 40 CFR 264.1082, and that the generator **“documents it for that waste stream.”** Provide a description of where in the operating record this documentation will be made available.

432. Part 2, Section 1.1.6.6. "Tanks." Lack of information regarding tank standards.

Because no information is provided regarding tanks, it is assumed that no hazardous waste tanks will be managed at the RMWMF according to 20.4.1.500 NMAC incorporating 40 CFR Part 264 Subpart J. Please clarify that tanks will not be managed at the RMWMF.

433. Module III, Section 1.2.6.6. "Preventing Releases to the Atmosphere." Container Level 1 standards.

It is stated that non-radioactive non-remediation wastes will be stored in primary containers that **1) have a design capacity of less than 0.1 cubic meter (m³) or 2) are U.S. Department of Transportation-approved and have a design capacity greater than 0.1 m³ but less than 0.46 m³.** Describe how air pollution from these containers will be controlled in accordance with Container Level 1 standards as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(b)(1).

434. Module III, Section 1.2.6.6. "Preventing releases to the atmosphere." Container Level 2 and 3 standards.

Because there is no description for how Container Level 2 and 3 standards will be complied with, it is assumed that the conditions that require Container Level 2 and 3 will not take place at the RMWMF during the life of the RCRA Part B Permit as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086. This section should clarify whether or not Container Level 2 or 3 standards will be required at the RMWMF. If Container Level 2 or 3 standards will be required during the life of the RCRA Permit, a complete description of how applicable standards will be complied with should be provided.

435. Module III, Section 1.2.6.6. "Preventing releases to the atmosphere." Identification of each container area.

Identify each container area subject to the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart CC and certify that that the requirements of this subpart are met in accordance with 40 CFR 270.27(a)(2).

436. Module III, Section 1.2.6.6. "Preventing releases to the atmosphere. " Container covers.

It is stated that container covers are "**maintained in closed and sealed conditions.**" Clarify whether or not covers meet design requirements to form a continuous barrier that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(c).\

437. Module III, Section 1.1.1 "Inspections." Reporting of non-compliances.

As required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1090, for each occurrence when hazardous waste is placed in the hazardous waste management unit in noncompliance with 20.4.1.500 NMAC incorporating 40 CFR Part 264.1082(c)(1) and (c)(2), the owner or operator shall submit a written report within 15 days of the time that the owner or operator becomes aware of the occurrence. These reporting requirements should be set forth in Module III of the RCRA Part B Permit.

438. Module III, Attachment G. "Treatment Plan." Process vents and control devices.

The Treatment Plan should clarify whether or not process vents or closed-vent systems and control devices will be required by any of the treatment technologies listed as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1032 and Part 264.1033. If required, the Treatment Plan should describe how all applicable requirements of these regulations will be complied with.

439. Module III, Section 1.2.6.6. "Preventing Releases to the Atmosphere." Negative pressure venting system.

It should be clarified whether the described negative pressure ventilation system in Building 6920 is intended to meet any specific RCRA control system requirements.

440. Part 2, Appendix F.4 and F.4.3. "Closure Plan." How the final closure will be conducted.

In Section F.4 DOE/SNL describes a phased closure approach where sampling and analysis activities will be conducted if RCRA constituents were known to have been released from the facility. Regardless of whether or not a release has been documented, NMED will require that building floors and other storage areas be decontaminated (washed) and a radiological screening be completed prior to closure. This section should describe decontamination procedures that will be conducted to meet the closure standard required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.111 and Part 264.112.

441. Part 2, Appendix F. "Closure Plan." Methods for removing, transporting, treating,

storing, or disposing.

Describe the methods that will be used to remove, transport, treat, store, or dispose of all hazardous waste, and identify all hazardous waste management unit(s) to be used, if applicable, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.111 and Part 264.112.

