SNL 2003 Enclosures A-E

Department of Energy
National Nuclear Security Administration
Sandia Site Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

FEB 14 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

RECEIVED
FEB 2003
Hazardous Waste Bureau

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Dr. East, Bldg 1
Santa Fe, NM 87505

Dear Mr. Bearzi:

Enclosed is one of two NMED copies of the responses to 358 of the comments included in Notice of Deficiency HWB-SNL-02-002 for Sandia National Laboratories, EPA ID NM5890110518. Per our verbal agreement, the second NMED copy is being sent directly to the Sandia Staff Manager.

On October 15, 2002, the US Department of Energy/National Nuclear Security Administration (DOE) and Sandia Corporation (Sandia) received the Notice of Deficiency (NOD). It includes a set of 524 comments that list the issues DOE/Sandia should address and the additional information that DOE/Sandia should provide to NMED before NMED can make a determination on the administrative and technical completeness of the Comprehensive Part B Permit Request (Part B) for RCRA-regulated waste storage and treatment operations at Sandia National Laboratories/New Mexico (SNL/NM).

On December 13, 2002, NMED granted DOE/Sandia's request for an extension to the deadline for responding to the comments, and accepted DOE/Sandia's proposed schedule for responses. In accordance with the schedule, DOE/Sandia hereby submits responses to those comments listed as due on February 18, 2003 and some of the comments listed as due on March 31, 2003.

DOE/Sandia and NMED have met several times since October 2002 to discuss the comments and issues involved in some areas of Parts 2, 3, and 5. The responses included in this submittal reflect the DOE/Sandia positions stated in the meetings.

The individual NMED comments are included as Attachments A and B to this letter, together with DOE/Sandia's responses. The NMED comments pertain to Parts 2, 3, and 5 of the Part B. DOE/Sandia's responses to Part 5 are included in Attachment A. DOE/Sandia's responses to Parts 2 and 3 are included in Attachment B.

SNL 1017

FEB 14 2003

Attachment A: Responses to NMED Comments on Part 5 of the Part B
DOE/Sandia have responded to comments, but have not provided replacement pages for Part 5 of the Part B submittal. Part 5 contains the Corrective Action Management (CAMU) permit application and the CAMU treatment unit permit applications. As explained in the response to comment 95, the CAMU is now undergoing closure under an updated Closure Plan, approved by the NMED on November 22, 2002. The NMED approval contained one condition, requiring revision and resubmittal of a Post-Closure Care Plan. The Post-Closure Care Plan is under development and will address all NMED Part B comments related to post-closure care. DOE and Sandia propose to submit the CAMU Post-Closure Care Plan in 2003 and will request that this submittal be substituted in the Part B renewal package as the CAMU permit application. As explained in the responses to comments 96 and 97, CAMU treatment operations (low-temperature thermal desorption [LTTD] and stabilization) are now complete and both units are undergoing closure as approved by the NMED. A request to withdraw the permit applications for the LTTD unit and the stabilization unit will be submitted following completion of closure for these units.

Attachments B, C, and D: Responses to NMED Comments on Parts 2 and 3 of the Part B
DOE/Sandia responses to NMED comments on Parts 2 and 3 of the Part B are included in Attachment B. Sections of Parts 2 and 3 of the Part B that been revised in response to the NMED comments are included as Attachments C and D. Attachment C contains the revised text and figures (except for eight topographic maps) in redline-strikeout format to highlight the revisions. Section D contains clean copies of the text and figures, including the eight topographic maps.

Attachment E: Floodplain Maps
In response to NMED Comment 4, DOE/Sandia are submitting one copy of the set of two floodplain maps used in preparing the Comprehensive Part B Permit Request.

March 31, 2003 Submittal
DOE/Sandia will respond to the remaining NMED comments by March 31, 2003 in accordance with the schedule approved by NMED on December 13, 2002. In order to respond to those remaining comments, DOE/Sandia will be revising text and figures in Parts 2 and 4, including further revisions to some of the text and figures included in this submittal.

If you have any questions, please contact John Gould at (505) 845-6089.

Sincerely,

Karen L. Boardman

Karen L. Boardman
Manager

Enclosure

FEB 1 4 2003

cc w/enclosure:
M. Gardipe, AL, ERD
W. Moats, NMED-HWB (via Certified Mail)
J. Parker, NMED-OB
R. Kennett, NMED-OB
L. King, EPA Region 6 (2 copies via Certified Mail)

cc w/o enclosure:
J. Estrada, SSO-AIP
K. Thomas, EPA Region 6
D. H. Blanton, SNL, MS 0186, 3000
E. D. Krauss, SNL, MS 0141, 11300
P. B. Davies, SNL, MS 0701, 6100
L. A. West, SNL, MS 1114, 3100
P. D. Yourick, SNL, MS 1050, 3120
F. B. Nimick, SNL, MS 1087, 6132
J. J. Thompson, SNL, MS 1151, 3125
A. S. Reiser, SNL, MS 1151, 3125
M. J. Davis, SNL, MS 1087, 6132
CAMU Operational Record, SNL, MS 1151, 6134
SNL ISS Records Center, MS 0651, 9612
SSO Legal File

Response to Comments in Notice of Deficiency HWB-SNL-02-002 for Sandia National Laboratories, EPA ID #NM5890110518

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

2/13/03

Donald H. Blanton
Vice President, Human Resources and Protection Services
Sandia Corporation
Albuquerque, New Mexico
Co-Operator

Date signed

Karen L Boardman

2·13·03

Karen L. Boardman
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Owner and Co-Operator

Date signed

Attachment A

DOE/Sandia Response to NMED Comments on Part 5

Task # HWB-SNL-02-002

Comments 95 – 324

SNL 1017

Comment Number	NMED Comment	DOE/Sandia Response
	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".	The CAMU completed treatment operations in January 2003 and is now undergoing closure under a revised Closure Plan, approved by the NMED on November 22, 2002. The NMED approval contained one condition, requiring revision and resubmittal of a Post-Closure Care Plan. The Post-Closure Care Plan is under development and will address all NMED Part B comments related to post-closure care. Because staging, treatment and containment operations have been completed, many comments on the CAMU permit application are no longer relevant. DOE and Sandia propose to submit the CAMU Post-Closure Care Plan in 2003 and request that this submittal be substituted in the Part B renewal package as the CAMU permit application. Consequently, this comment is no longer relevant.
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.	As noted in NMED Comment 509, the NMED has determined that the temporary authorization is no longer valid and that a separate permit application for LTTD operation is required. Based on this direction, DOE and Sandia transmitted a newly prepared Class 2 permit modification request for operation of the LTTD unit on June 11, 2002. On September 24, 2002, the NMED transmitted a final approval, with conditions. LTTD operations are now complete and the unit is undergoing closure as approved by the NMED. Because treatment has concluded, we are not including a permit application for the unit. A request to withdraw the LTTD unit from the Part B submittal will be transmitted following completion of the closure process.
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".	Stabilization unit operations are now complete and the unit is undergoing closure as approved by the NMED. Because treatment has concluded, we are not including revisions to the permit application for the unit. A request to withdraw the stabilization unit from the Part B submittal will be transmitted following completion of the closure process.
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".	Please see response to comment 95.
99	List of Figures, page vi: Figure 3-1 is missing. Please provide the figure.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	The 40-ton load limit is correct.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	The support structures and functions remaining after completion of CAMU closure will be described in detail in the post-closure care plan, which is currently in progress.
107 (13)	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.	The subject modifications, as approved by NMED, were incorporated into the current CAMU permit and implemented during treatment operations. Also, please see response to comment 95.
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. (a) This table should be updated to reflect currently known contaminants and contaminant levels. (b) 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.	The subject modifications, as approved by NMED, were incorporated into the current CAMU permit. Also, please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	All current permits are listed in Appendix A of the Part A Permit.
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.	The subject modifications, as approved by NMED, were incorporated into the current CAMU permit and implemented during treatment operations. Also, please see response to comment 95.
111	Section 3.1.1a, Treatment Standards for Remediation Waste, page 3-12: This section should be combined with section 3.1.1.	The subject modifications, as approved by NMED, were incorporated into the current CAMU permit and implemented during treatment operations. Also, please see response to comment 95.
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.	SNL/NM site-specific data is a compilation of NMED-approved background values.
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".	Please see response to comment 95.
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".	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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".	Please see response to comment 95.
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.	The subject modifications, as approved by NMED, were incorporated into the current CAMU permit and implemented during treatment operations. Also, please see response to comment 95.
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.	Please see response to comment 95.
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; ...".** (a) What are the threshold values for characteristically hazardous waste (reference the appropriate table(s) or regulations)? (b) 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.	Please see response to comment 95.
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; ...".** (a) What are the threshold values for characteristically hazardous waste (reference the appropriate table(s) or regulations)? (b) Also, please change the title of the bullet to read "Characteristic Hazardous Waste".	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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".	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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).	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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".	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	The requested revisions will be incorporated into the post-closure care plan.
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.	The requested update will be incorporated into the post-closure care plan.
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.	The requested update will be incorporated into the post-closure care plan.
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".	The working pressure of the 10-inch pipe is not applicable because the pipe is slotted, serves as a conduit for the smaller 4-inch pipe, and is not exposed to internal pressure.
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.	The requested update will be incorporated into the post-closure care plan.
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".	The requested revision will be incorporated into the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
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.	The results of the inspection are contained in the CAMU Containment Cell Construction Quality Assurance Report – Phase II Subsurface Components (SNL/NM April 1999). This QA Report was transmitted to the NMED on March 14, 2000 as an enclosure to the CAMU Quarterly Report for the period of October 1999 through December 1999. If requested by the NMED, DOE and Sandia will provide another copy of the inspection results.
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.	The high level sensor has been installed. Also, please see response to comment 95.
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.	The requested information will be incorporated into the post-closure care plan.
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".	The requested revision will be incorporated into the post-closure care plan.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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".	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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."	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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."	Please see response to comment 95.
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.	The requested distance will be incorporated into the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
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".	Please see response to comment 95.
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.	Please see response to comment 95.
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." Please provide information on the administrative and operational controls.	Please see response to comment 95.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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.	The requested information will be incorporated into the post-closure care plan.
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."	Please see response to comment 95.
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.	Please see response to comment 95.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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)."	Please see response to comment 95.
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.	The requested inspection forms will be provided in the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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).	The requested details will be included on the inspection form and provided in the post-closure care plan.
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).	The requested revision will be incorporated into the post-closure care plan.
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."	DOE/Sandia expresses concern that completion of remedial action within 3 days of discovery of a non-emergency problem would not be possible in some cases due to logistical implications. As a result, DOE/Sandia proposes to revise the subject sentence to indicate that remedial action will be *initiated* within 3 days of discovery of a non-emergency problem. The revision will be incorporated into the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
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)."	The requested revisions will be incorporated into the post-closure care plan.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
176	Section 3.5.3, Water Supplies, page 3-59: Provide information on the components of the water-supply system at the CAMU.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	The requested information will be incorporated into the post-closure care plan.
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.	Please see response to comment 95.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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 (107) above.	Please see response to comment 95.
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 (107) above.	Please see response to comment 95.
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.	Please see response to comment 95. In addition, the LCRS tanks continue to operate under less-than-90-day provisions of 20.4.1.300 NMAC, 40 CFR 262.34 and require no permit submittal.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 187.
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).	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
192	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.	Repeat of Comment 191.
	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).	Please see response to comment 95.
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).	Please see response to comment 187.
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."	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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".	Please see response to comment 95.
199	Section 4.1, Sampling Strategies, page 13: Indicate where sampling will be conducted.	Please see response to comment 95.
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.	Please see response to comment 95.
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).	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
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."	Please see response to comment 95.
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."	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
207	Section 7.2 Procedures for Ignitable, Reactive, and Incompatible Wastes, page 26: Explain where and how such wastes will be stored.	Please see response to comment 95.
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.	Please see response to comment 95.
	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.	The requested explanation will be incorporated into the post-closure care 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).	The requested information will be incorporated into the post-closure care plan.
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).	The requested information will be incorporated into the post-closure care plan.
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."	Please see response to comment 95.
213	General Comment: 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.	The requested information will be incorporated into the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	The requested information will be incorporated into the post-closure care plan.
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.	The requested information will be incorporated into the post-closure care plan.
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.	The requested information will be incorporated into the post-closure care plan.
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."	The requested revision will be incorporated into the post-closure care plan.

Comment Number	NMED Comment	DOE/Sandia Response
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. Explain how the Emergency Coordinator can coordinate a response to an emergency if he/she is not on-site	The requested explanation will be incorporated into the post-closure care plan.
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.	The requested justification will be incorporated into the post-closure care plan.
220	Section 2.3, Emergency Training, page 15: Explain how this training relates to that listed in Table 2-2.	The requested explanation will be incorporated into the post-closure care plan.
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".	The requested revision will be incorporated into the post-closure care plan.
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).	The requested justification will be incorporated into the post-closure care plan.
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."	The SNL/NM Records Center is currently located in Building 869.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	Following the submittal of the DOE/Sandia Part B renewal request, DOE and Sandia transmitted a CAMU permit modification request to update the Closure Plan prior to the start of closure (January 2003). The update was prepared after informal consultation with NMED staff to identify critical changes. The updated Closure Plan addressed NMED concerns and was approved on November 22, 2002, negating the need to address related comments on the earlier Part B submittal. As a result, a number of comments, including this comment, relating to the original CAMU Closure Plan have been superseded by the approval of the updated CAMU Closure Plan. Location in updated Closure Plan (CP): *Section 2.2, Page 14, 2nd Paragraph, 5th Sentence*
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.	Please see response to comment 224. Location in updated CP: *Subsections of Section 2.2, Pages 14 - 16*
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.	Please see response to comment 224. Location in updated CP: *Section 2.2.3, Page 16, 1st Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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). (1) 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. (2) 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. (3) 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.	(1) The updated CAMU Closure Plan includes text to indicate that all elements of the CAMU, except the decontamination pad and leachate collection tank, will be decontaminated or assessed as outlined in Comment 227. Also, please see response to comment 224. (2) The updated CAMU Closure Plan includes text indicating that the determinations of acceptable (or unacceptable) levels of contamination will be based upon NMED screening levels or risk assessment techniques. (3) Please see response to comment 224. <u>Location in updated CP:</u> *Section 4.0, Page 19, 1st Paragraph*
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 (227) and revise the Closure Plan accordingly.	The updated CAMU Closure Plan includes text addressing the requirements outlined in Comment 227. <u>Location in updated CP:</u> *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	A SAP is provided in the updated CAMU Closure Plan as an attachment. Location in updated CP: *Cited text is no longer present. SAP is included as Attachment 1 to the CP.*
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."	As outlined in Comment 227, the updated CAMU Closure Plan states that pad and wall surfaces will not be sampled but instead decontaminated. Location in updated CP: *No longer present*
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. (1) 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. (2) 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.	Please see response to comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan prescribes that wipe samples will be collected from the floors and walls of the Sprung structures and the surface of the treated waste staging area per TSCA requirements. Please see response to comment 230. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*
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".**	Please see response to comment 229. Location in updated CP: *No longer present*
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.**	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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."**	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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 basecoarse that can not be adequately decontaminated should be removed and properly disposed of. See also comment # 227.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
244	Section 4.3, Phase III – Decontamination, page 20, 2nd bullet: With regard to sampling concrete and asphalt, See comment # 227.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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."	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Also, please see response to comment 232. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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."	Please see response to comment 224. Location in updated CP: *Section 4.2.3, Page 24, 1st Paragraph*
250	Section 4.3, Phase III– Decontamination, page 22, 4th paragraph: See comments # 227, # 235, # 246 and # 249.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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."	Please see response to comment 224. Location in updated CP: *Section 4.4, Page 35, 1st Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3, Page 25, 3rd Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3, Page 25, 3rd Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3*
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".	The updated CAMU Closure Plan reflects a maximum transition slope of 4:1. Location in updated CP: *Section 4.3, Page 26, 2nd Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 30, 1st Paragraph*
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).	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 29, Gradation Requirements*
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".	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 29, 2nd Paragraph*
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. SNL should consider not using the wire mesh.	Wire mesh is no longer a component of the final cover system presented in the updated Closure Plan. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 29, 3rd Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 28, 1st - 3rd Paragraph*
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".	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 28, 1st Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 27, 4th Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.1, Page 27, 4th Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.2, Page 30*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.2, Page 30, 2nd Paragraph*
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".	It is agreed that this statement was confusing and consequently, has been removed from the updated Closure Plan. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
270	Table 4-1, page 31: a. The saturated hydraulic conductivity (Ks) for the native soil layer, as proposed (presumably 1.4 x 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 x 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.	Please see response to comment 224. Location in updated CP: *Section 3.4.2, Page 32, Table 4-1*
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.	A description of the operation and maintenance procedures that will be used to limit the growth of deep-rooted plants will be addressed in the post-closure care plan. Location in updated CP: *Section 4.3.3, Page 34, 2nd Paragraph*
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.	Please see response to comment 224. Location in updated CP: *Section 4.3.3, Page 34, 2nd Paragraph*
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.	Please see response to comment 257. Location in updated CP: *Section 4.3.3, Page 34, 3rd Paragraph*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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).	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Also, please see response to comment 232. Location in updated CP: *No longer present*
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.	As discussed in response to comment 229, a SAP is provided in the updated CAMU Closure Plan. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*
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.	Please see response to comment 229. Location in updated CP: *No longer present*
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."	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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)." Figures 6-1 and 6-2 should also be revised to reflect a grid spacing of 15 ft.	Sample locations for the treated waste staging area are identified in the updated CAMU Closure Plan. Location in updated CP: *No longer present*
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."	Sample collection depths for base-coarse gravel and ground-coarse gravel and ground surface sample locations are outlined in the updated CAMU Closure Plan. Location in updated CP: *No longer present*
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)."** (a) The word "may" is too vague. Indicate whether soil sampling will or will not follow the two cited FOPs. (b) Describe in more detail the basic procedures of the method(s) of soil sampling that will be employed.	(a) Based on the sampling approach negotiated with NMED, base-coarse gravel and ground-surface samples will be collected in accordance with FOP 94-52 as prescribed in the SAP. (b) Please see response to comment 229. Location in updated CP: *Attachment 1, Section 4.2, Page 10, 1st Paragraph*
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.	These procedures are no longer contained in the updated CAMU Closure Plan or SAP. Please see response to comment 229. Location in updated CP: *No longer present*

Comment Number	NMED Comment	DOE/Sandia Response
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *No longer present*
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.	Pertinent QA/QC sample information is now contained in the SAP. Location in updated CP: *No longer present*
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.	The subject sentence has been deleted from the updated Closure Plan. Location in updated CP: *Section 5.0, Page 36, 2nd Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 224. Location in updated CP: *Section 5.0, Page 36, Table 5-1*
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."	Please see response to comment 224. Location in updated CP: *Section 6.0, Page 37, 2nd Bullet*
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".	Please see response to comment 224. Location in updated CP: *Section 6.2, Page 38, 1st Paragraph*
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".	Please see response to comment 224. Location in updated CP: *No longer present*
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.	Please see response to comment 224. Location in updated CP: *Section 6.3, Page 38, 1st Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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.	It is agreed that the VZMS access tubes may not be useful for remediating a catastrophic failure of the CAMU monitoring or barrier systems. It was determined that the subject sentences were confusing and thus are not included in the updated CAMU Closure Plan. Location in updated CP: *No longer present*
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."	The subject sentence is not included in the updated CAMU Closure Plan. Location in updated CP: *No longer present*
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."	Please see response to comment 224. Location in updated CP: *Section 6.5, Page 42, 1st Paragraph*

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 224. Location in updated CP: *Section 6.5.4, Page 43, 1st and 2nd Paragraph*
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."	The updated CAMU Closure Plan includes the recommended statement. Location in updated CP: *Section 6.6, Page 44, 1st Paragraph*
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".	Please see response to comment 224. Location in updated CP: *No longer present*
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."	Please see response to comment 224. Location in updated CP: *Section 8.0, Page 44, 2nd Bullet*
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.	Please see response to comment 224. Location in updated CP: *Section 8.0, Page 44, 3rd Bullet*

Comment Number	NMED Comment	DOE/Sandia Response
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).	The updated CAMU Closure Plan includes a time extension for closure. If needed, another extension will be requested. Location in updated CP: *Section 5.0, Page 36*
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.	Please see response to comment 224. Location in updated CP: *Sections 4.3.2 and 4.3.3, Pages 30 - 35*
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.	Please see response to comment 224. Location in updated CP: *Sections 4.3.2 and 4.3.3, Pages 30 - 35*
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.	Please see response to comment 224. Location in updated CP: *Sections 4.3.2 and 4.3.3, Pages 30 - 35*
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.	Please see response to comment 224. Location in updated CP: *Section 6.5.3, Page 42*
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).	Please see response to comment 224. Location in updated CP: *Section 6.5.5, Page 42*
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.	The updated CAMU Closure Plan contains the sampling approach outlined in Comment 227. Location in updated CP: *General comment*
312	Comment on length of post-closure period: Suggest a reasonable time period for the length of post closure.	Please see response to comment 224. Location in updated CP: *Section 6.0, Page 37*
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.	The updated CAMU Closure Plan includes an updated table that outlines the type and frequency of vadose zone monitoring activities during the post-closure care period. This table will also be contained in the post-closure care plan. Location in updated CP: *Section 6.4.4, Page 41, Table 6-1*

Comment Number	NMED Comment	DOE/Sandia Response
	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.	Please see response to comment 95.
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.	Please see response to comment 95.
316	Section 1.0, Introduction, page 8, 1st bullet, states: "More rigorous and useful results". See comment 216. The subject bullet should be deleted.	Please see response to comment 95.
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 form the CWL or the CAMU. Because the subject statement is incorrect, it should be deleted.	Please see response to comment 95.
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 (7.0×10^{-6} to 7.9×10^{-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.	Please see response to comment 95.