442. Module III, Attachment G. "Treatment Plan." Proposed treatment technologies.

The Treatment Plan for the RMWMF lists five treatment technologies. The RMWMF is being permitted as a container storage area, and as such, treatment in containers is appropriate under RCRA. Clarify that the proposed treatment technologies will be performed at the RMWMF in containers, and in doing so, these treatment technologies do not require permitting under 20.4.1.500 NMAC incorporating 40 CFR Part Section 264 Subpart X.

443. Module III, Attachment G. "Treatment Plan." Thermal deactivation.

The Treatment Plan for the RMWMF lists thermal deactivation as one of the five treatment technologies. If the proposed treatment activity is carried out as described in Part 2, Appendix G.18, this unit must be permitted as a miscellaneous unit or meet the definition of a tank or container as described in 20.4.1.500 NMAC incorporating 40 CFR Subpart X. This section should clarify that the proposed thermal deactivation treatment will be performed in a tank or container, or a request for a RCRA Permit as a miscellaneous unit should be submitted.

444. Module III, Section 1.2.2, "Containment Systems." Containers holding only wastes that do not contain free liquids.

Explain how it can be verified that containers determined to be holding only wastes that do not contain free liquids actually do not contain free liquids, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175(c).

MODULE IV: RSI COMMENTS ON THE HIGH BAY WASTE STORAGE FACILITY

445. Module IV, Section 1.2.2, Containment Systems. Nonreactive containers.

The statement that containment systems are “**sufficiently impervious**” is insufficient. The specific container materials used should be presented and demonstrated not to react with the specific types of wastes stored in the containers as required by 20.4.1.500 NMAC incorporating 40 CFR 264.172 and 20.4.1.900 NMAC incorporating 40 CFR 270(15)(a).

446. Module IV, Section 1.2.2, Containment Systems. Number and specifications for containers.

To demonstrate compatibility of waste with containers, the number of containers, sizes, and specifications should be provided to verify compliance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.172. Describe how specific containers are resistant to the specific types of wastes that will be managed at the HBWSF.

447. Module IV, Section 1.2.2, Containment Systems. Container storage area design.

Provide drawings for container storage areas that adequately demonstrate compliance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.175 and 20.4.1.900 NMAC incorporating 40 CFR Section 270.15(a). A description of existing topography and the existing slope of pavement around the HBWSF is insufficient.

448. Module IV, Section 1.2.2, Containment Systems. Floor trenches.

Section 1.1 states that there are floor trenches in the HBWSF that “**are not used to provide secondary containment.**” Provide a description of what would happen to any liquid wastes that are captured in the floor trenches, where any captured liquid waste would drain to, and how any liquid wastes captured in the floor trenches would be managed in compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b).

449. Part 2, Section 1.1.2, Containment Systems. Removal of accumulated liquids.

Provide a description of the time period that qualifies as “**as soon as practicable**” in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(5). This time period must be sufficient to prevent overflow of the containment system.. It should be clarified that the procedures, equipment, and personnel required to remove accumulated liquids are available to ensure that overflows do not occur.

450. Module IV, Section 1.2.2, Containment Systems. Design and operation of container storage areas.

Liquids that accumulate in spill pallets or sumps must be analyzed and removed according to 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(5). The statement that accumulated liquids “**may be sampled and analyzed as needed**” is insufficient.

451. Module IV, Section 1.2.2, Containment Systems. Test for free liquids.

Provide a description of the tests that will be performed to test for free liquids in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.15(b)(1).

452. Module IV, Table E-1. Emergency Equipment. Sprinklers and fire hydrants.

Specify whether sprinklers are automatic or manual, and specify whether the fire hydrants are capable of providing adequate water and pressure required to supply water hose streams in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.32(d). Also, the specific locations of telephones and intercoms should be presented.

453. Appendix E. Contingency Plan. Arrange to familiarize local authorities with facility.

Arrangements to familiarize local police, fire departments, and emergency response teams with the facility must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(1).

454. Appendix E. Contingency Plan. Arrange to familiarize local hospitals.

Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from a fire, explosion, or release must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(4).

455. Part 2, Section 1.1.6.6. Contamination of Personnel. Procedures used to prevent contamination of personnel.

Describe procedures or safety plans used to prevent or eliminate the possibility of contamination of personnel in accordance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.14(b)(8)(vi).

456. Part 2, Section 1.1.3. Requirements for Ignitable, Reactive, and Incompatible Waste. Designation of safe areas and posting of hazards.

The owner/operator must designate safe areas for smoking and open flames and post signs where hazards exist in accordance with 20.4.1.500 NMAC incorporating 40 CFR Section 264.14(b)(9) and 40 CFR Section 264.17(a). Section 1.1.3 states: **“Ignitable or reactive waste is separated and protected from open flames, welding activities, hot surfaces, frictional heat, sources of sparks, spontaneous ignition, and radiant heat.”** If these hazards exist within waste management areas at the HBWSF, they should be confined to safe areas and hazard signs should be posted.

457. Part 2, Appendix F.4 and F.4.3. Closure Plan. How the final closure will be conducted.

In Section F.4 describes a phased closure approach where sampling and analysis activities will be conducted if RCRA constituents were known to have been released from the facility. Regardless of whether or not a release has been documented, NMED requires that building floors and other storage areas be decontaminated (washed) and a radiological screening be completed prior to closure. This section should describe decontamination procedures that will be conducted to meet the closure standard as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.111 and Part 264.112.

458. Part 2, Appendix F. Closure Plan. Methods for removing, transporting, treating, storing, or disposing.

Describe the methods that will be used to remove, transport, treat, store, or dispose of all hazardous waste, and identify all hazardous waste management unit(s) to be used, if applicable, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.11 and Part 264.112.

459. Module IV, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 1

standards.

It is stated that non-radioactive non-remediation wastes will be stored in primary containers that **1) have a design capacity of less than 0.1 cubic meter (m³) or 2) are U.S. Department of Transportation-approved and have a design capacity greater than 0.1 m³ but less than 0.46 m³.** Describe how air pollution from these containers will be controlled in accordance with Container Level 1 standards as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(b)(1).

460. Module IV, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 2 and 3 standards.

Because there is no description for how Container Level 2 and 3 standards will be complied with, it is assumed that the conditions that require Container Level 2 and 3 will not take place at the HBWSF during the life of the RCRA Part B Permit as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086. This section should clarify whether or not Container Level 2 or 3 standards will be required at the HBWSF. If Container Level 2 or 3 standards will be required during the life of the RCRA Permit, a complete description of how applicable standards will be complied with should be provided.

461. Module IV, Section 1.2.6.6. Preventing releases to the atmosphere. Container covers.

It is stated that “container covers are **“maintained in closed and sealed conditions.”** Clarify whether or not covers meet design requirements to form a continuous barrier that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(c).

462. Module IV, Section 1.1.1 Inspections. Reporting of noncompliances.

As required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1090, for each occurrence when hazardous waste is placed in the hazardous waste management unit in noncompliance with 20.4.1.500 NMAC incorporating 40 CFR Part 264.1082(c)(1) and (c)(2), the owner or operator shall submit a written report within 15 days of the time that the owner or operator becomes aware of the occurrence. These reporting requirements should be set forth in Module IV of the RCRA Part B Permit renewal application.

463. Part 2, Section 1.1.6.6. Preventing Releases to the Atmosphere. Wastes subject to Part CC.

It is stated that a determination of volatile organic concentration will be made to establish whether wastes are above the 500 ppmw standard provided in 20.4.1.500 NMAC incorporating 40 CFR Section 264.1082, and that the generator **“documents it for that waste stream.”** Provide a description of where in the operating record this documentation will be made available.

464. Part 2, Section 1.1.6.6. Tanks. Lack of information regarding tank standards.

Because no information is provided regarding tanks, it is assumed that no hazardous waste tanks will be managed at the HBWSF according to 20.4.1.500 NMAC incorporating 40 CFR Part 264 Subpart J. Please clarify that tanks will not be managed at the HBWSF.