Comment Number	NMED Comment	DOE/Sandia Response
319	Section 1.0, Introduction, page 9, 1st paragraph, 3rd sentence states: **"Unsaturated hydraulic conductivity values are typically in the range of 2.8 x 10^{-7} feet per day (1 x 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 x 10^{-10} or lower.	Please see response to comment 95.
	PART B PERMIT APPLICATION VOLUME III, PART 5 CORRECTIVE ACTION UNITS – QUALITY ASSURANCE PLAN FOR THE CAMU CONTAINMENT CELL – APPENDIX E	
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.	Please see response to comment 95.
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."	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.
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.	Please see response to comment 95.

Attachment B

DOE/Sandia Response to NMED Comments on Parts 2 and 3

Task # HWB-SNL-02-002

Comments
1-10, 53-57, 59-90,
326-344, 349-355, 358, 371-376, 384, 385,
418-424, 426-430, 432, 445-449, 452-456,
464, 466-469, 472-476, 486, 488-491, 494-497,
505, 507, and 508

Comment Number	NMED Comment	DOE/Sandia Response
	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 Attachment 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	The modules have been modified to eliminate redundant text and incorporate relevant parts of the attachments into the main text of each module, particularly with respect to: site description and information (formerly Attachment A), inspections (formerly Attachment C), training (formerly Attachment D), and contingency (formerly Attachment E). Attachment B in Module II will be incorporated into Appendix B of the General (site wide) Part B. The redundant parts of the attachments have been deleted. DOE/Sandia also added text to the General (site wide) Part B sections to match the format of the revised modules.
	VOLUME I, PART2 – 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.	a. Change made. b. DOE/Sandia added text and a table at the beginning of the General Part B (Part 2 of the comprehensive Part B permit request) to summarize all the information in the list except the last item. Information on waste quantities and types is already included in General Part A (Part 1 of the comprehensive Part B permit request). Note: DOE/Sandia also added text and a table at the beginning of Appendix A to capture and summarize the information relevant to the site-wide description in Appendix A.

Comment Number	NMED Comment	DOE/Sandia Response
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.	a. Additional discussion is included in Appendix A, Section A.2.1. b. Additional discussion is included in Appendix A, Section A.2.1. c. The KAFB gates are not shown on Figure A-2 because the scale of the map (necessitated by the size of KAFB) makes it difficult to see them. The KAFB South Gate is closed and no longer available. It is no longer mentioned in the text. The remaining KAFB gates are shown on Figure A-4 in Appendix A. d. The gate is shown on Figure A-7 in Appendix A.
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."	Change made.

Comment Number	NMED Comment	DOE/Sandia Response
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."	a. The US Army Corps of Engineers (COE) information pertinent to DOE/Sandia property on KAFB is a set of 2 maps (part of the set of 12 maps prepared for KAFB in 1979 that is referenced in Section A.4.3). DOE/Sandia will provide a set of the 2 maps to NMED. b. Change made.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Due to the large area of land included in KAFB, it is not feasible to include all of the information required in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) on a single topographic map. Therefore, the required information is included on one or more of the several topographic maps included in the application, as listed below. a. Land use in KAFB is shown on Figures A-2 and A-8 (formerly Figures A-9 and A-10) in Appendix A. b. Windroses are already shown on the individual Unit-specific topographic maps. DOE/Sandia have also added the windroses to Figure A-2 in Appendix A. All the windroses have been updated to reflect the most current data available. c. Fences are already shown on Figure A-2 in Appendix A. However, the scale of map (necessitated by size of KAFB) makes it difficult to see them. Gates have been added to Figure A-2 but they are also difficult to see due to the scale of the map. Note that fences and gates are already included on Unit-specific topographic maps. The scale of these maps makes items such as fences and gates more visible. d. Sanitary and storm sewers are shown on individual Unit topographic maps. The scale of Figure A-2 makes it difficult to include sewers on that figure. e. Buildings are already shown on Figure A-2. However, the scale of the map (necessitated by size of KAFB) makes it difficult to see them. Buildings are also included in the Unit-specific topographic maps. Sewers are addressed in item d. f. DOE/Sandia SWMUs on KAFB are already shown in Figure 1 in Volume II, Part 4 (a topographic map with the same scale and coverage as Figure A-2). They are shown on a separate figure for clarity, due to the large amount of information already shown on Figure A-2. SWMUs have been added to the topographic maps for individual Units.

Comment Number	NMED Comment	DOE/Sandia Response
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).	a. Change made. b. The CAMU has been deleted from Figure A-2 in Appendix A. It is addressed in Part 5 of the Comprehensive Part B Permit Request. c. SWMUs are shown on Figure 1 in Volume II, Part 4 (please see response to comment 5).
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	a. Well IP-3 has been relabeled, and Well IP-5 has been added to Figure A-2 in Appendix A. b. Figure A-2 shows the locations of withdrawal and injection wells in accordance with 20 NMAC 4.1.900/ 40 CFR 270.14(b)(19)(ix). Further information is not required for such wells. None of the Units included in this application are regulated units as defined in 20 NMAC 4.1.500/40 CFR 264.90(a)(2), and none are subject to the requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart F. None of the Units have groundwater monitoring wells associated with them. Thus, the requirement in 20 NMAC 4.1.900/40 CFR 270.14(c) to provide information about monitoring wells as part of the application is not applicable. Vadose zone monitoring systems associated with the CAMU are addressed in Part 5 of the application. Construction details for those systems were provided to NMED earlier. DOE/Sandia will provide copies of specific information from our files upon separate request by NMED to assist NMED in completing their files.
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.	The windroses have been added to Figure A-2 in Appendix A, and Figure A-8 has been deleted. The windroses continue to be shown on the individual Unit-specific topographic maps. All the windroses have been updated to reflect the most current data available.

Comment Number	NMED Comment	DOE/Sandia Response
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.	a. DOE/Sandia have added the areas of residential land use north of KAFB and the US Forest Service Withdrawn Area to Figure A-8 (formerly Figures A-9 and A-10) in Appendix A for information. Note that the areas outside KAFB and the Withdrawn Area are not within 1000 feet of the SNL/NM facility and thus are not included in the area subject to 20 NMAC 4.1.900/40 CFR 270.14(b)(19)(iv). Information about private land holdings and residences is included in areas of residential use. b. The information has been added to Figure A-2 in Appendix A. Residential areas within KAFB are within 1000 feet of one area of the SNL/NM facility. However, residential areas are not within 1000 feet of any SNL/NM RCRA-regulated waste management Units.
	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.	The information in Volume II, Part 3 has been deleted and replaced with the suggested text.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	DOE/Sandia note that 20 NMAC 4.1.500/40 CFR 264.176 specifies that ignitable and reactive wastes must be stored 50 feet from the property line. It does not require that: 1) wastes are stored 50 feet from the Unit boundary, or 2) the property line itself is fenced. Ignitable and reactive wastes are stored more than 50 feet from the SNL/NM facility property line, as stated in Section 1.1.2.2 (formerly Section 1.1.3) of the General Part B. The layout of each Unit is clearly shown on the topographic map included in the Unit-specific module. Of the SNL/NM RCRA-regulated waste management Units, the HWMF is located closest to the residential areas on KAFB. However, the nearest residential areas are more than one mile away, as described in Appendix A, Section A.5. The area immediately surrounding the HWMF is occupied by DOE/Sandia industrial operations and a parking lot. DOE/Sandia meet the requirements of 20 NMAC 4.1.500/40 CFR 264.176 and 20 NMAC 4.1.500/40 CFR 264.17 and provide adequate protection to the public with the current HWMF layout and operations, as reflected in the operating permit issued by NMED in 1992.
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.	The precautions taken to prevent accidental ignition or reaction of ignitable and reactive wastes are described in detail in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B, with additional information (as applicable) in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module. The discussion includes all of the items listed in 20 NMAC 4.1.500/40 CFR 264.17(a) and protection of water-reactive wastes.
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).	The precautions taken to prevent uncontrolled reactions are discussed in Section 1.1.2.2 (formerly Section 1.1.3) of the General Part B, with additional information (as applicable) in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module. The discussion includes all of the items listed in 40 CFR 264.17(b).
56	Describe the grounding procedures and use of static straps used during the transfer of liquids.	Grounding procedures are described in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B, with additional information (if applicable) in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module.
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.	Ignitable, reactive, and incompatible waste containers and storage areas are identified and labeled as described in Section 1.1.2.2 (formerly Section 1.1.3) of the General Part B. Additional information (if applicable) is included in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module.

Comment Number	NMED Comment	DOE/Sandia Response
59	Identify the methods employed for estimating the potential consequences of mixing different wastes.	The methods for estimating the potential consequences of mixing incompatible wastes are identified in Section 1.1.2.2 (formerly Section 1.1.3) of the General Part B, with additional information (if applicable) in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module.
60	Discuss how compatibility is determined.	Waste compatibility is determined as discussed in Section 1.1.2.2 (formerly Section 1.1.3) of the General Part B, with additional information (if applicable) in Section 1.2.2 (formerly Section 1.2.3) of each Unit-specific module.
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.	a. Potential sources of ignition and precautions are discussed in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B. This information is applicable to all of the Units. Any additional information that is applicable to an individual Unit is included in Section 1.2.2 (formerly Section 1.2.3) of that Unit-specific module. b. All the ignitable, reactive, and incompatible wastes managed at each Unit (except the TTF) are listed in the General Part A. (Part 1 of the application). Types of wastes to be treated at the TTF are listed in Module II. Note that Module II will undergo further revision in response to NMED comments. c. Please see response to comment 57.
	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.	Each Unit is surrounded by a fence. The gates and/or doors are locked when personnel are not present. When personnel are present and the gates and/or doors are not locked, access to each Unit is controlled through the procedures described in Section 2.1.1 (formerly Section A.2.1) of each Unit-specific module. These features and arrangements fully meet the requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) to "prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock" onto the RCRA-regulated waste management Units. In addition to the barriers to control entry to individual Units, KAFB is surrounded by a fence, and access is allowed only through monitored gates. The information in Section A.2.1 of Appendix A has been updated to describe the access.
	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.	The general site-wide inspection plan is presented in Appendix C. Detailed plans for each Unit are presented in Section 4 (formerly Attachment C) of each Unit-specific module.

Comment Number	NMED Comment	DOE/Sandia Response
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).	The general form already includes some details. Details of inspections conducted at each Unit are discussed in the inspection plans in Section 4 (formerly Attachment C) of each Unit-specific module. Each plan includes: the specific items, structures, and areas to be inspected; the inspection criteria; and inspection frequency. The basis and justification for inspection frequency are discussed in Section C.2 of Appendix C, and in Section 4 (formerly Attachment C) of each Unit-specific module.
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.	The form in Appendix C is an example of a typical form. Specific inspection criteria are included in each Unit-specific inspection plan (Section 4 [formerly Attachment C] in each module). The plans include specific items under each topic. The items and quantities of specific spill control equipment are not required on the form or in the plan. Because of the variation in waste quantities and individual items in each Unit, Unit personnel periodically evaluate the inventory of spill control supplies and adjust it as needed. DOE/Sandia choose not to list these items and quantities individually on the form or in the Unit-specific plans. However, both the form and plans indicate that expected quantities of such items are present and in good condition.
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.	The detailed inspection criteria are included in the Unit-specific inspection plans in Section 4 (formerly Attachment C) of each Unit-specific module.
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.	Remedial actions for equipment and structures are discussed in Appendix C, Section C.1.2. Remedial actions for containers and containment systems are discussed in Section 1.1.1 (formerly Section 1.1.2) of the General Part B and in Section 1.2.1 (formerly Section 1.2.2) of each Unit-specific module. Sandia personnel who are not Unit personnel perform inspections and testing of the fire protection systems. These activities are discussed in Section 1.1.3.2 (formerly Section 1.1.5.2) of the General Part B. Unit personnel perform a visual check of the fire protection systems, as described in the inspection plan in Section 4 (formerly Attachment C) of each Unit-specific module.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	Additional information is included in Appendix D. Please see response to comment 70.
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.	Additional information is included in Appendix D. Please see response to comment 70.

Comment Number	NMED Comment	DOE/Sandia Response
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.	a. Figures D-1 through D-9 in Appendix D describe job tasks for Unit personnel. Section D.3 describes the training program and how it meets the job tasks. b. 20NMAC 4.1 900/40 CFR 270.14(b)(12) does not require the names and qualification of training instructors be provided. Section D.4 (describing the training director) does specify that the Training Director is knowledgeable about RCRA-regulations and waste management operations employed at the Unit. The qualifications and duties of the Training Director are described in Figure D-1. c. 20NMAC 4.1 900/40 CFR 270.14(b)(12) does not require the presentation of an "organization structure", "lines of authority," nor the names of training personnel. Table D-2 identifies the general training for each job. This training is also captured on Figures D-1 through D-9. The general training curriculum is presented in Table D-1. The job titles used in Table D-2 are applicable to each Unit unless otherwise specified in Section 5 of each Unit-specific module. d. Already included in Section D.3, no change needed. Please see response to comment 72. e. As stated in the second paragraph of D.2, job specific training is provided according to the frequency established in Table D-1. As described in Figure D-1, the RCRA Training Director is required to ensure that required site-wide training is completed. f. Training records are described in Section D.6, and the location of the records is provided in Section 5 of each Unit-specific module. As indicated in Figure D-1, the RCRA Training Director in responsible for ensuring that all training records are being maintained. g. Job titles, descriptions, required skills, education and training are provided on Figures D-1 through D-9.
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.	Unit personnel at the TTF receive Unit-specific training in explosives safety and Unit operating procedures. These are described in Section 5 (formerly Attachment D) of Module II (TTF). Personnel at other Units receive the training described in Appendix D, as described in Section 5 of each Unit-specific module. Please see response to global (first) comment. Unit-specific Attachment Ds have been deleted, and the relevant information is included in Section 5 of each module. DOE/Sandia note that 20NMAC 4.1 900/40 CFR 270.14(b)(12) does not require that the information in Appendix D be provided on a "Unit-specific basis" but on a "facility" basis.

Comment Number	NMED Comment	DOE/Sandia Response
	Specific Comments:	
72	Section D-2 – New training requirements necessitated by changing compliance issues or activities should be reviewed annually.	Section D.2 already states that training content is reviewed annually and modified as necessary to incorporate regulatory changes
73	Section D-4 – Emergency-training requirements should be reviewed annually.	Section D.2 already states that training content is reviewed annually and modified as necessary to incorporate regulatory changes
	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.	Section 5 of the contingency plan has been completely revised to include lists of actions to be taken in response to various types of emergencies. The lists are in one section of the contingency plan; therefore, a table is not necessary.
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.	Please see response to comment 74.
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.	Please see response to comment 74.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	Change made.
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.	The descriptions of each Unit have been added to Section 6 (formerly Attachment E) of each Unit-specific module.
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.	The operating hours of each Unit are summarized in Table E-1 of the contingency plan. Table E-1 also indicates whether the Units are continuously staffed. Neither the HBWSF nor the MSB are routinely staffed; the staff are located at the RMWMF. The EC is notified when personnel are conducting activities at the HBWSF or MSB and is available by pager and portable radio. The EC and alternates are routinely available during operating hours of each Unit, as noted on each Unit-specific list of ECs. The Unit-specific lists of ECs and alternates are dated. 20 NMAC 4.1.500/40 CFR 264.52(d) requires that names, addresses, and phone numbers of ECs be included in the plan, and 20 NMAC 4.1.500/40 CFR 264.53(a) requires that the plan be maintained at the Unit. DOE/Sandia meet both of these requirements. The names and phone numbers of the ECs are available to all Unit personnel, but they are not posted near telephones.
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.	The training requirements for the EC are already included in Table D-2. Duties and qualifications for the EC are included in Figure D-3. Section E.3.1 states that the EC's authority to commit resources is granted through the department manager.
81	Section E.2 Contingency Plan Distribution, page SW-E-3: Provide the physical location of the SNL/NM Emergency Operations Center (EOC).	The EOC is located in Tech Area I, as noted in Table E-3.