465. Module IV, Section 1.2.2, Containment Systems. Containers holding only wastes that do not contain free liquids.

Explain how it can be verified that containers determined to be holding only wastes that do not contain free liquids actually do not contain free liquids as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.175(c).

MODULE V: RSI COMMENTS ON THE AUXILIARY HOT CELL FACILITY

466. Module V, Section 1.2.2, Containment Systems. Nonreactive containers.

The statement that containment systems are “**sufficiently impervious**” is insufficient. The specific container materials used should be presented and demonstrated not to react with the specific types of wastes stored in the containers as required by 20.4.1.500 NMAC incorporating 40 CFR 264.172 and 20.4.1.900 NMAC incorporating 40 CFR 270(15)(a).

467. Module V, Section 1.2.2, Containment Systems. Number and specifications for containers.

To demonstrate compatibility of waste with containers, the number of containers, sizes, and specifications should be provided to verify compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.172. Describe how specific containers are resistant to the specific types of wastes that will be managed at the AHCF.

468. Module V, Section 1.2.2, Containment Systems. Container storage area design.

Provide drawings for container storage areas that adequately demonstrate compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.175 and 20.4.1.900 NMAC incorporating 40 CFR 270.15(a). A description of existing topography around the AHCF is insufficient.

469. Part 2, Section 1.1.2, Containment Systems. Removal of accumulated liquids.

Provide a description of the time period that qualifies as “**as soon as practicable**” in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(5). This time period must be sufficient to prevent overflow of the containment system.. It should be clarified that the procedures, equipment, and personnel required to remove accumulated liquids are available to ensure that overflows do not occur.

470. Module V, Section 1.2.2, Containment Systems. Design and operation of container storage areas.

Liquids that accumulate in spill pallets or sumps must be analyzed and removed according to

20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(5). The statement that accumulated liquids “**may be sampled and analyzed as needed**” is insufficient.

471. Module V, Section 1.2.2, Containment Systems. Test for free liquids.

Provide a description of the tests that will be performed to test for free liquids in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.15(b)(1).

472. Module V, Table E-1. Emergency Equipment. Sprinklers and fire hydrants.

Specify whether sprinklers are automatic or manual, and specify whether the fire hydrants are capable of providing adequate water and pressure required to supply water hose streams in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.32(d). Also, the specific locations of telephones and intercoms should be presented.

473. Appendix E. Contingency Plan. Arrange to familiarize local authorities with facility.

Arrangements to familiarize local police, fire departments, and emergency response teams with the facility must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(1).

474. Appendix E. Contingency Plan. Arrange to familiarize local hospitals.

Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from a fire, explosion, or release must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(4).

475. Part 2, Section 1.1.6.6. Contamination of Personnel. Procedures used to prevent contamination of personnel.

Describe procedures or safety plans used to prevent or eliminate the possibility of contamination of personnel in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(8)(vi).

476. Part 2, Section 1.1.3. Requirements for Ignitable, Reactive, and Incompatible Waste. Designation of safe areas and posting of hazards.

The owner/operator must designate safe areas for smoking and open flames and post signs where hazards exist in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(9) and 40 CFR 264.17(a). Section 1.1.3 states: “**Ignitable or reactive waste is separated and protected from open flames, welding activities, hot surfaces, frictional heat, sources of sparks, spontaneous ignition, and radiant heat.**” If these hazards exist within waste management areas at the AHCF, they should be confined to safe areas and hazard signs should be posted.

477. Part 2, Appendix F.4 and F.4.3. Closure Plan. How the final closure will be conducted.

In Section F.4 describes a phased closure approach where sampling and analysis activities will be conducted if RCRA constituents were known to have been released from the facility. Regardless of whether or not a release has been documented, NMED requires that building floors and other storage areas be decontaminated (washed) and a radiological screening be completed prior to closure. This section should describe decontamination procedures that will be conducted to meet the closure standards, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.111 and Part 264.112.