Comment Number	NMED Comment	DOE/Sandia Response
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.	The duties of the EC are more clearly described in Section E.3.1 and in the lists of specific actions to be taken (Section 5). The duties of the IC are included in Section E.3.3 and in the lists of actions to be taken in response to emergencies (Section 5).
83	Section E.3.2 Emergency Response Groups, page SW-E-3: The last sentence is cut off.	The missing text is included in Section E.3.2.
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.	20 NMAC 4.1.500 /40 CFR 264.52(c) requires that the agreements be described, but does not require that copies of the agreements be provided in the application. The agreements are described in Section E.3.4. The KAFB Fire Department is the only outside support agency that will provide direct emergency services. As described in Section E.2, DOE/Sandia provide copies of the contingency plan to them. The other agencies listed in Section E.3.4 provide support for specific activities as directed by the Sandia IC. DOE/Sandia provide information regarding emergencies, injuries, and materials involved to those agencies at the time of service according to the terms of the support agreements. Unit personnel are instructed to obtain emergency services by contacting 911 or 505-844-0911, as listed in Table E.4.
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.	Table E-3 (formerly Table E-2) includes ownership and location of the equipment. In the Unit-specific modules, lists of emergency response equipment include: the equipment, location, and a discussion of capabilities. The lists have been clarified to add additional discussion and clarify locations as needed. While terminology such as "near exit" is not specific, DOE/Sandia believe it is appropriate to describe equipment that is located near all the exits. The exits are shown in figures entitled "Emergency Response and Access Information" (the figure number varies) in each Unit-specific module. Similarly, terminology such as "building-wide" is appropriate to describe the coverage provided by automatic fire sprinkler systems. Unit personnel are trained in implementation of the contingency plan (as described in Appendix D, Section D.5) and are familiar with each Unit where they work. Emergency equipment is listed in each Unit-specific module. Building diagrams showing equipment locations are not posted throughout the buildings. Sprinkler systems at each Unit are activated automatically. They cannot be activated manually. This is described in the equipment lists in each Unit-specific module.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Please see response to comment 74. Unit personnel implement the actions listed in Section E.5.
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).	Section E.3.5 has been combined with Section E.5.4. Section E.5.4 describes the actions to be taken to notify off-site parties and local authorities in accordance with 20 NMAC 4.1.500/40 CFR 264.56(d)(1). Such notifications will be made through the Sandia EOC using information provided by the IC and the EC at the Unit. DOE/Sandia will be available to assist local officials.
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).	Emergency notifications are described in Section E.5.4 and include notification to the National Response Center in accordance with 20 NMAC 4.1.500/40 CFR 264.56(d)(2). The EC will provide the information but may not personally make the notification.
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.	The list of actions to be taken during an evacuation has been revised to list specific steps. These actions include shutting down equipment and evacuating the area to a designated point for roll call. Unit personnel are trained in implementation of the contingency plan (as described in Appendix D, Section D.5) and are familiar with each Unit and the evacuation routes. Routes are not posted in the Units.
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.	Section E.8 has been moved to Section E.2. It includes a more detailed distribution list.
	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.	The address of the Records Center is included. Appendix H has been deleted and the text is now included in Section 9 of the General Part B.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	The additional area is not a RCRA-regulated WMA, and is therefore not discussed in the text. It is used for storage of equipment and non-RCRA-regulated waste oil. A description has been added for information to each figure where it appears.
328	There is a discrepancy between the numbers of buildings shown on the various figures presented for the HWM Facility. Correct this discrepancy.	The figures have been corrected to show the proper number of storage sheds along the east fence. Note that these sheds are not RCRA-regulated WMAs.
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.	The topographic map of the HWMF and surrounding areas is Figure 6 (formerly Figure A-4). It already shows an accurate layout of the buildings and other required features of the HWMF in accordance with 20 NMAC 4.1.900/40 CFR 270.14(b)(19). Other figures are included in the application to provide additional information. The other figures do not need to be drawn to scale. Please see response to comment 53.
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.	All of the figures that include the catchment pond have been revised to clearly show it.
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).	Surrounding land use is shown on Module I, Figure 6 (formerly A-4) and is discussed in Module I, Section 2.4 (formerly A.5). Additional information and discussion are included in Appendix A of the General Part B.
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.	Street names have been added to the figures. O Street is Hardin Blvd. Both names are now included on the figures and in the text.

Comment Number	NMED Comment	DOE/Sandia Response
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.	All of the information is included in the application. It is included in various places to minimize redundancy throughout the application. a. Unit status is listed in the Introduction and Overview (Part 1of the application) and in new Table 1 of the General Part B (Part 2 of the application.) b. Details about Unit location are included in Section 1 of Module I and on Figure 6 (formerly Figure A-4), the topographic map for the HWMF. c. The HWMF size is listed in new Table 1 of the General Part B. It is also included in the introduction of Module I. d. The activities conducted at the HWMF are listed in new Table 1 in the General Part B and in the introduction to Module I. e. All of the wastes listed in the General Part A (Part 1 of the application) are managed at the HWMF as specified in the introduction to Module I. f. Surrounding land use is discussed in Section 2.4 of Module I and in Appendix A, Section A.5.3.
	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.	Each cell and the packaging area include 7-inch-deep recessed floors covered with grating, as discussed in Section 1.1.1 (Building 959). Figure 3 has been clarified to note that all cells and the packaging area include these features.
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 by20.4.1.500 NMAC incorporating 40 CFR 264.175(b)(1).	The coating is an epoxy-based chemical-resistant coating that forms a protective barrier over the floor, as discussed in Section 1.1.1 (Building 959). The coating extends up the walls to the top of the grating in the recessed areas.
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.	The floors are sealed, as discussed in Section 1.1.2 (Building 958).
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).	Secondary containment calculations and associated storage capacities are included in each WMA description (Sections 1.1.1 through 1.1.3 of Module I). Drum capacities (based on secondary containment) are included in Sections 1.1.1 through 1.1.3 of Module I. Drum stacking arrangements are described in Section 1.3.2.2 of Module I.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Additional detail about building dimensions and secondary containment is included in Section 1.1.3 of Module I, demonstrating compliance with 20 NMAC 4.1.500/40 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.	The title of Module I Section 1.2.1 (formerly Section 1.2.2) has been revised to "Operation of Containment Systems" to match the content of the section. The containment systems are described in Section 1.1.
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 shelve. 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).	The shelves in Building 959 are not used to provide secondary containment. Unit personnel take precautions to prevent liquid accumulation on the shelves, as discussed in Section 1.2.1 (formerly Section 1.2.2).
341	Section 1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes See comments addressed under the General section.	Requirements for ignitable, reactive, and incompatible wastes are discussed in Section 1.1.2 of the General (site-wide) Part B and in Section 1.2.2 (formerly Section 1.2.3) of Module I. The discussion includes all items noted in comments 53 - 57 and 59 - 61.
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.	General features and procedures at all Units to prevent hazards (including hazards in unloading) are discussed in Section 1.1.4.1 (formerly Section 1.1.6.1) of the General Part B. Features and procedures to prevent hazards in unloading for the HWMF are described in Module I Section 1.2.4.1 (formerly 1.2.6.1). These include features and condition of the areas, and operating practices.

Comment Number	NMED Comment	DOE/Sandia Response
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.	General features and procedures to prevent hazards (including runoff and flooding) are discussed in Section 1.1.4.2 (formerly Section 1.1.6.2) of the General Part B. Features and procedures to prevent runoff and flooding at the HWMF are described in Section 1.2.4.2 (formerly 1.2.6.2) of Module I. These include surface elevation and slope, curbs, pavement, diversion around the facility, and the catchment pond.
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.	General features and procedures to prevent hazards (including contamination of water supplies) are discussed in Section 1.1.4.3 (formerly Section 1.1.6.3) of the General Part B. As noted in Section 1.2.4.3 (formerly 1.2.6.3) of Module I, Unit personnel use the features and procedures discussed in the General Part B. DOE/Sandia do not anticipate that RCRA-regulated waste management activities at the HWMF will affect the water supplies. Pressurized lines that are not affected by the industrial activities at the HWMF supply potable water for the HWMF.
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.	Aisle spacing and container storage configurations (including stacking height) are described in Section 1.3.2.2 for the storage areas at the HWMF. General requirements that DOE/Sandia considered in establishing the aisle spacing are described in Section 1.2.2.2 of the General Part B. Note that the aisle spaces at all SNL/NM Units meet the requirements of 20 NMAC 4.1.500/40 CFR 264.35: the aisles are adequate for movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area. In particular, the aisles are adequate for fully equipped fire protection and emergency response personnel to move about with equipment.
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.	Module I Section 2.1.1 (formerly Section A.2.1) includes a description of the emergency exit gate in the fence on the west side of the HWMF. The gate is also labeled on the Module I figures. It is locked and can only be opened from the inside. Security devices and procedures are discussed in Section 2.1.1 of Module I. Site-wide security devices and procedures are discussed in Appendix A, Section A.2. Warning signs are placed on the fence at locations that are visible, rather than at a specified spacing. The signs contain the warning in English and in Spanish, as discussed in Section 2.1.2 (formerly Section A.2.2).
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.	Additional Unit-specific information about the access road, traffic signs, and amount of traffic is provided in Module I, Section 2.2 (formerly Section A.3). Site-wide information about road construction and traffic is provided in Appendix A, Section A.3.

Comment Number	NMED Comment	DOE/Sandia Response
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.	HWMF spill control and decontamination equipment is listed in Table 4 of Module I, together with a description of equipment capabilities and storage location. Because of the variation in waste quantities and individual items in each Unit, Unit personnel periodically evaluate the inventory of spill control supplies and adjust it as needed. The contingency plan and inspection plan indicate that expected quantities of such items are present and in good condition.
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).	The HWMF fire protection system is described in detail in Section 1.2.3.1 (formerly Section 1.2.5.1) of Module I. Information about fire hydrants is included in Section 1.1.3.1 (formerly Section 1.1.5.1) of the General Part B in accordance with 20 NMAC 4.1.500/40 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).	Module II and all other modules have been revised in response to this comment and the global comment (first comment) about format. The revisions have eliminated most or all of the redundancy.
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.	DOE/Sandia agree that numbering the pages containing figures would be more convenient for readers and reviewers. However, the figures are not part of the text document. They are produced as individual files using different software, and they must be revised individually (a considerable effort) after every text change that affects page numbers. The figures are currently identified in a list of figures that is part of the table of contents at the front of each module or other section of text. This list (which DOE/Sandia will update when the text and/or figures are revised) provides accessible (although less convenient) information for readers who need to reference the figures.

Comment Number	NMED Comment	DOE/Sandia Response
	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.	a. The information is included in Module II, Section 2.2.2 (formerly A.3.2). b. The information is included in Module II, Section 1.2.4.1 (formerly 1.2.6.1). c. Typical estimated waste quantities are described in Module II, Section 2.2.2 (formerly Section A.3.2). d. Road composition and load-bearing capacity are described in Appendix A, Section A.3 and in Module II, Section 2.2.1 (formerly Section A.3.1).
	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]:	Much detail has been added to the inspection plan in Section 4 (formerly Attachment C) of Module II. The revised plan (consisting of the general material in Appendix C and the Unit-specific material in Module II) is similar to the plan in the current operating permit.

Comment Number	NMED Comment	DOE/Sandia Response
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.	The table with specific items and criteria for inspection is included in Section 4 (formerly Attachment C) of Module II. The table includes all items a-g.
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.	The inspection frequency is specified in the inspection plan in Section 4 of Module II.
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.	Wastes are typically treated in the TTF the same day that they are generated. The TTF is not a storage Unit. Any wastes stored in containers in Building 6715 are stored in compliance with the requirements of 20 NMAC 4.1.300/40 CFR 262.34 and are not subject to 40 CFR Part 264.
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.	Please see response to comment 374.
376	Provide a stand-alone security plan TTF similar to the plan in the current TTF operating permit.	A stand-alone security plan is not consistent with the format of the rest of the permit application. Therefore, the additional information (similar to the information in the current permit) is provided in Section 2.2 (formerly Section A.3) of Module II.

Comment Number	NMED Comment	DOE/Sandia Response
	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	Copies are maintained at the locations listed in the contingency plan (Appendix E), Section E.2.
385	describes a schedule of remedial action.	Actions to be taken in response to emergencies are listed in Section E.5 of the Plan (Appendix E).
	MODULE III: RSI COMMENTS ON THE RMWMF	
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.	The portable spill pallets meet the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-5) as discussed in Sections 1.1 and 1.2.1 (formerly Section 1.2.2) of Module III.
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.	DOE/Sandia use a wide variety of containers that are suitable for the wide variety of wastes managed at the RMWMF. The containers are described in Section 1.2.1 of the General (site-wide) Part B. As stated in Section 1.3.1 of Module III, any of the containers listed in the General Part B may be used at the RMWMF. Unit personnel follow the process discussed in Section 1.2.2.3 of the General Part B to evaluate the compatibility of wastes with containers in compliance with 20 NMAC 4.1.500/40 CFR 264.172.
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.	Please see response to comment 421 regarding secondary containment. The buildings do not provide secondary containment, thus drawings are not required. However, the buildings do provide protection from runon and direct precipitation for all of the wastes (liquid and solid) stored inside them. All precipitation is directed away from the entrances to each building by the slope of concrete pads and asphalt pavement as discussed in Sections 1.1 and 1.2.4.2 (formerly 1.2.6.2) of Module III. The topographic map (Figure 8) shows the contours. General drainage patterns are shown on Figure 10.
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.	The portable spill pallets used for secondary containment are discussed in Section 1.1 of Module III. The sumps in Building 6920 are discussed in Section 1.1.1 of Module III. The modular storage buildings and their secondary containment are discussed in Section 1.1.4 of Module III. All meet the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1) and 20 NMAC 4.1.900/40 CFR 270.15.

Comment Number	NMED Comment	DOE/Sandia Response
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).	Please see response to comment 421. Containers of liquid RCRA-regulated wastes are stored on grating above the containment, thus meeting the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(2) and 20 NMAC 4.1.900/40 CFR 270.15. The buildings provide protection from precipitation as discussed in the response to comment 420.
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).	As discussed in Section 1.1.5 of Module III, containers in the outdoor storage area are stored within transportainers. The transportainer floors are approximately 12 inches off the asphalt pavement, providing protection from runon and flooding. Secondary containment for liquid wastes is provided by spill pallets (discussed in Section 1.1)
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	Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery, as described in Section 1.2.1 (formerly Section 1.2.2) of Module III.
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.	Sprinkler systems are automatic, as described in Section 1.2.3.1 (formerly 1.2.5.1) of Module III. Fire hydrants meet the requirements of 20 NMAC 4.1.500/40 CFR 264.32(d) and are discussed in Section 1.1.3.1 (formerly Section 1.1.5.1) of the General Part B. Intercoms are not routinely used and have been deleted from Table 3. Telephone locations have been added to Table 3.
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).	As discussed in Section E.2 of the contingency plan (Appendix E), DOE/Sandia provides the KAFB fire department with a copy of the contingency plan. Mutual aid and support agreements with other support agencies and facilities are described in Appendix E, Section E.3.4.
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).	Please see response to comment 427. The mutual aid and support agreements with local hospitals include requirements for DOE/Sandia to provide information each time the agreements are invoked.

Comment Number	NMED Comment	DOE/Sandia Response
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).	The procedures are described in Section 1.1.4.5 (formerly 1.1.6.5) of the General Part B and meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(8)(v).
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.	Precautions to prevent accidental ignition or reaction are discussed in detail in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B. These precautions, which include no smoking and no open flames, are applicable to all Units. Additional precautions applicable to waste management operations at the RMWMF are discussed in Section 1.2.2 (formerly Section 1.2.3) of Module III.
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.	Wastes are not managed in tanks subject to 20 NMAC 4.1.500/40 CFR 264 Subpart J at SNL/NM, as stated in Section 1.0 of the General Part B.
	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).	Please see response to comment 446 regarding containers and compatibility. Portable spill pallets provide secondary containment as described in Section 1.1 of Module IV.
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.	DOE/Sandia use a wide variety of containers that are suitable for the wide variety of wastes managed at the HBWSF. The containers are described in Section 1.2.1 of the General (site-wide) Part B. As stated in Section 1.3.1 of Module IV, any of the containers listed in the General Part B may be used at the HBWSF. Unit personnel follow the process discussed in Section 1.2.2.3 of the General Part B to evaluate the compatibility of wastes with containers in compliance with 20 NMAC 4.1.500/40 CFR 264.172.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Portable spill pallets provide secondary containment for containers, as discussed in Section 1.1 of Module IV. The building does not provide secondary containment, thus drawings are not required. However, Building 6596 does provide protection from runon and direct precipitation for all of the wastes (liquid and solid) stored in the HBWSF. All precipitation is directed away from the doors by the slope of concrete pads and asphalt pavement as discussed in Sections 1.1 and 1.2.4.2 (formerly 1.2.6.2) of Module IV. The topographic map (Figure 5) shows the contours.
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).	The floor trenches and management of any liquid wastes that could be released to them are discussed in Section 1.2.1 (formerly 1.2.2) of Module IV.
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.	Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery, as described in Section 1.2.1 (formerly Section 1.2.2) of Module IV.
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.	Sprinkler systems are automatic, as described in Section 1.2.3.1 (formerly 1.2.5.1) of Module IV. Fire hydrants meet the requirements of 20 NMAC 4.1.500/40 CFR 264.32(d) and are discussed in Section 1.1.3.1 (formerly Section 1.1.5.1) of the General Part B. There are no intercoms or telephones in Building 6596. Personnel carry radios or mobile telephones, as described in Table 3.
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).	As discussed in Section E.2 of the contingency plan (Appendix E), DOE/Sandia provides the KAFB fire department with a copy of the contingency plan. Mutual aid and support agreements with other support agencies and facilities are described in Appendix E, Section E.3.4.
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).	Please see response to comment 453. The mutual aid and support agreements with local hospitals include requirements for DOE/Sandia to provide information each time the agreements are invoked.

Comment Number	NMED Comment	DOE/Sandia Response
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).	The procedures are described in Section 1.1.4.5 (formerly 1.1.6.5) of the General Part B and meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(8)(v).
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.	Precautions to prevent accidental ignition or reaction are discussed in detail in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B. These precautions, which include no smoking and no open flames, are applicable to all Units. Additional precautions applicable to waste management operations at the HBWSF are discussed in Section 1.2.2 (formerly Section 1.2.3) of Module IV.
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.	Wastes are not managed in tanks subject to 20 NMAC 4.1.500/40 CFR 264 Subpart J at SNL/NM, as stated in Section 1.0 of the General Part B.
	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).	Please see response to comment 467 regarding containers and compatibility. Portable spill pallets provide secondary containment as described in Section 1.1 of Module V.
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.	DOE/Sandia use a wide variety of containers that are suitable for the wide variety of wastes managed at the AHCF. The containers are described in Section 1.2.1 of the General (site-wide) Part B. As stated in Section 1.3.1 of Module V, any of the containers listed in the General Part B may be used at the AHCF. Unit personnel follow the process discussed in Section 1.2.2.3 of the General Part B to evaluate the compatibility of wastes with containers in compliance with 20 NMAC 4.1.500/40 CFR 264.172.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Portable spill pallets provide secondary containment for containers, as discussed in Section 1.1 of Module V. The building does not provide secondary containment, thus drawings are not required. However, the building does provide protection from runon and direct precipitation for all of the wastes (liquid and solid) stored in the Unit. All precipitation is directed away from the doors by the slope of concrete pads and asphalt pavement as discussed in Sections 1.1 and 1.2.4.2 (formerly 1.2.6.2) of Module V. The topographic map (Figure 5) shows the contours.
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.	Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery, as described in Section 1.2.1 (formerly Section 1.2.2) of Module V.
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.	Sprinkler systems are automatic, as described in Section 1.2.3.1 (formerly 1.2.5.1) of Module V. Fire hydrants meet the requirements of 20 NMAC 4.1.500/40 CFR 264.32(d), and are discussed in Section 1.1.3.1 (formerly Section 1.1.5.1) of the General Part B.
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).	As discussed in Section E.2 of the contingency plan (Appendix E), DOE/Sandia provides the KAFB fire department with a copy of the contingency plan. Mutual aid and support agreements with other support agencies and facilities are described in Appendix E, Section E.3.4.
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).	Please see response to comment 473. The mutual aid and support agreements with local hospitals include requirements for DOE/Sandia to provide information each time the agreements are invoked.
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).	The procedures are described in Section 1.1.4.5 (formerly 1.1.6.5) of the General Part B and meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(8)(v).