478. Part 2, Appendix F. Closure Plan. Methods for removing, transporting, treating, storing, or disposing.

Describe the methods that will be used to remove, transport, treat, store, or dispose of all hazardous waste, and identify all hazardous waste management unit(s) to be used, if applicable, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.11 and Part 264.112.

479. Module V, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 1 standards.

It is stated that non-radioactive non-remediation wastes will be stored in primary containers that **1) have a design capacity of less than 0.1 cubic meter (m³) or 2) are U.S. Department of Transportation-approved and have a design capacity greater than 0.1 m³ but less than 0.46 m³.** Describe how air pollution from these containers will be controlled in accordance with Container Level 1 standards as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(b)(1).

480. Module V, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 2 and 3 standards.

Because there is no description for how Container Level 2 and 3 standards will be complied with, it is assumed that the conditions that require Container Level 2 and 3 will not take place at the AHCF during the life of the RCRA Part B Permit as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086. This section should clarify whether or not Container Level 2 or 3 standards will be required at the AHCF. If Container Level 2 or 3 standards will be required during the life of the RCRA Permit, a complete description of how applicable standards will be complied with should be provided.

481. Module V, Section 1.2.6.6. Preventing releases to the atmosphere. Container covers.

It is stated that “container covers are **“maintained in closed and sealed conditions.”** Clarify whether or not covers meet design requirements to form a continuous barrier that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(c).

482. Module V, Section 1.2.1 Inspections. Reporting of non-compliances.

As required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1090, for each occurrence when hazardous waste is placed in the hazardous waste management unit in noncompliance with 20.4.1.500 NMAC incorporating 40 CFR Part 264.1082(c)(1) and (c)(2), the owner or operator shall submit a written report within 15 days of the time that the owner or operator becomes aware of the occurrence. These reporting requirements should be set forth in Module V of the RCRA Part B Permit.

483. Module V, Section 1.2.6.6. Preventing releases to the atmosphere. Ventilation and Exhaust Systems.

Clarify whether the described ventilation and exhaust systems at the AHCF are intended to satisfy any requirements of RCRA.

484. Module V, Attachment G. Treatment Plan. Proposed treatment technologies.

The Treatment Plan for the AHCF lists four treatment technologies. The AHCF is being permitted as a container storage area, and as such, treatment in containers is appropriate under RCRA. Clarify that the proposed treatment technologies will be performed at the AHCF in containers, and in doing so, these treatment technologies do not require permitting under 20.4.1.500 NMAC incorporating 40 CFR Part 264 Subpart X.

485. Part 2, Section 1.1.6.6. Preventing Releases to the Atmosphere. Wastes subject to Part CC.

It is stated that a determination of volatile organic concentration will be made to establish whether wastes are above the 500 ppmw standard provided in 20.4.1.500 NMAC incorporating 40 CFR 264.1082, and that the generator “**documents it for that waste stream.**” Provide a description of where in the operating record that this documentation will be made available.

486. Part 2, Section 1.1.6.6. Tanks. Lack of information regarding tank standards.

Because no information is provided regarding tanks, it is assumed that no hazardous waste tanks will be managed at the AHCF according to 20.4.1.500 NMAC incorporating 40 CFR Part 264 Subpart J. Please clarify that tanks will not be managed at the AHCF.

487. Module V, Section 1.2.2, Containment Systems. Containers holding only wastes that do not contain free liquids.

Explain how it can be verified that containers determined to be holding only wastes that do not contain free liquids actually do not contain free liquids as required by 20.4.1.500 NMAC incorporating 40 CFR 264.175(c).

MODULE VI: RSI COMMENTS ON THE MANZANO STORAGE BUNKERS

488. Module VI, Section 1.2.2, Containment Systems. Nonreactive containers.

The statement that containment systems are “**sufficiently impervious**” is insufficient. The specific container materials used should be presented and demonstrated not to react with the specific types of wastes stored in the containers as required by 20.4.1.500 NMAC incorporating 40 CFR 264.172 and 20.4.1.900 NMAC incorporating 40 CFR 270(15)(a).