Comment Number	NMED Comment	DOE/Sandia Response
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.	Precautions to prevent accidental ignition or reaction are discussed in detail in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B. These precautions, which include no smoking and no open flames, are applicable to all Units. Additional precautions applicable to waste management operations at the AHCF are discussed in Section 1.2.2 (formerly Section 1.2.3) of Module V.
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.	Wastes are not managed in tanks subject to 20 NMAC 4.1.500/40 CFR 264 Subpart J at SNL/NM, as stated in Section 1.0 of the General Part B.
	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).	Please see response to comment 489 regarding containers and compatibility. Portable spill pallets provide secondary containment as described in Section 1.1 of Module VI.
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.	DOE/Sandia use a wide variety of containers that are suitable for the wide variety of wastes managed at the Unit. The containers are described in Section 1.2.1 of the General (site-wide) Part B. As stated in Section 1.3.1 of Module VI, any of the containers listed in the General Part B may be used at the MSB. Unit personnel follow the process discussed in Section 1.2.2.3 of the General Part B to evaluate the compatibility of wastes with containers in compliance with 20 NMAC 4.1.500/40 CFR 264.172.
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.	The portable spill pallets provide secondary containment for containers, as discussed in Section 1.1 of Module VI. The bunkers do not provide secondary containment, thus drawings are not required. However, the bunkers do provide protection from runon and direct precipitation for all of the wastes (liquid and solid) stored in the Units. All precipitation is directed away from the doors by the slope of concrete pads and asphalt pavement as discussed in Sections 1.1 and 1.2.4.2 (formerly 1.2.6.2) of Module VI. The topographic map (Figure 7) shows the contours.

Comment Number	NMED Comment	DOE/Sandia Response
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.	Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery, as described in Section 1.2.1 (formerly Section 1.2.2) of Module VI.
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).	As discussed in Section E.2 of the contingency plan (Appendix E), DOE/Sandia provides the KAFB fire department with a copy of the contingency plan. Mutual aid and support agreements with other support agencies and facilities are described in Appendix E, Section E.3.4.
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).	Please see response to comment 494. The mutual aid and support agreements with local hospitals include requirements for DOE/Sandia to provide information each time the agreements are invoked.
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).	The procedures are described in Section 1.1.4.5 (formerly 1.1.6.5) of the General Part B and meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(8)(v).
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.	Precautions to prevent accidental ignition or reaction are discussed in detail in Section 1.1.2.1 (formerly Section 1.1.3) of the General Part B. These precautions, which include no smoking and no open flames, are applicable to all Units. Additional precautions applicable to waste management operations at the MSB are discussed in Section 1.2.2 (formerly Section 1.2.3) of Module VI.
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.	Wastes are not managed in tanks subject to 20 NMAC 4.1.500/40 CFR 264 Subpart J at SNL/NM, as stated in Section 1.0 of the General Part B.

Comment Number	NMED Comment	DOE/Sandia Response
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).	Forklifts are used to move containers through the access tunnels. Containers are typically strapped together or tied down before movement, as discussed in Section 1.2.4.1 (formerly 1.2.6.1) of Module VI.
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).	As discussed in Section 1.2 of Module VI, all personnel sign in and out at each bunker. Unit personnel work in pairs at the MSB and maintain contact with each other. All personnel are trained to check that everyone has signed out and exited the bunkers before they close and lock the doors.

Attachment C

Redline-Strikeout Copy of Revised Text and Figures

DOE/Sandia Response to NMED Comments on Parts 2 and 3

Task # HWB-SNL-02-002

PART 2
General Part B, Appendix A, Appendix C, Appendix D, Appendix E
Modules I - VI

PART 3
All text

Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application

Revision ~~1~~2.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... SW-iiiii
LIST OF FIGURES ..... SW-iiiiv
LIST OF APPENDICES ..... SW-ivv
LIST OF MODULES ..... SW-vvi
ACRONYMS AND ABBREVIATIONS ..... SW-vivii
DEFINITIONS ..... SW-ixx
1.0 GENERAL SITE OPERATIONS SW-7
1.1 General Unit Operations SW-7
1.1.1 Operation of Containment Systems SW-8
1.1.2 Requirements for Ignitable, Reactive, and Incompatible Waste SW-9
1.1.2.1 Measures to Prevent Accidental Ignition or Reaction SW-9
1.1.2.2 Precautions to Prevent Uncontrolled Reactions SW-10
1.1.3 Preparedness and Prevention SW-11
1.1.3.1 Required Equipment SW-11
1.1.3.2 Testing and Maintenance of Equipment SW-12
1.1.3.3 Access to Communications or Alarm System SW-12
1.1.4 Hazards Prevention SW-12
1.1.4.1 Preventing Hazards in Unloading SW-13
1.1.4.2 Preventing Runoff or Flooding SW-13
1.1.4.3 Preventing Contamination of Water Supplies SW-14
1.1.4.4 Mitigating Effects of Equipment Failure and Power Outages SW-14
1.1.4.5 Preventing Undue Exposure SW-15
1.1.4.6 Preventing Releases to the Atmosphere SW-16
1.2 Container Storage SW-18
1.2.1 Container Types and Labeling SW-18
1.2.2 Container Handling SW-18
1.2.2.1 Condition of Containers SW-19
1.2.2.2 Aisle Space and Storage Configuration SW-19
1.2.2.3 Compatibility of Waste with Containers SW-19
2.0 SITE DESCRIPTION SW-21
3.0 WASTE ANALYSIS PLAN SW-22
4.0 INSPECTION PLAN SW-23
5.0 PERSONNEL TRAINING PLAN SW-24
6.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN SW-25
7.0 CLOSURE PLAN SW-26
8.0 TREATMENT SW-27
9.0 RECORDKEEPING SW-28
9.1 Hazardous Waste Report SW-32
9.2 Unmanifested Waste Report SW-33
9.3 Additional Reports SW-34
10.0 OTHER FEDERAL LAWS SW-35
11.0 CORRECTIVE ACTION SW-37
12.0 CERTIFICATION SW-38
13.0 REFERENCES SW-39

TABLE OF CONTENTS (Concluded)

~~1.0 GENERAL SITE OPERATIONS ..... SW-4~~
~~1.1 General Unit Operations ..... SW-4~~
~~1.1.1 Inspections ..... SW-5~~
~~1.1.2 Containment Systems ..... SW-5~~
~~1.1.3 Requirements for Ignitable, Reactive, and Incompatible Waste ..... SW-6~~
~~1.1.4 Closure ..... SW-8~~
~~1.1.5 Preparedness and Prevention ..... SW-8~~
~~1.1.5.1 Required Equipment ..... SW-8~~
~~1.1.5.2 Testing and Maintenance of Equipment ..... SW-9~~
~~1.1.5.3 Access to Communications or Alarm System ..... SW-9~~
~~1.1.6 Hazards Prevention ..... SW-9~~
~~1.1.6.1 Preventing Hazards in Unloading ..... SW-9~~
~~1.1.6.2 Preventing Runoff or Flooding ..... SW-10~~
~~1.1.6.3 Preventing Contamination of Water Supplies ..... SW-11~~
~~1.1.6.4 Mitigating Effects of Equipment Failure and Power Outages ..... SW-11~~
~~1.1.6.5 Preventing Undue Exposure ..... SW-12~~
~~1.1.6.6 Preventing Releases to the Atmosphere ..... SW-13~~
~~1.2 Container Storage ..... SW-14~~
~~1.2.1 Container Types and Labeling ..... SW-15~~
~~1.2.2 Container Handling ..... SW-15~~
~~1.2.2.1 Condition of Containers ..... SW-15~~
~~1.2.2.2 Aisle Space and Storage Configuration ..... SW-16~~
~~1.2.2.3 Compatibility of Waste with Containers ..... SW-16~~
~~1.3 Treatment ..... SW-17~~
~~2.0 OTHER FEDERAL LAWS ..... SW-22~~
~~3.0 CORRECTIVE ACTION ..... SW-31~~
~~4.0 CERTIFICATION ..... SW-32~~
~~5.0 REFERENCES ..... SW-33~~

LIST OF TABLES

Table No.	Title
1	Resource Conservation and Recovery Act-Regulated Waste Management Units Included in Part 2 of Comprehensive Part B Permit Request
~~1~~2	Regulatory References and Corresponding Permit Renewal Request/Application Location
~~2~~	~~Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units~~
3	Cultural Properties Used by Sandia/DOE on Kirtland Air Force Base

LIST OF FIGURES

Figure No.	Title
1	Sandia National Laboratories/New Mexico Technical Areas (TAs) and Resource Conservation and Recovery Act-Regulated Waste Management Units in Relation to Kirtland Air Force Base

LIST OF APPENDICES

Appendix	Title
A	Site-Wide Description for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
B	Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
C	Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
D	Site-Wide Personnel Training Plan for Sandia National Laboratories/ New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
E	Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
F	Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
G	Site-Wide Treatment Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
~~H~~	~~Site-Wide Record Keeping and Reporting for Sandia National Laboratories/ New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units~~

LIST OF MODULES

Module	Title
I	HWMF-Hazardous Waste Management Facility
II	TTF-Thermal Treatment Facility
III	RMWMF-Radioactive and Mixed Waste Management Facility
IV	HBWSF-High Bay Waste Storage Facility
V	AHCF-Auxiliary Hot Cell Facility
VI	MSB-Manzano Storage Bunkers

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	microgram(s) per cubic meter
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
A/BCAQCB	Albuquerque/Bernalillo County Air Quality Control Board
AHCF	Auxiliary Hot Cell Facility
ALARA	as low as reasonably achievable
ARPA	Archeological Resources Protection Act
ASTM	American Society for Testing and Materials
CMU	concrete masonry unit
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOT	U.S. Department of Transportation
DQO	data quality objective
DR	disposal request
EC	Emergency Coordinator
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ER	Environment Restoration
ERO	Emergency Response Organization
^{o}F	degree(s) Fahrenheit
ft	foot/feet
ft^2	square foot/feet

ACRONYMS AND ABBREVIATIONS (Continued)

ft^3	cubic foot/feet
HBWSF	High Bay Waste Storage Facility
HEPA	high efficiency particulate air
HSWA	Hazardous and Solid Waste Amendments
HWMF	Hazardous Waste Management Facility
IC	Incident Commander
ICS	Incident Command System
ID	inner diameter
in.	inch(es)
KAFB	Kirtland Air Force Base
KOP	knowledge of process
lb/ft^2	pound(s) per square foot/feet
LDR	land disposal restriction
m^3	cubic meter(s)
mi	mile(s)
mph	mile(s) per hour
MSB	Manzano Storage Bunkers
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NMED	New Mexico Environment Department
OKSO	Office of Kirtland Site Operations
ppmw	part(s) per million by weight

ACRONYMS AND ABBREVIATIONS (Concluded)

PPE	personal protective equipment
psi	pounds per square inch (pressure)
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
R&D	research and development
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SASN	silver acetylide/silver nitrate
SNL/NM	Sandia National Laboratories/New Mexico
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TA	Technical Area
TSDF	treatment, storage, and disposal facility
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
USC	United States Code
USFS	U.S. Forest Service
VOC	volatile organic compound
WAP	waste analysis plan
WMA	waste management area

DEFINITIONS

Characterization: The identification of hazardous characteristics or constituents of waste, using sampling and analysis, acceptable knowledge, or a combination of chemical analysis and acceptable knowledge.

~~**Classified Waste:** Waste for which information may be restricted based on origin, shape, chemical or isotopic composition, physical form, process association, or other specifications of importance to national security.~~

Emergency: Any imminent or existing fire, explosion, or unplanned sudden or nonsudden release of Resource Conservation and Recovery Act (RCRA)-regulated waste or hazardous constituents to air, soil, or surface water that significantly threatens human health or the environment outside the Unit.

RCRA-Regulated Waste: For the purposes of this permit renewal request/application and Unit-specific modules, a waste that meets the regulatory definition of either hazardous waste or hazardous/radioactive mixed waste.

RCRA-Regulated Waste Management Area (WMA): For the purposes of this permit renewal request/application and Unit-specific modules, an area used for the treatment or storage of RCRA-regulated waste within a RCRA-regulated Waste Management Unit.

RCRA-Regulated Waste Management Unit (Unit): For the purposes of this permit renewal request/application and Unit-specific modules, a specific operational area subject to a RCRA permit that is used for the treatment and/or storage of RCRA-regulated waste. The Units that are the subjects of this permit renewal request/application are described in Unit-specific modules.

Regulated Unit: A surface impoundment, waste pile, land treatment unit, or landfill that received hazardous waste after July 26, 1982.

SANDIA NATIONAL LABORATORIES/NEW MEXICO GENERAL PART B PERMIT RENEWAL REQUEST/APPLICATION

This "Sandia National Laboratories/New Mexico (SNL/NM) General Part B Permit Renewal Request/Application," hereinafter referred to as the SNL/NM General Part B, is submitted by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, to address requirements applicable to Resource Conservation and Recovery Act (RCRA)-regulated waste storage and treatment operations at SNL/NM RCRA-regulated waste management units (Units) (Figure 1). The U.S. Environmental Protection Agency (EPA) Identification Number for SNL/NM is NM5890110518.

Sandia National Laboratories/New Mexico (SNL/NM) is located on Kirtland Air Force Base (KAFB) southeast of Albuquerque, New Mexico. SNL/NM consists of five technical areas (TAs) and several remote testing areas situated on the 80-square-mile KAFB. Sandia generates and manages wastes that are regulated under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act and implementing regulations, specifically the New Mexico Administrative Code (NMAC) Title 20, Chapter 4. In this Part B permit request, these wastes are referred to as RCRA-regulated wastes (i.e., wastes that meet the regulatory definition of hazardous or mixed wastes). RCRA-regulated wastes are generated during SNL/NM operations and ongoing corrective actions for solid waste management units (SWMUs). The corrective actions are conducted under the SNL/NM Environmental Restoration (ER) Project.

There are 15 RCRA-regulated waste management units included in this comprehensive Part B permit request. Twelve of the units (listed in Table 1) are used for management of wastes from ongoing operations and from the ER project. These units are addressed in this part (Part 2) of the comprehensive Part B permit request. The remaining three units are corrective action units used exclusively for management of remediation wastes generated through the ER project. They are addressed in Part 5 of the comprehensive Part B permit request.

The information in Part 2 is separated into site-wide and Unit-specific information to minimize redundancy. Part 2 information for the Units listed in Table 1 includes:
~~This SNL/NM General Part B includes:~~

- General information (~~A~~ ~~G~~general Part B) that serves as an "umbrella" document addressing the general requirements of the New Mexico Hazardous Waste Act and implementing regulations, specifically the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~-IX (20 NMAC 4.1.5~~1~~00 and -.900), revised June 14, 2000 [6-14-00]. 20 NMAC 4.1.5~~1~~00 and ~~-~~.900 adopt, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264~~0-266, 268,~~ and 270 (40 CFR 264~~0-266, 268,~~ and 270).

- Unit-specific Part B modules addressing Unit-specific requirements of 20 NMAC 4.1.5~~1~~00 and -.900/40 CFR 264~~0-266, 268,~~ and 270 [6-14-00]. There is one module for the set of seven Manzano Storage Bunkers, and one module for each of the other five Units listed in Table 1. For clarity and consistency, the information in each Unit-specific Part B module is arranged in the same general order as the information in the ~~G~~general Part B.

Table 1
Resource Conservation and Recovery Act – Regulated Waste Management Units Included in Part 2 of Comprehensive Part B Permit Request

Name	Acronym	Location, Size	Types of Operations	Types of Waste	Operating Status	Permit Status
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II. 1.35 acres	Storage, Repackaging	All wastes listed in General Part A	Existing, operational	Permit expired August 6, 2002. Submitted renewal request February 6, 2002. Requesting that permit be updated and renewed for continued operation.
Thermal Treatment Facility	TTF	Northern part of TA-III. 196 square feet	Treatment	Ignitable, reactive, toxic, and listed wastes	Existing, on standby	Permit expires November 4, 2004. Requesting that permit be updated and renewed for continued operation.
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III. 3.11 acres	Storage, Treatment, Repackaging	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.
High Bay Waste Storage Facility	HBWSF	TA-V. 5670 square feet	Storage	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.
Auxiliary Hot Cell Facility	AHCF	TA-V. 5578 square feet	Storage, Treatment, Repackaging	All wastes listed in General Part A	Existing, expected to start operations in 2003	Added under interim status. Requesting that permit be issued using information provided in this application.
Manzano Storage Bunkers (set of 7 Units)	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 7 bunkers (approximately 1600 to 2100 square feet in each bunker)	Storage	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.

Together, the information in thise general Part B and each Unit-specific Part B module address the applicable regulatory requirements for that Unit.

The information in this General Part B and in the Unit-specific modules is arranged as follows:

- General Unit operations, including preparedness and prevention – Section 1
- Site description, including features, security, and access control – Section 2 and Appendix A
- Waste analysis – Section 3 and Appendix B
- Inspections – Section 4 and Appendix C
- Training – Section 5 and Appendix D
- Emergency response and contingency plan – Section 6 and Appendix E
- Closure – Section 7 and Appendix F
- Treatment – Section 8 and Appendix G
- Recordkeeping – Section 9

Sandia/DOE are also submitting a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," hereinafter referred to as the SNL/NM General Part A (SNL/NM, 2002), with this SNL/NM General Part B. The SNL/NM General Part A consolidated information from previous SNL/NM Part A submittals into one comprehensive document, identifying all Units at SNL/NM as of January 31, 2002, that are or will be subject to 20 NMAC 4.1.500/40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00]. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to this SNL/NM General Part B.

In both the SNL/NM General Part A (SNL/NM, 2002) and this SNL/NM General Part B submittal, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., the Hazardous Waste Management Facility). The term "facility," as it appears in this context, is used only to denote building or Unit names and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

Table 21 provides a list of regulatory references and the corresponding section locations in this SNL/NM General Part B.

Table 2~~1~~
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§270.14(b)(1)	General facility description	Appendix A[a]
§270.14(b)(2)	Chemical and physical analyses	Appendix B[a]
§270.14(b)(3)	Waste analysis plan	Appendix B[a]
§264.13(b)	Written waste analysis plan	Appendix B[a]
§264.13(c)	Off-site waste analysis requirements	Appendix B[a]
§270.14(b)(4)	Security procedures and equipment	Appendix A[a]
§264.14	Security	Appendix A[a]
§270.14(b)(5)	General inspection schedule	Appendix C[a]
§264.15(b)	Written inspection schedule	Appendix C[a]
§264.174	Containers	1.2, Appendix C[a]
§264.602	Miscellaneous units	Appendix C[a]
§264.1086	Standards: Containers	~~1.4~~1.2, Appendix C
§264.1088	Inspection and monitoring requirements	~~1.4~~.0, Appendix C[a]
§270.14(b)(6)	Request for waiver from preparedness and prevention requirements of Part 264, Subpart C	NA
§270.14(b)(7)	Contingency plan	Appendix E[a]
§270.14(b)(8)	Preparedness and prevention requirements	1.1.~~5~~[a]3[a], 1.1.~~6~~[a]4[a]
§270.14(b)(8)(i)	Preventing hazards in unloading operations	1.1.~~6~~4.1[a]
§270.14(b)(8)(ii)	Preventing runoff/flooding	1.1.~~6~~4.2[a]
§270.14(b)(8)(iii)	Preventing contamination of water supplies	1.1.~~6~~4.3[a]
§270.14(b)(8)(iv)	Mitigating effects of equipment failure and power outages	1.1.~~6~~4.4[a]
§270.14(b)(8)(v)	Preventing undue exposure of personnel	1.1.~~6~~4.5[a]
§270.14(b)(8)(vi)	Preventing releases to the atmosphere	1.1.~~6~~4.6[a]
§270.14(b)(9)	Preventing accidental ignition or reaction	1.1.~~3~~2.1[a]
§264.17	General requirements for ignitable, reactive, or incompatible wastes	1.1.~~3~~2[a]
§270.14(b)(10)	Traffic pattern, volume, and controls	Appendix A[a]
§270.14(b)(11)	Facility/unit location information	Appendix A[a]
§270.14(b)(11)(i)	Seismic standard applicability [264.18(a)]	Appendix A[a]
§264.18(a)	Seismic considerations	Appendix A
§270.14(b)(11)(ii)	Seismic standard requirements	Appendix A[a]
§264 Appendix VI	Political jurisdictions requiring compliance with 264.18(a)	Appendix A
§270.14(b)(11)(ii)(A)	No fault within 3,000 feet (ft) with displacement in Holocene time	Appendix A[a]
§270.14(b)(11)(iii)	100-year floodplain standard	Appendix A
§270.14(b)(11)(iv)	Floodplain requirements	NA
§270.14(b)(11)(v)	Plan to show how the facility will be brought into compliance with 264.18(b)	NA
§270.14(b)(12)	Personnel training program	Appendix D[a]
§264.16	Personnel training	Appendix D[a]
§270.14(b)(13)	Closure and post-closure plans	Appendix F[a]

Refer to footnotes at end of table.

Table ~~1~~2 (Continued)
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§264.112	Closure plan	Appendix F[a]
§264.118	Post-closure plan	Appendix F[a]
§264.178	Closure—containers	Appendix F[a]
§264.601	Environmental performance standards—miscellaneous units	Appendix G[a]
§264.603	Post-closure care—miscellaneous units	Appendix F
§270.14(b)(14)	Post-closure notices (264.119)	Appendix F
§264.119	Post-closure notices	Appendix F
§270.14(b)(15)	Closure cost estimate (264.142)	Appendix F
	Financial assurance (264.143)	Appendix F
§264.142	Cost estimate for closure	Appendix F
§264.143	Financial assurance for closure	Appendix F
§270.14(b)(16)	Post-closure cost estimate (264.144)	Appendix F
	Post-closure care financial assurance (264.145)	Appendix F
§264.144	Cost estimate for post-closure care	Appendix F
§264.145	Financial assurance for post-closure care	Appendix F
§270.14(b)(17)	Liability insurance (264.147)	Appendix F
§264.147	Liability requirements	Appendix F
§270.14(b)(18)	Proof of financial coverage (264.149-150)	Appendix F
§270.14(b)(19)	Topographic map requirements	Appendix A
§270.14(b)(19)(i)	Map scale and date	Appendix A
§270.14(b)(19)(ii)	100-year floodplain area	Appendix A
§270.14(b)(19)(iii)	Surface waters	Appendix A
§270.14(b)(19)(iv)	Surrounding land uses	Appendix A
§270.14(b)(19)(v)	Wind rose	Appendix A
§270.14(b)(19)(vi)	Map orientation/north arrow	Appendix A
§270.14(b)(19)(vii)	Legal boundaries	Appendix A
§270.14(b)(19)(viii)	Access controls	Appendix A[a]
§270.14(b)(19)(ix)	Wells (injection and withdrawal)	Appendix A
§270.14(b)(19)(x)	Buildings or other structures	Appendix A
§270.14(b)(19)(xi)	Barriers—drainage or flood control	Appendix A[a]
§270.14(b)(19)(xii)	Location of operational units	Appendix A
§270.14(b)(20)	Other federal laws (270.3)	~~2.0~~10.0
§270.14(b)(21)	Notice of extension approval for land disposal facilities	NA
§270.14(b)(22)	Summary of pre-application meeting	NA
§270.14(c)	Groundwater monitoring requirements	Appendix A[b]
§264.90(b)	Exemptions from regulation of releases	NA
§270.14(d)	Information requirements for solid waste management units	~~3~~11.0[c]
§270.15	Specific information requirements—containers	1.2[a]
§264.170	Subpart I applicability	1.1[a]
§264.175	Containment	1.1, 1.2[a]
§264.176	Special requirements for ignitable or reactive waste	1.1.2[a]

Refer to footnotes at end of table.

Table 2~~1~~ (Concluded)
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§264.177	Special requirements for incompatible waste	1.1[a]
§264.17	General requirements for ignitable, reactive, or incompatible wastes	1.1[a]
§270.23	Specific information requirements—miscellaneous units	~~1.3~~8.0[a]
§264.600	Subpart X applicability	Appendix G[a], Module II
§264.601	Environmental performance standards	Appendix G[a], Module II
§264.602	Monitoring analysis, inspection, response, reporting, and corrective action	Appendix G[a], Module II
§270.27	Specific information requirements—air emission controls for tanks, surface impoundments, and containers	~~1.4~~1.1, 1.2[a]
§264 Subpart AA	Air emission standards for process vents	1.1.~~6~~4.6
§264 Subpart BB	Air emission standards for equipment leaks	1.1.~~6~~4.6
§264 Subpart CC	Air emission standards for tanks, surface impoundments, and containers	1.1.~~6~~4.6

[a] Unit-specific information is provided in Unit-specific modules.
[b] Groundwater monitoring for regulated units is addressed in Part 3 of this comprehensive Part B permit request package.
[c] Corrective action is addressed in Parts 4 and 5 of this comprehensive Part B permit request package. Solid waste management units are discussed in Part 4. Operation of the waste management units associated with corrective action is addressed in Part 5.
NA = not applicable

1.0 GENERAL SITE OPERATIONS

This section provides an overview of RCRA-regulated waste management operations at the Units addressed in this SNL/NM General Part B. ~~There are six Units at the SNL/NM site (Table 2).~~

~~**Table 2**~~
~~**Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units**~~

~~Module~~	~~Unit Name~~	~~Acronym~~
~~I~~	~~Hazardous Waste Management Facility~~	~~HWMF~~
~~II~~	~~Thermal Treatment Facility~~	~~TTF~~
~~III~~	~~Radioactive and Mixed Waste Management Facility~~	~~RMWMF~~
~~IV~~	~~High Bay Waste Storage Facility~~	~~HBWSF~~
~~V~~	~~Auxiliary Hot Cell Facility~~	~~AHCF~~
~~VI~~	~~Manzano Storage Bunkers~~	~~MSB~~

The SNL/NM Units are used to store and/or treat RCRA-regulated wastes bearing EPA Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002). Unless otherwise specified in a Unit-specific ~~Part B~~ module, any of the wastes listed in the SNL/NM General Part A may be managed at any Unit.

The following general ~~i~~information applicable to the Units addressed in this SNL/NM General Part B is provided in this section:~~for the following subject areas~~:

- General Unit operations ~~including: inspections~~; containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure~~; preparedness and prevention; hazards prevention; and
- Container storage practices, including air emission controls. Sandia/DOE do not manage RCRA-regulated wastes in tanks at any Unit.~~; and Treatment practices~~

The general information provided in this section, together with the Unit-specific information provided in Modules I through VI, address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14, 270.15, and 270.23 [6-14-00].

1.1 General Unit Operations

The following sections provide an overview of the general Unit operations applicable to the Units addressed in this SNL/NM General Part B. General Unit operations include ~~inspections~~; containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure~~; preparedness and prevention; and hazards prevention.

~~1.1.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5];20 NMAC 4.1.500/40 CFR 264.15, and 264.174)~~

~~20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] require that the Unit waste management areas (WMAs) and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation. Inspections focus on identifying malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. Inspections are undertaken on a regular schedule based on the likelihood of component failure and associated consequences. Safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities are inspected to ensure that human health and the environment will be protected.~~

~~20 NMAC 4.1.500/40 CFR 264.174 [6-14-00] requires that containers of RCRA-regulated waste in storage at Unit WMAs be inspected at least weekly to identify leaking containers, deterioration of containers, and loss of integrity of the containment system. Inspections are performed in accordance with the "Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix C of this SNL/NM General Part B. Unit-specific information on inspections is provided in Attachment C of each Unit-specific module.~~

~~The U.S. Air Force, which operates Kirtland Air Force Base, may, for security or other reasons, deny access to Sandia/DOE personnel performing periodic Unit inspections. In such cases, Unit personnel will resume inspections as soon as possible after access is granted, and will document the missed inspection(s) and the reasons on the next inspection report.~~

~~1.1.2~~1.1.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15;20 NMAC 4.1.500/40 CFR 264.175[b][5])

20 NMAC 4.1.500/40 CFR 264.175[b][1] [6-14-00] requires that containment systems be maintained in leak proof and fully operable conditions. 20 NMAC 4.1.500/40 CFR 264.175(b)(2) and (3) [6-14-00], respectively, require that secondary containment systems be designed to 1) contain at least 10 percent of the volume of potential liquid-bearing containers or the volume of the largest container, whichever is greater, and 2) prevent contact between containers and spilled material. Containment systems at each Unit are described in Section 1 of each Unit-specific module.

Liquids that might accumulate at an SNL/NM Unit are contained within a secondary containment system that is sufficiently impervious to contain leaks, spills, or accumulated precipitation until the liquid is removed, as described in each Unit-specific module. Unit personnel begin taking action to evaluate and remove a~~A~~ccumulated liquids upon discovery. ~~are removed as soon as practicable~~ (20 NMAC 4.1.500/40 CFR 264.175[b][5] [6-14-00]).

Accumulated liquids from precipitation or snowmelt, for which there is no evidence of a release, will be discharged to the ground or to the sanitary sewer after sampling (as needed) and approval, as needed. Accumulated liquids or waters generated during fire suppression activities may be characterized as a newly-generated waste using acceptable knowledge or

may be analyzed, as applicable, for RCRA-regulated waste constituents known to be components of the source. If the accumulated liquids are from other than an identifiable source, the resulting material will be ~~may be~~ characterized as described in ~~analyzed for the appropriate potential parameters listed in Table B-3 in~~ Appendix B of this SNL/NM General Part B. Containers of collected liquids are also stored with adequate secondary containment. This method of removal and analysis of accumulated liquids fulfills the requirements of 20 NMAC 4.1.900/40 CFR 270.15(a)(5) [6-14-00], for the prevention of overflow.

~~1.1.3~~1.1.2 Requirements for Ignitable, Reactive, and Incompatible Waste (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[d]; 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

20 NMAC 4.1.900/40 CFR 270.14(b)(9) [6-14-00], requires a description of precautions taken to prevent accidental ignition or reaction of ignitable, reactive, or incompatible RCRA-regulated wastes as required to demonstrate compliance with 20 NMAC 4.1.500/40 CFR 264.17(~~a~~c) [6-14-00]. 20 NMAC 4.1.900/40 CFR 270.15(d) [6-14-00], requires a description of procedures used to ensure compliance with 20 NMAC 4.1.500/40 CFR 264.17(b) and (c) [6-14-00], and 264.176 and 264.177.~~(a) and (b), and 264.17(b) and (c) [6-14-00]~~.

1.1.2.1 Measures to Prevent Accidental Ignition or Reaction (20 NMAC 4.1.500/40 CFR 264.17[a])

At SNL/NM, appropriate measures are taken to prevent accidental ignition or ~~reaction, and mixing of~~reaction of ignitable and reactive ~~incompatible,~~ RCRA-regulated wastes, as described below.

~~Incompatible, reactive, and ignitable RCRA-regulated wastes are handled and segregated safely at Units in accordance with 20 NMAC 4.1.900/40 CFR 270.15 [6-14-00].~~All containers are kept closed unless wastes are being added, removed, inspected, sampled, repackaged, or treated as noted in Section 1.2.2.

Ignitable and ~~or~~ reactive wastes are~~is~~ labeled and separated from other wastes. Such wastes may be stored in designated WMAs at each Unit, as described in the Unit-specific modules. ~~and protected from~~ Open flames and ~~,~~ welding activities are prohibited in the vicinity of ignitable or reactive wastes at all Units. If the wastes cannot be removed from the area before such activities take place, the wastes are protected by a non-combustible barrier before and during work.~~,~~ ~~H~~hot surfaces, frictional heat, sources of sparks, ~~spontaneous ignition~~, and radiant heat (e.g., heat-generating wastes) are also prohibited in the vicinity of ignitable and reactive wastes. Unit personnel are not allowed to operate forklifts or other motorized equipment in the vicinity of open containers of ignitable or reactive wastes unless such equipment is designed for use in flammable environments. Ignitable and reactive wastes are stored under controlled conditions to prevent spontaneous combustion.

Spark-proof tools may be used to open and close containers holding ignitable or reactive wastes. When large quantities of flammable or reactive liquids are transferred from one container to another, ~~static straps and~~ grounding procedures are typically used. During such operations, each container is connected to a grounding cable that remains in place during liquid transfer to dissipate static charge created by liquid flow.

Smoking is not allowed within any Unit. "No Smoking" signs are conspicuously placed at the entrance to each Unit, as required by 20 NMAC 4.1.500/40 CFR 264.17(a) [6-14-00].

Water-reactive wastes are not stored in WMAs equipped with automatic water sprinkler systems. When water-reactive wastes are present in such WMAs (e.g. for treatment or temporary staging), Unit personnel will keep water from coming into contact with the waste. ~~Together, these measures meet the requirements of 20 NMAC 4.1.500/40 CFR 264.17(a) and (b) and 264.176 [6-14-00].~~

1.1.2.2 Precautions to Prevent Uncontrolled Reactions (20 NMAC 4.1.500/40 CFR 264.17[b,c], 40 CFR 264.176, 40 CFR 264.177 and 40 CFR 264.17[b])

Unit personnel rarely mix incompatible wastes together or with other materials. Personnel perform treatment of ignitable and reactive wastes at the TTF, RMWMF, and AHCF. As described in Section B.5 (Appendix B of the General Part B), Unit personnel plan such activities carefully to prevent reactions which could:

- Generate extreme heat or pressure, fire or explosions, or violent reaction;
- Produce uncontrolled toxic mists, fumes, dusts, or gases;
- Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- Damage the structural integrity of the device or Unit;
- Through other like means threaten human health or the environment.

In general, Unit personnel use characterization information for each waste (as described in Section B.5) and published data regarding chemical properties of RCRA-regulated constituents in the wastes (e.g., material safety data sheets, NIOSH Pocket Guide to Chemical Hazards, Bretherick's Handbook of Handbook of Reactive Chemical Hazards) to identify potential consequences of treatment or other mixing activities. Additional information is included in each Unit-specific module.

Incompatible wastes~~, if any,~~ are kept separated from each other during storage to meet the requirements of 20 NMAC 4.1.500/40 CFR 264.177(c) [6-14-00]. ~~In addition,~~ incompatible wastes are not packed in the same container, and no waste is placed in a container that previously held an incompatible waste (i.e., only new and/or clean containers are used to hold RCRA-regulated wastes), as required by 20 NMAC 4.1.500/40 CFR 264.177(a) and (b) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.17(b), and 20 NMAC 4.1.900/ 40 CFR 270.15(d) [6-14-00]. Additional information is included in the Unit-specific modules.

Compatibility is determined in accordance with 20 NMAC 4.1.500/40 CFR 264, Appendix V [6-14-00], or equivalent information (e.g., NIOSH Pocket Guide to Chemical Hazards).

Containers holding ignitable or reactive wastes are located at least 50 feet from the SNL/NM facility property line at all times and are protected from sources of ignition or reaction as required by 20 NMAC 4.1.500/40 CFR 264.176 [6-14-00].

~~1.1.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~20 NMAC 4.1.500/40 CFR 264.111, 264.178, and 264.601 [6-14-00], as applicable, and 20 NMAC 4.1.900/40 CFR 270.14(b)(13) [6-14-00], require a description of closure activities and a closure plan.~~

~~Closure information provided in this SNL/NM General Part B is applicable to partial closure rather than final closure of the entire SNL/NM facility. Partial closure is defined as closure of one or more Units while leaving other Units in operation. Partial closure will include removal of RCRA-regulated waste from the Unit to be closed, and decontamination or removal of structures and equipment that have been contaminated by waste materials. Final closure will occur when all SNL/NM Units are closed either by waste removal and decontamination or by disposal of contaminated structures and equipment.~~

~~Unit closures will minimize the need for further maintenance, preclude the release of RCRA-regulated waste or constituents to environmental media, and be protective of human health. Detailed partial closure procedures are described in Appendix F of this SNL/NM General Part B and in Attachment F of each Unit-specific module.~~

~~1.1.5~~1.1.3 Preparedness and Prevention (20 NMAC 4.1.900/40 CFR 270.14(b)(8) and 20 NMAC 4.1.500/40 CFR 264, Subpart C)

20 NMAC 4.1.900/40 CFR 270.14(b)(8) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart C [6-14-00], require a description of how Units will comply with preparedness and prevention requirements. The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems.

~~1.1.5.1~~1.1.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Sandia/DOE maintain required equipment, including internal communications or alarm systems; devices to summon emergency assistance; fire control, spill control, and decontamination equipment; and adequate water volume and pressure for fire suppression equipment at each Unit.

Each Unit (except the Thermal Treatment Facility and Manzano Storage Bunkers) is equipped with fire hydrants and with one or more automatic water sprinkler or dry chemical fire suppression systems. Each fire hydrant meets the requirements of the Appendix B of the International Fire Code, and provides at least 1500 gallons per minute of water at 20 psi, which meets the requirements of 20 NMAC 4.1.500/40 CFR 264.32(d) [6-14-00]. The locations of the hydrants are shown in each Unit-specific module. Building-specific fire suppression systems are described in Section 1.2 of each Unit-specific module.

A list of the required equipment ~~together~~ with the location and capabilities of the equipment, ~~for each Unit~~ is provided in tables in ~~Attachment E of~~ each Unit-specific module.

~~1.1.5.~~21.1.3.2 *Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)*

Sandia/DOE assure that communications and alarm systems and fire protection, spill control, and decontamination equipment are inspected and/or tested according to the inspection plans and schedules detailed in Appendix C of this SNL/NM General Part B and in Section 4 of each Unit-specific module. The frequency of inspection is sufficient to assure proper operation in the event of an emergency. Maintenance, repair, and replacement of emergency equipment are performed as needed.

Sandia personnel test fire suppression equipment on monthly, quarterly, and annual schedules, in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems".

~~1.1.5.3~~1.1.3.3 *Access to Communications or Alarm System (20 NMAC 4.1.500/40 CFR 264.34)*

Sandia/DOE assure that whenever waste is being handled at a Unit, personnel involved have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another individual. In the event of an emergency, this communication equipment allows personnel to contact the Unit Emergency Coordinator and/or the Emergency Operations Center (refer to Appendix E of this SNL/NM General Part B). In addition to the communications and alarm systems described in each Unit-specific module, on-site personnel may carry pagers, two-way radios, and/or cellular telephones so that they can contact or be contacted by on-site and SNL/NM emergency support personnel at all times.