489. Module VI, Section 1.2.2, Containment Systems. Number and specifications for containers.

To demonstrate compatibility of waste with containers, the number of containers, sizes, and specifications should be provided to verify compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.172. Describe how specific containers are resistant to the specific types of wastes that will be managed at the MSB.

490. Module VI, Section 1.2.2, Containment Systems. Container storage area design.

Provide drawings for container storage areas that adequately demonstrate compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.175 and 20.4.1.900 NMAC incorporating 40 CFR 270.15(a). A description of existing slope of earthen materials around the MSB is insufficient.

491. Part 2, Section 1.1.2, Containment Systems. Removal of accumulated liquids.

Provide a description of the time period that qualifies as “**as soon as practicable**” in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(5). This time period must be sufficient to prevent overflow of the containment system.. It should be verified that the procedures, equipment, and personnel required to remove accumulated liquids are available to ensure that overflows do not occur.

492. Module III, Section 1.2.2, Containment Systems. Design and operation of container storage areas.

Liquids that accumulate in spill pallets or sumps must be analyzed and removed according to 20.4.1.900 NMAC incorporating 40 CFR 270.15(a)(5). The statement that accumulated liquids “**may be sampled and analyzed as needed**” is insufficient.

493. Module III, Section 1.2.2, Containment Systems. Test for free liquids.

Provide a description of the tests that will be performed to test for free liquids in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.15(b)(1).

494. Module VI, Appendix E. Contingency Plan. Arrange to familiarize local authorities with facility.

Arrangements to familiarize local police, fire departments, and emergency response teams with the facility must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(1).

495. Module VI, Appendix E. Contingency Plan. Arrange to familiarize local hospitals.

Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from a fire, explosion, or release must be made in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.37(a)(4).

496. Part 2, Section 1.1.6.6. Contamination of Personnel. Procedures used to prevent contamination of personnel.

Describe procedures or safety plans used to prevent or eliminate the possibility of contamination of personnel in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(8)(vi).

497. Part 2, Section 1.1.3. Requirements for Ignitable, Reactive, and Incompatible Waste. Designation of safe areas and posting of hazards.

The owner/operator must designate safe areas for smoking and open flames and post signs where hazards exist in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(9) and 40 CFR 264.17(a). Section 1.1.3 states: “**Ignitable or reactive waste is separated and protected from open flames, welding activities, hot surfaces, frictional heat, sources of sparks, spontaneous ignition, and radiant heat.**” If these hazards exist within waste management areas at the HBWSF, they should be confined to safe areas and hazard signs should be posted.

498. Part 2, Appendix F.4 and F.4.3. Closure Plan. How the final closure will be conducted.

In Section F.4 describes a phased closure approach where sampling and analysis activities will be conducted if RCRA constituents were known to have been released from the facility. Regardless of whether or not a release has been documented, NMED will require that building floors and other storage areas be decontaminated (washed) and a radiological screening be conducted prior to closure. This section should describe decontamination procedures that will be conducted to meet the closure standard as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.111 and Part 264.112.

499. Part 2, Appendix F. Closure Plan. Methods for removing, transporting, treating, storing, or disposing.

Describe the methods that will be used to remove, transport, treat, store, or dispose of all hazardous waste, and identify all hazardous waste management unit(s) to be used, if applicable, as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.11 and Part 264.112.

500. Module IV, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 1 standards.

It is stated that non-radioactive non-remediation wastes will be stored in primary containers that **1) have a design capacity of less than 0.1 cubic meter (m³) or 2) are U.S. Department of Transportation-approved and have a design capacity greater than 0.1 m³ but less than 0.46 m³.** Describe how air pollution from these containers will be controlled in accordance with

Container Level 1 standards as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(b)(1).

501. Module IV, Section 1.2.6.6. Preventing releases to the atmosphere. Container Level 2 and 3 standards.

Because there is no description for how Container Level 2 and 3 standards will be complied with, it is assumed that the conditions that require Container Level 2 and 3 will not take place at the MSB during the life of the RCRA Part B Permit as provided in 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086. This section should clarify whether or not Container Level 2 or 3 standards will be required at the MSB. If Container Level 2 or 3 standards will be required during the life of the RCRA Permit, a complete description of how applicable standards will be complied with should be provided.