Unit personnel typically work in pairs and maintain contact when handling wastes, further enhancing safety.

~~1.1.6~~1.1.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

20 NMAC 4.1.900/40 CFR 270.14(b)(8) [6-14-00], requires that a Unit be designed and operated to prevent hazards. SNL/NM Units are designed and operated to minimize the possibility of fire, explosion, or any unplanned or nonsudden releases of RCRA-regulated waste or constituents to the environment. Specific Unit design and construction information is presented in Section 1.1~~0~~ of each Unit-specific Part B module. The following sections describe the general procedures, equipment, and structures that are currently used at SNL/NM Units to prevent hazards. These include preventing hazards during unloading of waste containers, preventing runoff and flooding, preventing contamination of water supplies, mitigating the effects of power outages, preventing undue exposure to personnel, and preventing releases to the atmosphere. Any additional information about procedures is included in Section 1.2 of each Unit-specific module.

~~1.1.6.1~~1.1.4.1 *Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(i) [6-14-00], requires descriptions of procedures, structures, or equipment used at a Unit to prevent hazards in unloading operations.~~

Only closed waste containers are accepted for transport by vehicle to SNL/NM Units. Prior to transport, containers are inspected to ensure that they are properly closed, ~~and~~ labeled, and in suitable condition for transport.

Loading and unloading operations typically occur outdoors in the area immediately in front of a WMA at a Unit to minimize the distance that the waste must be moved. ~~Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift or hydraulic lift is typically used to load or unload larger containers.~~ Spills that might occur during loading or unloading operations will be promptly cleaned up in accordance with spill response procedures contained in Appendix E of this SNL/NM General Part B.

Except where noted in Unit-specific modules, all loading and unloading areas are level, and the asphalt or concrete pavement is in good condition. Loading and unloading areas are also typically free of overhead and other obstructions to visibility and operations.

Appropriate vehicles, forklifts, drum dollies, pallet jacks, and other tools for the safe transport and handling of wastes are used during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift or hydraulic lift is typically used to load or unload larger containers. For loads that are moved with a forklift, the containers of waste are typically held together on a pallet with straps or shrink wrap. Fasteners and clamps are typically used with drum dollies. Waste-handling equipment is maintained and operated in accordance with manufacturers' guidance.

Only qualified personnel trained in RCRA-regulated waste management procedures are allowed to handle RCRA-regulated waste at Units, and they typically work in pairs. Personnel are trained to be aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts. ~~Appropriate vehicles, forklifts, and tools for the safe transport and handling of wastes are used during loading and unloading operations.~~

~~1.1.6.2~~1.1.4.2 *Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(ii) [6-14-00], requires descriptions of procedures, structures, or equipment used at a Unit to prevent runoff from RCRA-regulated WMAs to other areas of the Unit or to the environment, or to prevent flooding.~~

Run-on of surface water from surrounding areas and runoff of waste is prevented at Units by Unit design and operating practices. Unit-specific runon/runoff features and operating precautions are described in ~~Section 1.2.6.2 of~~ each Unit-specific Part B module.

~~1.1.6.3~~1.1.4.3 *Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(iii) [6-14-00], requires descriptions of procedures, structures, or equipment used at a Unit to prevent contamination of water supplies.~~

Due to the depth to groundwater at SNL/NM and Unit operating procedures, it is not anticipated that there will be any impact to groundwater or other water supplies as a result of RCRA-regulated waste-handling operations at any Unit. Contamination of surface water and groundwater ~~supplies~~ is prevented by Unit operating procedures as well as the spill containment features located within a specific WMA at a Unit. Spills are contained within the buildings or within secondary containment systems, and are cleaned up promptly. Spills occurring outside the buildings will be contained promptly and cleaned up so as not to come into contact with surface water or groundwater. Some units are supplied with potable water that is provided through pressurized underground water supply lines. These water supply lines are designed to withstand industrial activities that are typical of waste management operations, and they are not affected by Unit operations.

~~1.1.6.4~~1.1.4.4 *Mitigating Effects of Equipment Failure and Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(iv) [6-14-00], requires descriptions of procedures, structures, or equipment used at a Unit to mitigate the effects of equipment failure and power outages. Unit-specific responses and backup equipment are described in Section 1.2.6.4 of each Unit-specific Part B module.~~In general, it is possible for Unit personnel to place the affected equipment in a safe state, close or cover open containers of RCRA-regulated wastes that are present, and stop operations until power is restored.

The general types of equipment, utilities, and systems that would be affected by a power or equipment failure are listed below, together with features and activities to mitigate effects of a failure.

- Lights: Fixed battery-operated lights operate in the buildings in each Unit where available.
- Alarms: Fire alarm devices in each Unit (except the MSB) are equipped with emergency power supply.
- Pumps and other equipment: Personnel use portable manually- or pneumatically-operated equipment or wait for power to be restored.
- Container-handling equipment: Unit personnel obtain forklifts and drum-handling equipment from Sandia's transportation department.
- Personal Protective Equipment: Unit personnel replace equipment with supplies in the Unit storage areas.

- Vehicles: Unit personnel obtain replacements for vehicles from Sandia's transportation department.
- Telephone: Unit personnel use cellular telephones or portable radios.
- Fire sprinklers: Unit personnel use portable fire extinguishers.

Additional Unit-specific procedures (where applicable) are included in each Unit-specific module.

~~1.1.6.5~~1.1.4.5 *Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(v) [6-14-00], requires descriptions of procedures, structures, or equipment used at a Unit to prevent undue exposure of personnel to RCRA-regulated wastes.~~

Only qualified personnel trained in RCRA-regulated waste management procedures are allowed to handle RCRA-regulated waste at Units. The training that these personnel receive includes use of ~~Personnel exposure is minimized by restricting the handling of RCRA-regulated wastes to properly trained personnel using~~ appropriate equipment and personal protective equipment (PPE) for the RCRA-regulated wastes managed at SNL/NM Units.

Personnel at SNL/NM Units are required to use appropriate PPE to protect themselves from the hazards that are or may be found in the work place under normal conditions. Such hazards may include handling heavy containers, operating waste-handling equipment, weather conditions, and contact with RCRA-regulated wastes and constituents. ~~Use of PPE protects workers from direct contact with and inhalation or ingestion of hazardous materials. The different levels of PPE are defined by the Occupational Safety and Health Administration as follows:~~

- ~~*Level D:* Coveralls, safety boots, safety glasses or goggles, hard hat, and appropriate gloves;~~
- ~~*Level C:* Full face, air-purifying respirator with appropriate cartridges for the chemicals or hazards present, chemical-resistant suits, chemical-resistant safety boots or booties, and inner and outer gloves;~~
- ~~*Level B:* All Level C equipment plus self-contained breathing apparatus in place of a Level C full-face respirator; and~~
- ~~*Level A:* All Level B equipment, plus a fully-encapsulating chemical-resistant suit.~~

Operations at SNL/NM Units typically require that personnel handling closed containers of RCRA-regulated wastes wear PPE that includes safety shoes and appropriate gloves (e.g., heavy abrasion-resistant gloves with or without chemical-resistant outer gloves. Depending on the work performed, they may also wear safety glasses or goggles, coveralls, and hard hats.

~~modified Level D PPE (e.g., coveralls, safety glasses, and hard hats are not always required) or other appropriate work clothing.~~

During treatment operations or other work that involves opening containers, personnel typically don additional PPE (e.g., safety glasses, face shields, chemical-resistant gloves, and coveralls) to protect themselves from hazards that may be present. Such hazards may include the potential for contact with liquids, particles, or corrosive materials.

~~There are instances where an~~ Increased ~~level of~~ PPE (e.g., respiratory protection) ~~is~~ may also be required~~, such as~~ during an emergency or unusual hazardous situation.

~~1.1.6.6~~1.1.4.6 *Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)*

~~20 NMAC 4.1.900/40 CFR 270.14(b)(8)(vi) [6-14-00], requires descriptions of procedures, structures, or equipment used to prevent releases to the atmosphere.~~

Sandia/DOE do not use any of the processes identified in 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00] for the management of RCRA-regulated wastes. Therefore, Sandia/DOE are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00].

Sandia/DOE do not routinely manage RCRA-regulated wastes with organic concentrations $\geq$ 10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052-.1060 as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f). The equipment use will be noted in the Unit operating log.

Hazardous wastes stored in containers may be subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00], "Air Emission Standards for Tanks, Surface Impoundments, and Containers," based on applicability criteria specified in 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. These standards are not applicable to:

- Containers that held hazardous waste prior to December 6, 1996, and to which no hazardous waste has been added on or after December 6, 1996;
- Containers having a design capacity of less than or equal to 0.1 cubic meter (m^3) or approximately 26 gallons;
- Containers used solely for on-site management of hazardous waste placed in the Unit as a result of implementing remedial activities under corrective action authorities;
- Containers used solely for the management of radioactive mixed waste; or
- Containers equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation (20 NMAC 4.1.500/40 CFR 264.1080[b] [6-14-00].

Furthermore, a container is exempt from the 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] container standards in 20 NMAC 4.1.500/40 CFR 264.1086 [6-14-00] if:

- The hazardous waste in a container has an average volatile organic concentration at the point of waste origin of less than 500 parts per million by weight (ppmw), or

- The organic content of all hazardous waste entering a container has been reduced by an organic destruction or removal process achieving any one of the conditions specified in 20 NMAC 4.1.500/40 CFR 264.1082(c)(2)(i)-(vi) [6-14-00] (20 NMAC 4.1.500/40 CFR 264.1082 [6-14-00]).

To establish 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] applicability for a specific waste stream, a generator may follow the waste determination procedures specified in 20 NMAC 4.1.500/40 CFR 264.1083 [6-14-00] to determine the concentration of volatile organics in the waste stream at the point of generation or assume the waste is subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. If the generator elects to make the determination, the generator documents it for that waste stream, as described in Appendix B of this SNL/NM General Part B. Volatile organic-containing RCRA-regulated waste streams that are documented to contain volatile organic concentrations of less than 500 ppmw are exempt, by regulation, from the following Sandia/DOE container management requirements.

At SNL/NM, RCRA-regulated wastes that are subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements while in SNL/NM RCRA-regulated container storage or treatment Units are managed in primary containers that 1) have a design capacity of less than or equal to 0.1 m^3 or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for access for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c) (1i)-(5v) [6-14-00].

WMAs used "solely" for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" are not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements. If hazardous waste and radioactive mixed waste/remediation waste are managed in the same Unit, the wastes are segregated into separate WMAs or process areas, if possible. WMA(s) and process areas used solely for "radioactive mixed waste" or "remediation waste" management are not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements while the WMA(s) and process area(s) used for hazardous waste management are subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements. If waste types cannot be segregated into separate WMAs or process areas, all of the waste containers within a WMA or process area are managed as though they are subject to 20 NMAC 4.1.500/ 40 CFR 264, Subpart CC [6-14-00] requirements.

Releases to the atmosphere are not anticipated at any of the container storage Units because containers are kept closed during storage. The only exceptions to this practice are when, upon inspection, it is determined that a container currently in storage needs to be overpacked or repackaged in a new container, or during waste characterization activities. Overpacking or repackaging may be performed within a storage structure or in a modular containment system. A modular containment system can be equipped with an air filtration system to prevent the

release of particulates. During normal RCRA-regulated waste storage operations at SNL/NM, there are no sources of air emissions.

Additional Unit-specific information is provided in Section 1.0 of each Unit-specific Part B module.

1.2 Container Storage

The information provided in this section is submitted to address the applicable container storage requirements of 20 NMAC 4.1.900/40 CFR 270.15 [6-14-00], and 20 NMAC 4.1.500/ 40 CFR 264, Subpart I (6-14-00). The following sections provide brief descriptions of waste management practices applicable to all Units used for container storage of RCRA-regulated wastes at SNL/NM.

Additional Unit-specific information is provided in Section 1.0 of each Unit-specific Part B module.

1.2.1 Container Types and Labeling

Containers that may be used to store RCRA-regulated waste stored at Units qualify as "containers" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. That is, they are "portable devices in which a material is stored, transported, disposed of, or otherwise handled."

A number of container types are used for RCRA-regulated waste storage, depending on the type of waste and the ultimate disposition of the waste. Waste containers that may be stored at the SNL/NM Units include, but are not limited to, 30-, 55-, 83-, 85-, and 110-gallon steel, polyethylene, and fiber drums; fiberglass-reinforced plastic or plywood boxes; various steel boxes; metal overpack boxes; cardboard shipping containers; gas cylinders; roll-off bins; labpack containers; various small containers (e.g., 1-, 2-, 5-, 10-, and 20-gallon drums or pails); bags; and some oversized, irregularly-shaped containers.

RCRA-regulated waste containers are clearly labeled with the words "hazardous waste" and a description of container contents (i.e., hazardous constituents). The accumulation start date is clearly marked on each container holding RCRA-regulated waste.

1.2.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

As required by 20 NMAC 4.1.500/40 CFR 264.173(b) [6-14-00], RCRA-regulated waste containers at SNL/NM are handled in a manner that will not cause them to rupture or leak. As required by 20 NMAC 4.1.500/40 CFR 264.173(a) [6-14-00], stored containers at SNL/NM are kept closed during storage except when waste is added to or removed from a container, the contents of a container need to be repackaged, or waste is being inspected or sampled.

Waste-handling equipment is maintained and operated in accordance with manufacturers' guidance.

1.2.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

Prior to transportation or storage, additional containment is provided for each ~~a~~ container that is not in good condition (e.g., severe rusting, apparent structural defects). The container may be overpacked or the waste may be repackaged in containers that are in good condition (20 NMAC 4.1.500/40 CFR 264.171 [6-14-00]).

Containers are handled with care, maintained in good condition, and inspected according to the schedule outlined in Appendix C and Section 4 of each Unit-specific module. During storage, if a container holding RCRA-regulated waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, Unit personnel begin taking action to remediate the situation upon discovery. Remedial actions include transferring the RCRA-regulated waste ~~is transferred~~ from that container to a container that is in good condition or overpacking the container. ~~is overpacked.~~ Unit personnel begin taking action to remediate containers not in good condition upon discovery.

1.2.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

Storage configuration of containers depends upon the type of container, its size, and its weight restrictions as well as the load-bearing and/or secondary containment capacity of the specific Unit. Aisle space is maintained to enable the unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency (20 NMAC 4.1.500/40 CFR 264.35 [6-14-00]). Additional information is provided in Unit-specific modules.

1.2.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

As required by 20 NMAC 4.1.500/40 CFR 264.172 [6-14-00], only containers made of or lined with materials that will not react with and are otherwise compatible with the RCRA-regulated waste stored in them are ~~accepted and~~ managed at SNL/NM Units. Unit personnel will evaluate the compatibility of the waste to the container by considering one or more of the following as appropriate:

- Physical properties of the waste.
- Chemical properties of the original raw material(s) or commercial chemical product(s) used in the activity that generated the waste (obtained through material safety data sheets or other published information)
- Physical and chemical similarities between the waste and the original material.
- Features of the container(s) used for the original material(s), and compatibility of those features with the physical and chemical properties of the waste.
- Chemical properties of the waste (obtained through knowledge of generating processes, material safety data sheets, and/or published information)

- Data from waste characterization activities as described in Appendix B of the General Part B.
- Information about the containers being considered (supplied by manufacturers of containers).
- US DOT hazardous materials information and packaging specifications (49 CFR 172.101).

Any additional Unit-specific information is included in Section 1.3 of each Unit-specific module.

~~1.3Treatment~~

~~Sandia/DOE plan to perform limited RCRA-regulated waste treatment at some SNL/NM Units (i.e., TTF, RMWMF, AHCF). Treatment will be performed to render RCRA-regulated wastes nonhazardous and/or safer to manage on-site and/or dispose of off-site. Treatment operations requiring a permit are described in Appendix G of this SNL/NM General Part B and in Attachment G of each applicable Unit-specific module.~~

~~Handling and Treatment of Unstable Wastes~~

~~Because of the nature of Sandia/DOE activities, there are a number of chemicals that are used in various laboratories that, with age or improper storage, may become explosive, unstable, or dangerous to handle. Examples of such chemicals include unknown or damaged compressed gas or liquid cylinders; or expired, sensitized chemicals, such as picric acid, crystallized ether, tetrahydrofuran, heavy metal azides, or organic peroxides. Unit personnel may be required to handle and dispose of unstable chemicals.~~

~~If the material has deteriorated such that handling the chemical would pose an imminent and substantial threat of a release that could be harmful to human health or the environment, on-site stabilization may be performed to render the material nonhazardous. Treatment may include venting of known, nonhazardous gas cylinders or stabilizing (e.g., rehydrating) the chemical. Unknown gas cylinders are not vented to the atmosphere; however, a sample of the gas may be taken and analyzed to characterize the gas. According to 20 NMAC 4.1.500/40 CFR 264.1(g)(8) [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.1(c)(3)(i) [6-14-00], treatment of this type is exempt from permitting requirements and from 20 NMAC 4.1.500/40 CFR 264. Once the material has been stabilized and is safe to handle, it will be disposed of according to normal procedures through the appropriate Unit.~~

~~1.0~~ 2.0 SITE DESCRIPTION

SNL/NM is located on Kirtland Air Force Base immediately southeast of Albuquerque, New Mexico. General information about the SNL/NM site is included "Site-Wide Description for Sandia National Laboratories/New Mexico" in Appendix A of this SNL/NM General Part B. Additional Unit-specific information is included in Section 2.0 of each Unit-specific module .

The information in Appendix A includes: site description. security procedures, traffic patterns, location information for compliance with seismic and floodplain standards, a topographic map, and groundwater protection information.

~~1.0~~ 3.0 WASTE ANALYSIS PLAN

RCRA-regulated wastes are stored and/or treated at Sandia waste management Units. Information about waste analysis at SNL/NM is included in "Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico" in Appendix B of this SNL/NM General Part B.

The information in Appendix B includes: descriptions of waste streams, waste analysis parameters, characterization procedures, waste acceptance procedures, and special requirements.

4.0 INSPECTION PLAN

Sandia personnel inspect Unit waste management areas and associated systems on a regular basis to assure their integrity, maintenance, and safe operation. The inspection program is described in "Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" in Appendix C to this SNL/NM General Part B.

The information in Appendix C includes: daily inspection forms, weekly/monthly inspection forms, and requirements for inspection of various types of units. Unit-specific inspection plans are included in Section 4.0 of each module.

5.0 PERSONNEL TRAINING PLAN

Sandia Unit personnel receive training relevant to their positions. The training program is described in "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico" in Appendix D to this SNL/NM General Part B. Any additional Unit-specific information is included in Section 5.0 of each Unit-specific module.

The information in Appendix D includes: training content, frequency, techniques, and requirements for various waste management and Unit personnel.

6.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN

Sandia/DOE have developed emergency response and contingency measures in accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart D. The plan is described in "Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico" in Appendix E to this SNL/NM General Part B. Unit-specific information is included in Section 6.0 of each Unit-specific module.

The information in Appendix E includes: description of Sandia/DOE emergency response system, general procedures to be followed by Unit personnel in the event of an emergency, and post-emergency actions. Unit-specific information that is included in Section 6.0 of each module includes: description of the Unit, description and location of emergency equipment, and emergency coordinators.

7.0 CLOSURE PLAN

Sandia/DOE have developed closure information and plans in accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart G. The closure plan is described in "Site-Wide Closure Plan for Sandia National Laboratories/New Mexico" in Appendix F to this SNL/NM General Part B. Additional Unit-specific information is included in Section 7.0 of each Unit-specific module.

Closure information provided in Appendix F is applicable to partial closure rather than final closure of the entire SNL/NM facility. Partial closure is defined as closure of one or more Units while leaving other Units in operation. Partial closure will include removal of RCRA-regulated waste from the Unit to be closed, and decontamination or removal of structures and equipment that have been contaminated by waste materials. Such Unit closures will minimize the need for further maintenance, preclude the release of RCRA-regulated waste or constituents to environmental media, and be protective of human health.

Final closure will occur when all SNL/NM Units are closed either by waste removal and decontamination or by disposal of contaminated structures and equipment.

8.0 TREATMENT

Sandia/DOE perform and plan to perform limited RCRA-regulated waste treatment at some SNL/NM Units (i.e., TTF, RMWMF, AHCF). Treatment will be performed to render RCRA-regulated wastes nonhazardous and/or safer to manage on site and/or dispose of off site. Treatment operations requiring a permit are described in Appendix G of this SNL/NM General Part B. Additional Unit-specific information is included in ~~Attachment G~~ Section 8.0 of the Unit-specific module for each Unit where treatment is performed.

Handling and Treatment of Unstable Wastes

Because of the nature of Sandia/DOE activities, there are a number of chemicals that are used in various laboratories that, with age or improper storage, may become explosive, unstable, or dangerous to handle. Examples of such chemicals include unknown or damaged compressed gas or liquid cylinders; or expired, sensitized chemicals, such as picric acid, crystallized ether, tetrahydrofuran, heavy metal azides, or organic peroxides. Unit personnel may be required to handle and dispose of unstable chemicals.

If the material has deteriorated such that handling the chemical would pose an imminent and substantial threat of a release that could be harmful to human health or the environment, on-site stabilization may be performed to render the material nonhazardous. Treatment may include venting of known, nonhazardous gas cylinders or stabilizing (e.g., rehydrating) the chemical. Unknown gas cylinders are not vented to the atmosphere; however, a sample of the gas may be taken and analyzed to characterize the gas. According to 20 NMAC 4.1.500/ 40 CFR 264.1(g)(8) [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.1(c)(3)(i) [6-14-00], treatment of this type is exempt from permitting requirements and from 20 NMAC 4.1.500/40 CFR 264. Once the material has been stabilized and is safe to handle, it will be disposed of according to normal procedures through the appropriate Unit.

~~APPENDIX H~~

~~SITE-WIDE RECORDKEEPING AND REPORTING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS~~

~~TABLE OF CONTENTS~~

~~ACRONYMS AND ABBREVIATIONS ..... SW-H-ii~~
~~H.1 Hazardous Waste Report ..... SW-H-2~~
~~H.2 Unmanifested Waste Report ..... SW-H-3~~
~~H.3 Additional Reports ..... SW-H-3~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 40, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2XX, Section 2*XX.XX*~~
~~DOE~~	~~U.S. Department of Energy~~
~~EPA~~	~~U.S. Environmental Protection Agency~~
~~NMED~~	~~New Mexico Environment Department~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~Sandia~~	~~Sandia Corporation~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~

~~SITE-WIDE RECORDKEEPING AND REPORTING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS~~

9.0 RECORDKEEPING

The information provided in this ~~appendix~~ section is submitted to address the applicable requirements of ~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V (~~20 NMAC 4.1.500~~), adopting by reference the Code of Federal Regulations, Title 40, Part 264 (~~/40 CFR 264~~),~~ Subpart E, ~~revised June 14, 2000~~ [6-14-00]. ~~This appendix contains the recordkeeping and reporting requirements for Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE) as co-operators of Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act (RCRA)-regulated waste management units (Units).~~ The following Unit-specific records are maintained by Sandia/DOE at each Unit unless specified otherwise in each Unit-specific Part B module.

- A current copy of sections of SNL/NM General Part B permit renewal request/application (or permit upon issuance) that govern Unit operations, including the site-wide waste analysis (Appendix B), inspection (Appendix C), training (Appendix D), contingency (Appendix E), and treatment (Appendix G) plans;
- A written operating record that describes:
  - the type and quantity of each RCRA-regulated waste received
  - the location of RCRA-regulated wastes and the quantity at each location
  - the method(s) and dates of storage and/or treatment of the RCRA-regulated waste
  - records and results of RCRA-regulated waste analyses and determinations
  - reports of any incidents that required activation of the Contingency Plan
  - inspection forms for the last three years
  - monitoring, testing, or analytical data and records of corrective actions taken (in the previous or current calendar year) to prevent or mitigate releases of RCRA-regulated waste to the environment
  - treatment notice and certification (as specified in 20 NMAC 4.1.800/40 CFR 268.7(b), (d), and (e) or 268.~~9~~8(d) [6-14-00])
  - ~~storage notice and certification (as specified in 20 NMAC 4.1.800/40 CFR 268.7 or 268.8 [6-14-00]);~~

- Training records for current personnel;
- Written inspection schedule; and
- Air emissions records (as specified in 20 NMAC 4.1.500/40 CFR 264.1064 and 264.1089 [6-14-00]).

The following records are maintained at the SNL/NM Records Center, currently located in Building 869:

- A copy of the SNL/NM General Part B permit renewal request/application (or permit upon issuance);
- Correspondence and other documents from government agencies;
- Notices to off-site generators (as specified in 20 NMAC 4.1.500/40 CFR 264.12[b] [6-14-00]);
- Waste minimization certification;
- Training records for former employees (maintained for a minimum of three years from the date the employee last worked at a Unit);
- Manifest documents for RCRA-regulated waste shipped off site;
- A copy of the Hazardous Waste Report (Biennial Report);
- Copies of unmanifested waste reports;
- Certification and documentation that the Unit and any associated closed-vent system, control system, and containers meet the specifications of 20 NMAC 4.1.500/40 CFR 264.1089 [6-14-00]; and
- Superseded versions of the SNL/NM General Part B permit renewal request/application, the permit, Contingency Plan, Inspection Plan, Waste Analysis Plan, Treatment Plan, and Training Plan.

9.1 ~~H.1~~ Hazardous Waste Report (Biennial Report; 20 NMAC 4.1.500/40 CFR 264.75 and 20 NMAC 4.1.300/40 CFR 262.41)

Sandia/DOE will prepare and submit a hazardous waste report (biennial report) to the New Mexico Environment Department (NMED) by March 1 of each even-numbered year as required by 20 NMAC 4.1.500/40 CFR 264.75 and 20 NMAC 4.1.300/40 CFR 262.41 [6-14-00]. The hazardous waste report (biennial report) will be submitted to the NMED on U.S. Environmental Protection Agency (EPA) Form 8700-13A/B (revised June 2000 or update) unless directed otherwise. The report will cover SNL/NM Unit activities during the previous calendar year and will include:

- The EPA identification number, name, and address of the facility;
- The calendar year(s) covered by the report;
- A description and the quantity of each RCRA-regulated waste received at each unit during the year;
- The method of treatment, storage, or disposal for each RCRA-regulated waste;
- For generators who treat, store, or dispose of RCRA-regulated waste on site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;
- For generators who treat, store, or dispose of RCRA-regulated waste on site, a description in the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and
- The certification signed by Sandia/DOE or an authorized representative.

9.2 ~~H.2~~ Unmanifested Waste Report (20 NMAC 4.1.500/40 CFR 264.76)

Waste from off-site sources may be accepted at SNL/NM, provided that such waste is properly characterized and manifested and meets the requirements listed in Section B.5 of Appendix B of this permit renewal request/application. If Sandia/DOE accepts any wastes for treatment or storage from an off-site facility without an accompanying manifest, or without an accompanying shipping paper as described in 20 NMAC 4.1.500/40 CFR 264.76 [6-14-00], Sandia/DOE will prepare and submit an Unmanifested Waste Report (EPA Form 8700-13B) to the NMED within fifteen days after receiving the waste. The report will include the following:

- The EPA identification number, name, and address of the facility;
- The date the Unit received the waste;
- The EPA identification number, name, and address of the generator and transporter, if available;
- A description and the quantity of each unmanifested RCRA-regulated waste and facility received;
- The method of treatment, storage, or disposal for each RCRA-regulated waste;
- The certification signed by Sandia/DOE or an authorized representative; and
- A brief explanation of why the waste was unmanifested, if known.

9.3 ~~H.3~~ Additional Reports (20 NMAC 4.1.500/40 CFR 264.77)

In accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264.77 [6-14-00], SNL/NM will also report the following to the NMED:

- Releases, fires, and explosions as specified in 20 NMAC 4.1.500/40 CFR 264.56(j) [6-14-00];
- Unit closures specified in 20 NMAC 4.1.500/40 CFR 264.115 [6-14-00];
- Manifest discrepancies that cannot be resolved within 15 days after receiving the waste as required by 20 NMAC 4.1.500/40 CFR 264.72(b) [6-14-00];
- Occurrence(s), if any, when RCRA-regulated waste is placed in a container in noncompliance with conditions specified in 20 NMAC 4.1.500/40 CFR 264.1090[a] [6-14-00] (20 NMAC 4.1.500/40 CFR 264.1082[c][1] or [2] [6-14-00]); and
- As otherwise required by 20 NMAC 4.1.500/40 CFR 264, Subparts F, BB, and CC [6-14-00].

~~2.0~~ 10.0 OTHER FEDERAL LAWS

The following federal laws are required under 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], to be given consideration when applying for a hazardous waste facility permit. When any of these laws is applicable, its procedures must be followed. Requirements and applicability of each law are briefly summarized.

1. *The Wild and Scenic Rivers Act (16 United States Code [USC] 1273 et seq.).* This act provides for a national wild and scenic rivers system and prohibits construction of water resources projects that would have a direct adverse impact on wild and scenic river values. The Rio Grande, the closest river to SNL/NM Units at a distance of approximately 7 miles, is designated as a wild and scenic river. SNL/NM Unit operations do not involve any water resources project construction or development. Therefore, the Wild and Scenic Rivers Act does not apply.

2. *The National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq.).* This act establishes a program for the preservation of the nation's cultural resources including historic properties. Cultural resource investigations have recorded approximately 37 eligible and potentially eligible cultural properties in areas used by Sandia/DOE on Kirtland Air Force Base (KAFB) (Table 3). In addition, some Sandia/DOE structures on KAFB land could have Cold War significance or are approaching 50 years of age; these are in the process of being evaluated for potential inclusion in the National Register.

Table 3
Cultural Properties Used by Sandia/DOE on Kirtland Air Force Base

Land Jurisdiction	Cultural Properties		
	Eligible	Potentially Eligible	Total
USAF/USFS withdrawn: Sandia/DOE joint use	8	9	17
USAF: Sandia/DOE/Others joint use	15	5	20
Total	23	14	37

DOE = U.S. Department of Energy
Sandia = Sandia Corporation
USAF = U.S. Air Force
USFS = U.S. Forest Service

The NHPA has been amended by the Archeological and Historic Preservation Act *(16 USC 469a et seq.)*, which directs federal agencies to recover and preserve historic and archeological data that would otherwise be lost as a result of federal construction or other activities. It has also been amended by the Archeological Resources Protection Act (ARPA) (*16 USC 470aa et seq.*), which requires a permit from the U.S. Department of the Interior (DOI) for excavation or removal of archeological resources from public or pueblo lands. Both of these statutes apply to known or future cultural properties recorded on KAFB land used by Sandia/DOE. Any excavations conducted on, or removal of archaeological resources from, KAFB land used by Sandia/DOE require an ARPA permit obtained through the DOI, National Park Service.

3. *The Endangered Species Act of 1973 (16 USC 1531 et seq.).* This act provides for the protection of endangered and threatened species of flora and fauna. The act prohibits any action that would jeopardize the continued existence of any endangered or threatened species or its critical habitat. There are no federally-listed threatened or endangered species in the vicinity of SNL/NM Units. Consequently, neither formal consultation nor biological opinion processes have been required for SNL/NM Unit operations by the U.S. Fish and Wildlife Service under Section 7 of the Act.

4. *The Coastal Zone Management Act of 1972 (16 USC 1451 et seq.).* This act establishes national policy for the management, use, protection, and development of land and water resources of the nation's coastal zones. Section 307(c) of the act and implementing regulations prohibit the EPA from issuing a permit for activity affecting coastal zone land or water without the certification from the applicant that the activity is in compliance with the state Coastal Zone Management Program. As an inland state, New Mexico does not have a State Coastal Zone Management Program with which Sandia/DOE must comply. None of the SNL/NM Units are located in an affected area (i.e., a coastal zone); therefore, the act does not apply.

5. *The Fish and Wildlife Coordination Act of 1934, as amended (16 USC 661-666c).* This act provides for the protection of fish and wildlife resources potentially affected by development projects that modify any stream or other body of water 10 acres or greater in size. Because there are no natural bodies of surface water proposed for modification by SNL/NM Unit activities, the Fish and Wildlife Coordination Act does not apply.

Consideration will be given to Executive Orders, issued by the President, that are relevant to RCRA-regulated waste management activities at SNL/NM.

~~3.0~~ 11.0 CORRECTIVE ACTION

In accordance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], information on solid waste management units is presented in Part 4 of this comprehensive Part B permit request. Solid waste management units are shown on Figure 1 in Part 4.

~~4.0~~ 12.0 CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Donald H. Blanton
Vice President, Human Resources and Protection Services
Sandia Corporation
Albuquerque, New Mexico
Co-Operator

Date Signed

Karen L. Boardman~~Michael J. Zamorski~~
Manager~~Director~~
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office ~~of Kirtland Site Operations~~
Albuquerque, New Mexico
Owner and Co-Operator

Date Signed

5.0 13.0 REFERENCES

Bretherick's Handbook of Handbook of Reactive Chemical Hazards, 5th Edition, 1995. P.G. Urben, Editor. Butterworth-Heinemann

Hoagland, S.R., 1991, "A Cultural Resources Survey Conducted in the Vicinity of the Sandia National Laboratories Burn Site, KAFB, New Mexico," CGI Project No. 8067 AF.CR, Chambers Group, Inc., Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/ New Mexico General Part A Permit Renewal Request/Application, Revision 3.0," Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. US Department of Health and Human Services, National Institute for Occupational Safety and Health.

APPENDIX A

SITE-WIDE DESCRIPTION FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-A-ii
LIST OF FIGURES ..... SW-A-iiiii
ACRONYMS AND ABBREVIATIONS ..... SW-A-iiiiv
A.1 GENERAL SITE DESCRIPTION SW-A-1
A.2 SECURITY PROCEDURES AND EQUIPMENT SW-A-3
A.2.1 Barriers and Means to Control Entry SW-A-3
A.2.2 Warning Signs SW-A-3
A.3 TRAFFIC PATTERNS, VOLUMES, AND CONTROLS SW-A-4
A.3.1 Traffic Patterns SW-A-4
A.3.2 Traffic Volumes SW-A-4
A.3.3 Traffic Control Signals SW-A-5
A.4 SITE LOCATION INFORMATION SW-A-5
A.4.1 Geologic Setting SW-A-5
A.4.2 Seismic Standard SW-A-6
A.4.3 Floodplain Standard SW-A-6
A.5 TOPOGRAPHIC MAPS SW-A-6
A.5.1 Wells SW-A-7
A.5.2 Wind Rose SW-A-7
A.5.3 Surrounding Land Use SW-A-7
A.5.4 Drainage Control Features SW-A-8
A.5.5 Waste Management Areas SW-A-9
A.6 GROUNDWATER MONITORING SW-A-9
A.7 OTHER PERMIT ACTIVITIES SW-A-9
REFERENCES SW-A-10
~~A.1 GENERAL SITE DESCRIPTION ..... SW-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... SW-A-3~~
~~A.2.1 Barriers and Means to Control Entry ..... SW-A-3~~
~~A.2.2 Warning Signs ..... SW-A-3~~
~~A.3 TRAFFIC PATTERNS, VOLUMES, AND CONTROLS ..... SW-A-4~~
~~A.3.1 Traffic Patterns ..... SW-A-4~~
~~A.3.2 Traffic Volumes ..... SW-A-4~~
~~A.3.3 Traffic Control Signals ..... SW-A-5~~
~~A.4 SITE LOCATION INFORMATION ..... SW-A-5~~
~~A.4.1 Geologic Setting ..... SW-A-5~~
~~A.4.2 Seismic Standard ..... SW-A-6~~
~~A.4.3 Floodplain Standard ..... SW-A-6~~
~~A.5 TOPOGRAPHIC MAPS ..... SW-A-6~~
~~A.5.1 Wells ..... SW-A-7~~
~~A.5.2 Wind Rose ..... SW-A-7~~
~~A.5.3 Surrounding Land Use ..... SW-A-8~~
~~A.5.4 Drainage Control Features ..... SW-A-9~~
~~A.5.5 Waste Management Areas ..... SW-A-9~~
~~A.6 GROUNDWATER MONITORING ..... SW-A-9~~
~~A.7 OTHER PERMIT ACTIVITIES ..... SW-A-9~~
~~REFERENCES ..... SW-A-9~~

LIST OF TABLES

Table No.	Title
A-1	Location of RCRA-Regulated Waste Management Units

LIST OF FIGURES

Figure No.	Title
A-1	Site Location Map, Albuquerque and Kirtland Air Force Base (KAFB)
A-2	Unit Location Map, Sandia National Laboratories/New Mexico
A-3	Sandia National Laboratories/New Mexico Technical Areas (TAs) in Relation to Kirtland Air Force Base
A-4	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes, Sandia National Laboratories/New Mexico
A-5	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes Around Technical Area I
A-6	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes in Technical Areas III and V
A-7	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes at Manzano Base
~~A-8~~	~~Average Annual Wind Direction Near Resource Conservation and Recovery Act-Regulated Waste Management Units (2000)~~
~~A-9~~	~~Land Uses Adjacent to Sandia National Laboratories/New Mexico and Kirtland Air Force Base~~
A-~~8~~~~10~~	Land Uses Adjacent to and Within Kirtland Air Force Base (including Sandia National Laboratories/New Mexico)
A-~~9~~~~11~~	Geologic Features in Relation to Sandia National Laboratories/New Mexico

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
AHCF	Auxiliary Hot Cell Facility
DOE	U.S. Department of Energy
ft	foot/feet
HBWSF	High Bay Waste Storage Facility
HWMF	Hazardous Waste Management Facility
KAFB	Kirtland Air Force Base
MSB	Manzano Storage Bunkers
RCRA	Resource Conservation and Recovery Act
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
TA	Technical Area
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
USFS	U.S. Forest Service

SITE-WIDE DESCRIPTION FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

The information provided in this appendix is submitted in accordance with the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (20 NMAC 4.1.100–.900), revised June 14, 2000 [6-14-00].~~ 20 NMAC 4.1.100–.900 [6-14-00] ~~adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270~~)~~. The following subject areas are addressed in this appendix or in Section 2 of ~~are referenced to Attachment A in~~ each ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific module.

- A general description of the Sandia National Laboratories/New Mexico (SNL/NM) site (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);
- Site-wide security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Site-wide traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Site location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Site-wide topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]).
- Site-wide groundwater monitoring and protection information (20 NMAC 4.1.900/40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]); and
- Other permit activities.