502. Module III, Section 1.2.6.6. Preventing releases to the atmosphere. Container covers.

It is stated that “container covers are **“maintained in closed and sealed conditions.”** Clarify whether or not covers meet design requirements to form a continuous barrier that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere as required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1086(c).

503. Module IV, Section 1.1.1 Inspections. Reporting of noncompliances.

As required by 20.4.1.500 NMAC incorporating 40 CFR Part 264.1090, for each occurrence when hazardous waste is placed in the hazardous waste management unit in noncompliance with 20.4.1.500 NMAC incorporating 40 CFR Part 264.1082(c)(1) and (c)(2), the owner or operator shall submit a written report within 15 days of the time that the owner or operator becomes aware of the occurrence. These reporting requirements should be set forth in Module IV of the RCRA Part B Permit.

504. Part 2, Section 1.1.6.6. Preventing Releases to the Atmosphere. Wastes subject to Part CC.

It is stated that a determination of volatile organic concentration will be made to establish whether wastes are above the 500 ppmw standard provided in 20.4.1.500 NMAC incorporating 40 CFR Section 264.1082, and that the generator **“documents it for that waste stream.”** Provide a description of where in the operating record that this documentation will be made available.

505. Part 2, Section 1.1.6.6. Tanks. Lack of information regarding tank standards.

Because no information is provided regarding tanks, it is assumed that no hazardous waste tanks will be managed at the RMWMF according to 20.4.1.500 NMAC incorporating 40 CFR Part 264 Subpart J. Please clarify that tanks will not be managed at the MSB.

506. Module VI, Section 1.2.2, Containment Systems. Containers holding only wastes that do

reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed.

512. LTTD Temporary Authorization Request, April 1998. Potential pathways of exposure of humans or environmental receptors.

The LTTD permit application should Provide a description of any potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and the potential magnitude and nature of such exposures as required by 20.4.1.900 NMAC incorporating 40 CFR 270.23(c).

513. LTTD Temporary Authorization Request, April 1998. Demonstration of effectiveness.

The LTTD permit application should provide a demonstration of effectiveness of the treatment based on laboratory or field data as required by 20.4.1.900 NMAC incorporating 40 CFR 270.23(d).

514. LTTD Temporary Authorization Request, April 1998. Prevention of releases to groundwater or the subsurface.

The LTTD permit application should demonstrate that appropriate steps will be taken to prevent releases that may have adverse effect on human health or the environment due to migration of waste constituents in the ground water or subsurface environment as required by 20.4.1.500 NMAC incorporating 40 CFR 264.601(a).

515. LTTD Temporary Authorization Request, April 1998. Prevention of releases to surface water or wetlands.

The LTTD permit application should demonstrate that appropriate steps will be taken to prevent releases that may have adverse effect on human health or the environment due to migration of waste constituents in surface water, wetlands, or on the soil surface as required by 20.4.1.500 NMAC incorporating 40 CFR 264.601(b).

516. LTTD Temporary Authorization Request, April 1998. Prevention of releases to the air

The LTTD permit application should demonstrate that appropriate steps will be taken to prevent releases that may have adverse effect on human health or the environment due to migration of waste constituents in the air as required by 20.4.1.500 NMAC incorporating 40 CFR 264.601(c).

517. LTTD Temporary Authorization Request, April 1998. Monitoring, analysis, inspection, response, reporting, and corrective action.

The LTTD permit application should demonstrate that monitoring, analysis, inspection, response, reporting, and corrective action activities will be performed as required by applicable sections of 20.4.1.500 NMAC incorporating 40 CFR 264.601, 40 CFR 264.15, 40 CFR 264.33, 40 CFR 264.75, 40 CFR 264.76, 40 CFR 264.77, and 40 CFR 264.101.

not contain free liquids.

Explain how it can be verified that containers determined to be holding only wastes that do not contain free liquids actually do not contain free liquids as required by 20.4.1.500 NMAC incorporating 40 CFR Section 264.175(c).

507. Module VI, Section 1.2.6.1, Containment Systems. Preventing hazards during unloading operations.

The slope of the access tunnels in the Type D storage bunkers pose a hazard when transporting wastes through the tunnels. Explain how waste containers will be controlled properly in the tunnels and transported without rolling down the slope and posing a hazard as required by 20.4.1.900 NMAC incorporating 40 CFR Section 270.14(8)(i).

508. Module VI, Section 1.2.6.1, Containment Systems. Preventing hazards during unloading operations.

At the Manzano Storage Bunkers, it is possible for a worker to become locked inside a bunker chamber if another worker closes a chamber door behind him. If this happens, there are no means for a worker inside the bunker to communicate with anyone outside the bunker. Describe procedures that are used to avoid this hazard, as required by 20.4.1.900 NMAC incorporating 40 CFR Section 270.14(8)(i).

LOW TEMPERATURE THERMAL DESORPTION UNIT (LTTD)

509. LTTD Temporary Authorization Request, April 1998. Submitted as a permit application.

NMED approved a Temporary Authorization for the LTTD unit on April 6, 1998 that is no longer effective because of the substantial time period that has passed since its approval. The current request for a temporary authorization is denied because there is now sufficient time to permit the unit. The request for a temporary authorization should be re-submitted as an application to permit and operate a Subpart X miscellaneous unit as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart X.

510. LTTD Temporary Authorization Request, April 1998. Demonstrate that the unit is not an incinerator.

The LTTD permit application should adequately demonstrate that the proposed LTTD is not an incinerator (does not utilize controlled flame combustion) and therefore is not subject to 20.4.1.500 NMAC incorporating 40 CFR Subpart O.

511. LTTD Temporary Authorization Request, April 1998. Detailed description of the unit.

The LTTD permit application should provide a detailed description of the unit in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.23(a) that includes physical characteristics, materials of construction, and dimensions of the unit as well as detailed plans and engineering

518. LTTD Temporary Authorization Request, April 1998. Monitoring, analysis, inspection, response, reporting, and corrective action.

The LTTD permit application should demonstrate that monitoring, analysis, inspection, response, reporting, and corrective action activities will be performed as required by applicable sections of 20.4.1.500 NMAC incorporating 40 CFR 264.601, 40 CFR 264.15, 40 CFR 264.33, 40 CFR 264.75, 40 CFR 264.76, 40 CFR 264.77, and 40 CFR 264.101.

519. LTTD Temporary Authorization Request, April 1998. Air emission standards for equipment leaks.

The LTTD permit application should demonstrate that requirements for equipment leaks will be managed according to applicable sections of 20.4.1.500 NMAC incorporating 40 CFR Subpart BB. Or, the LTTD permit application should confirm that the LTTD unit is exempt from Subpart BB operational requirements.

520. LTTD Temporary Authorization Request, April 1998. General facility standards.

The LTTD permit application should explain how general facility standards will be satisfied as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart B.

521. LTTD Temporary Authorization Request, April 1998. Preparedness and prevention.

The LTTD permit application should explain how preparedness and prevention standards will be satisfied as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart C.

522. LTTD Temporary Authorization Request, April 1998. Contingency plan and emergency procedures.

The LTTD permit application should explain how contingency plan and emergency procedure standards will be satisfied as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart D.

523. LTTD Temporary Authorization Request, April 1998. Manifest system, record keeping and reporting.

The LTTD permit application should explain how applicable manifest system, record keeping, and reporting requirements will be satisfied as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart E.

524. LTTD Temporary Authorization Request, April 1998. Closure.

The LTTD permit application should explain how requirements for closure and post-closure will be satisfied as required by 20.4.1.500 NMAC incorporating 40 CFR Subpart G or 20.4.1.900 NMAC incorporating 40 CFR 270.1.