~~Unit-specific descriptions addressing these regulatory requirements are provided in Attachment A of each Unit-specific module. Table A-1 lists Unit-specific modules and the corresponding SNL/NM Units co-operated by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE).~~ Together, the information in this appendix and in each Unit-specific Part B module meets the applicable regulatory requirements. Individual Units are listed in Table A-1.

For the purposes of this permit renewal request/application, SNL/NM (the facility) is owned by DOE and co-operated by Sandia and DOE.

A.1 GENERAL SITE DESCRIPTION (20 NMAC 4.1.900/40 CFR 270.14[b][1])

SNL/NM is located on Kirtland Air Force Base (KAFB) immediately southeast of the Albuquerque~~, New Mexico,~~ city limits in Bernalillo County, New Mexico. SNL/NM occupies an area of approximately 2,842 acres within ~~the eastern portion of~~ the 80-square-mile KAFB~~Kirtland Air Force Base (KAFB)~~ (Figure A-1).

Table A-1
Location of RCRA-Regulated Waste Management Units

Unit Name	Acronym	Location, size	Types of operations	Operating Status
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II, 1.35 acres	Storage, Repackaging	Existing, operational
Thermal Treatment Facility	TTF	Northern part of TA-III, 196 square feet	Treatment	Existing, on standby
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III, 3.11 acres	Storage, Treatment, Repackaging	Existing, operational
High Bay Waste Storage Facility	HBWSF	TA-V, 5670 square feet	Storage	Existing, operational
Auxiliary Hot Cell Facility	AHCF	TA-V, 5578 square feet	Storage, Treatment, Repackaging	Existing, expected to start operations in 2003
Manzano Storage Bunkers (Set of seven Units)	MSB	In Manzano Area on KAFB, 0.4 acres occupied by bunkers (approximately 1600 to 2100 square feet in each bunker)	Storage	Existing, operational

~~**Table A-1**~~
~~**Part B Permit Renewal Request/Application Modules and Corresponding Units**~~

~~Module Number~~	~~Unit Name~~	~~Acronym~~
~~I~~	~~Hazardous Waste Management Facility~~	~~HWMF~~
~~II~~	~~Thermal Treatment Facility~~	~~TTF~~
~~III~~	~~Radioactive and Mixed Waste Management Facility~~	~~RMWMF~~
~~IV~~	~~High Bay Waste Storage Facility~~	~~HBWSF~~
~~V~~	~~Auxiliary Hot Cell Facility~~	~~AHCF~~
~~VI~~	~~Manzano Storage Bunkers~~	~~MSB~~

SNL/NM (U.S. Environmental Protection Agency Identification Number NM5890110518) is a multidisciplinary laboratory engaged in research and development of weapons and alternative energy sources. SNL/NM is managed by Sandia, a wholly-owned subsidiary of Lockheed Martin, for the DOE, with work also performed for others. Activities at SNL/NM fall under North American Industry Classification System Numbers 92811 (National Security) and 54171 (Research and Development in the Physical, Engineering, and Life Sciences).

The major Sandia/DOE research and administration functions are located at five Technical Areas (TAs), designated I through V. TAs I, II, and IV are located north of Tijeras Arroyo and Arroyo del Coyote (Figures A-2 and A-3). TAs III and V occupy contiguous tracts of land south of Tijeras Arroyo and west of Arroyo del Coyote.

A.2 SECURITY PROCEDURES AND EQUIPMENT (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

In accordance with 20 NMAC 4.1.500/40 CFR 264.14(a) [6-14-00], an owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of a facility. The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of Units.

A.2.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]~~,~~ and ~~20 NMAC 4.1.900/40 CFR 270.14(b)(4) and~~ 270.14[b][19][viii] [6-14-00], require that security be provided by 24-hour surveillance which is continuously monitored and controls access to the facility (20 NMAC 4.1.500/40 CFR 264.14[b][1] [6-14-00]), or if that requirement cannot be met, a natural or artificial barrier and means to control entry must be provided (20 NMAC 4.1.500/40 CFR 264.14[b][2] [6-14-00]). The design and operation of the SNL/NM facility fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The five TAs, Manzano Base, and Units outside TAs are surrounded by fences that prohibit access except through gated entrances. Only personnel with appropriate Sandia-issued access badges and identification, or escorted visitors, are allowed access to the TAs and all Units. The gates and/or doors to all Units are closed and locked during non-operating hours.

~~The existence of a barrier (i.e., fence) and a means to control entry (i.e., controlled gates) demonstrate compliance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~ Sandia security personnel periodically monitor the gates of all SNL/NM technical areas and RCRA-regulated waste management Units during non-operational hours. Any additional Unit-specific information on security procedures and access control is provided in ~~Attachment A of~~ each Unit-specific module.

The SNL/NM Units are located within the fenced ~~and guarded/patrolled~~ boundaries of KAFB. Access to KAFB is controlled 24 hours per day, 7 days per week. Entrance is possible only though five gates, staffed by armed military police, upon recognition of identification stickers or passes issued to each vehicle. Visitors must have a base sponsor and sign an entry log prior to entering the base. The gates are shown in Figure A-4. ~~restricted to authorized personnel and visitors who must enter through one of six KAFB gates that are monitored or locked 24 hours per day.~~

A.2.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

20 NMAC 4.1.500/40 CFR 264.14(c) [6-14-00], requires that signs meeting the requirements of that section be posted. Each SNL/NM Unit is posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs in English and Spanish. The signs are legible from a distance of 25 feet and can be seen from any approach to any Unit. The signs and their placement meet the requirements of 20 NMAC 4.1.500/40 CFR 264.14(c) [6-14-00]. Any additional Unit-specific information on warning signs is provided in ~~Attachment A of~~ each Unit-specific module.

A.3 TRAFFIC PATTERNS, VOLUMES, AND CONTROLS (20 NMAC 4.1.900/ 40 CFR 270.14[b][10])

The traffic pattern information presented below is general in nature. More detailed information is provided in Section 2.2 of ~~Attachment A of~~ each Unit-specific module.

RCRA-regulated waste is generated during operations at sites throughout SNL/NM. Because RCRA-regulated waste may be generated throughout SNL/NM, waste transport may occur on nearly all roads within KAFB. Off-site wastes may be received at SNL/NM (see ~~Section B.5 in~~ Appendix B of this SNL/NM General Part B). The Units included in this permit application can be reached from the KAFB entrance gates at Wyoming Boulevard, Truman Avenue, Gibson Boulevard, or Eubank Boulevard (Figure A-4). KAFB may restrict hazardous material traffic to one or more gates.

A system of interior roads, as shown in Figures A-4, A-5, A-6, and A-7, is maintained at SNL/NM. About 78 total miles of roadway exist; 33 of those miles are paved. The paved roads present at SNL/NM are generally built in conformance to the New Mexico State Highway Standards or the "City of Albuquerque Development Process Manual, Standards for Residential Streets" (City of Albuquerque, 1983 and amendments). These standards conform to specifications prepared by the American Association of State Highway Transportation Officials. Paved roads at SNL/NM are generally designed and constructed to accommodate light to moderate volumes of truck traffic, including 30- to 40-ton vehicles. The roads typically consist of a 1.5 - to 4-inch layer of asphaltic pavement over a 4- to-6 inch base course (not always present) and 8- to 12-inch compacted subgrade.

A.3.1 Traffic Patterns

Information addressing current Unit-specific travel routes is presented in Section 2.2 of ~~Attachment A of~~ each Unit-specific module. Traffic patterns are subject to change in response to KAFB security requirements.

A.3.2 Traffic Volumes

During the last official traffic study conducted at KAFB in 1984, the average number of vehicles passing through the continuously guarded KAFB gates during normal workday hours from Monday through Friday was estimated to be (Meyers, 1991):

- Carlisle-Gibson gate—5,200 vehicles
- Truman-Gibson gate—10,200 vehicles
- Louisiana-Gibson gate—18,000 vehicles
- Wyoming gate—21,600 vehicles
- Eubank gate—12,200 vehicles.

The majority of the 67,200 total vehicles consisted of commuting employees in personal automobiles and light-duty trucks. At the time of the traffic study, about 8,400 people were

employed at SNL/NM (including Sandia personnel and contractors) and an estimated additional 21,000 people were employed at adjoining KAFB and DOE facilities (Jackson, 1991). SNL/NM currently employs about 6,450 people and an additional 17,000 are employed at KAFB and DOE facilities (Francis, 2001). The KAFB Security Forces squadron estimates that 40,000 to 50,000 vehicles currently pass through KAFB gates daily (Francis, 2001).

Therefore, Sandia/DOE believes the 1984 traffic data slightly overestimate the traffic volume for 2001.

A.3.3 Traffic Control Signals

~~Sitewide~~Site wide traffic flow on KAFB is controlled by traffic lights, stop signs, yield signs, and one-way streets. Traffic lights are in place at major intersections on KAFB. Traffic signs are used at "T" intersections throughout KAFB, including SNL/NM. Any additional Unit-specific information addressing traffic control is presented in Section 2.2 of ~~Attachment A of~~ each Unit-specific module.

A.4 SITE LOCATION INFORMATION (20 NMAC 4.1.900/40 CFR 270.14[b][11])

A.4.1 Geologic Setting (20 NMAC 4.1.500/40 CFR 264.18[a] and 20 NMAC 4.1.900/40 CFR 270.14[b][11])

SNL/NM is located along the east-central edge of the Albuquerque Basin, one of a north-south-trending series of basins that make up the Rio Grande Rift. The Sandia, Manzanita, and Manzano Mountains, which are uplifted fault blocks, form the eastern boundary of the basin. The Lucero uplift bounds the west side of the basin, the Ladron Mountains bound the south side, and there is limited topographic relief on the northwest side of the basin. The basin is approximately 100 miles long and 20 to 40 miles wide (Figure A-9~~11~~).

The eastern section of the Albuquerque Basin shows major faulting (Figures A-2 and A-9~~11~~). The Hubbell Springs, Sandia, and Tijeras faults form a series of down-dropped blocks to the west (SAIC, 1985; Machette, 1982; Grant, 1981; Kelley, 1977).

The Tijeras Fault zone trends northeast from SNL/NM through Tijeras Canyon. The fault zone consists of several subparallel faults with near-vertical dips and show normal and left lateral displacement (Maynard et al., 1991; Lisenbee et al., 1979).

Within the boundaries of KAFB, the Albuquerque Basin rocks are Precambrian to Holocene in age. The upper part of the basin fill within KAFB is comprised of the Ceja Member of the Tertiary Santa Fe Group, which is a complex sequence of gravel, sand, silt, clay, and caliche deposits. Quaternary and Holocene deposits, which include alluvium, landslide deposits, eolian deposits, caliche, and gravel pediments, also comprise Albuquerque Basin sediments within KAFB (Kelley, 1977).

A.4.2 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

SNL/NM is located in Bernalillo County, New Mexico, which is listed in Appendix VI of 20 NMAC 4.1.500/40 CFR 264 [6-14-00]. None of the SNL/NM Units are located within 3,000 feet (ft) of any fault with Holocene displacements (Machette, 1982). Therefore, all SNL/NM Units are compliant with the seismic standards in 20 NMAC 4.1.500/40 CFR 264.18(a) [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(11)(ii) [6-14-00]. ~~, are not applicable to these Units.~~

A.4.3 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii through v]; 20 NMAC 4.1.500/40 CFR 264.18[b])

SNL/NM is located near the middle of the upper Rio Grande basin that originates in southern Colorado. SNL/NM occupies generally flat, gently west-sloping mesa land located between the Rio Grande Valley to the west and the Manzano and Manzanita Mountains to the east. The nearest surface water body is the Rio Grande, located about 7 miles west of SNL/NM.

The locations of the 100-year floodplains of Tijeras Arroyo and Arroyo del Coyote are shown in Figure A-2. 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. None of the SNL/NM Units are located within a 100-year floodplain, as defined in 20 NMAC 4.1.500/40 CFR 264.18(b)(2)(i) [6-14-00], and as regulated under 20 NMAC 4.1.500/40 CFR 264.18(b)(1) [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(11)(iv) [6-14-00]. Therefore, all SNL/NM Units are compliant with the floodplain standards. ~~floodplain regulations are not applicable to these Units.~~

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

Figure A-2 is provided to meet the requirements of the 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Figure A-2 is a topographic map of KAFB that shows the SNL/NM TAs and includes the following:

- Map scale and date
- The 100-year floodplain area
- Surface water bodies, including intermittent streams
- ~~A~~ Wwind roses
- Map orientation (north arrow)
- Legal boundaries of the SNL/NM facility

- Access control features (i.e., fences and gates)
- Groundwater monitoring, withdrawal, and water supply wells both on site and off site at KAFB and SNL/NM in the vicinity of the Units
- Buildings and other structures (e.g., access and internal roads)
- Locations of the HWMF, TTF, RMWMF, HBWSF, AHCF, and MSB.
- Areas of residential land use within KAFB.

These items are also shown on topographic maps in the Unit-specific modules. The Unit-specific maps show Unit features and the area surrounding each Unit in greater detail.

A.5.1 Wells (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix])

There are no injection wells at SNL/NM. Groundwater monitoring wells and withdrawal wells located at SNL/NM are shown in Figure A-2. None of the ~~se~~ wells shown in Figure A-2 are expected to be influenced by activities at any SNL/NM RCRA-regulated waste management Units because waste management activities occur in contained areas. KAFB water-supply wells, City of Albuquerque wells, and other wells located within 1,000 ft of the KAFB boundaries are shown on Figure A-2.

A.5.2 Wind Rose (20 NMAC 4.1.900/40 CFR 270.14[b][19][v])

A network of meteorological towers is used to monitor weather conditions at SNL/NM. Data indicate that the prevailing winds at SNL/NM are from the east, except that winter winds at the 100-ft elevation are from the north. Rapid night time ground cooling after sunset on cloudless or near-cloudless nights produces strong temperature inversions in which temperature increases with elevation (an atmospheric condition resulting from a reversal of the normal temperature lapse rate). This rapid cooling effect generates drainage winds (i.e., katabatic winds) out of the mountains, which are strongest at the mouths of the larger canyons. It also appears that Tijeras Arroyo diverts surface air flow between TAs III and V on the south and TAs I, II, and IV, and Albuquerque on the north. The channeling of wind through Tijeras Canyon can be seen by comparing the wind roses from these two areas. Figure A-2 ~~Figure A-8~~ shows wind roses that summarize wind speeds and directions for TA-II (near the HWMF), the southeast corner of TA-III (near the RMWMF), and the northeast corner of TA-III (near the HBWSF, AHCF, and TTF). Wind roses are also shown on the Unit-specific topographic maps.

A.5.3 Surrounding Land Use (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv])

Albuquerque is the largest population center in Bernalillo County and also the closest population center to KAFB and SNL/NM. According to Census 2000 data, the total population of the Albuquerque metropolitan area is 448,607 (U.S. Census Bureau, 2000). This population includes permanent residents of KAFB living in the KAFB housing areas. An additional 108,071 people live

outside the Albuquerque metropolitan area but within Bernalillo County (U.S. Census Bureau, 2000).

SNL/NM is essentially surrounded by KAFB, with co-use agreements on some portions of KAFB. An additional 22,500-acre area to the east of KAFB has been withdrawn from the U.S. Forest Service (USFS) for the exclusive use of KAFB. High explosive tests, explosives storage, and other operations are buffered and barricaded by the mountainous terrain toward the eastern edge of this withdrawal area. Areas to the west and south, by agreements with the State of New Mexico and Isleta Pueblo, serve as buffer zones for other test operations.

Land use in the vicinity of SNL/NM and KAFB is urban to the northwest, north, and northeast. Undeveloped grazing land of Isleta Pueblo is located to the south. Undeveloped public grazing land lies to the west and southwest of KAFB and the buffer zones.

The urbanized area immediately northeast, north, and northwest of SNL/NM is predominantly residential, with commercial development along more heavily-traveled streets. Military (i.e., KAFB) housing is located north of F Street (adjacent to the northern edge of SNL/NM TA-I). Additional military housing is located west of Pennsylvania Avenue, north of Hardin Blvd (west of SNL/NM TA-1), as shown on Figure A-2. Albuquerque International Sunport is located west of the northern part of KAFB. Figures A-89 ~~and A-10~~ shows land uses for the areas adjacent to and within KAFB boundaries.

The SNL/NM facility is comprised of five TAs and several additional test areas spread over 17,845 acres which are under diverse land ownership. SNL/NM occupies 2,842 acres owned by the DOE and an additional 15,003 acres that have been made available through a series of land-use agreements or permits among DOE-Albuquerque Operations, DOE Transportation Safeguards Division, KAFB, USFS, Bureau of Land Management, State of New Mexico, Phillips Laboratory (a private contractor), DOE Central Training Academy, and Isleta Pueblo.

The HWMF is approximately 2 miles south of Interstate 40 and 6 miles east of Interstate 25 and downtown Albuquerque. At their nearest points, the HBWSF, the AHCF, and the TTF are approximately 3 miles south of Interstate 40 and 6.5 miles east of Interstate 25 and downtown Albuquerque. The MSB are approximately 5 miles south of Interstate 40 and 7.5 miles east of Interstate 25 and downtown Albuquerque. The RMWMF is approximately 5.5 miles south of Interstate 40 and 6.5 miles east of Interstate 25 and downtown Albuquerque. Land use in the vicinity of each RCRA-regulated Unit is predominantly or completely industrial. There are no residential areas within 1 mile of any of the SNL/NM Units. The closest residences are in Zia Park, a KAFB residential area located approximately 1 mile west of TA-I and approximately 3.9 miles north-northwest of TA-V.

A.5.4 Drainage Control Features (20 NMAC 4.1.900/40 CFR 270.14(b)(8)(ii)

Drainage control features (e.g., run-on/runoff, drainage barriers, storm water discharge) are shown on figures provided in each Unit-specific module.

A.5.5 Waste Management Areas

Locations of the waste management areas at each SNL/NM Unit are shown on figures provided in each Unit-specific module.

A.6 GROUNDWATER MONITORING (20 NMAC 4.1.900/40 CFR 270.14[c] and 20 NMAC 4.1.500/40 CFR 264.90[a])

The 12~~six~~ SNL/NM Units included in Part 2 of this Sandia/DOE comprehensive Part B permit request are storage and/or treatment Units that are subject to 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00] which requires that operators of treatment, storage, or disposal facilities develop and implement corrective actions as necessary to protect human health and the environment from past, present, or future releases of RCRA-regulated wastes. None of the 12~~six~~ storage and/or treatment Units addressed in Part 2 have released RCRA-regulated wastes in the past.

The 12~~six~~ Units are not subject to the groundwater protection and monitoring requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart F [6-14-00] because they are not regulated units or solid waste management units.

SNL/NM currently has one regulated unit (the Chemical Waste Landfill) that is subject to the groundwater protection and monitoring requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart F [6-14-00]. Chemical Waste Landfill groundwater monitoring is addressed in Part 3 of this Sandia/DOE comprehensive Part B permit request.

A.7 OTHER PERMIT ACTIVITIES

Sandia/DOE hold numerous environmental permits issued by various agencies. Current permits, including RCRA permits, are listed in Appendix A of the General Part A included in Part 1 of this comprehensive Part B renewal request.

REFERENCES

City of Albuquerque, 1983 and amendments, "Development Process Manual," Albuquerque, New Mexico.

COE, see U.S. Army Corps of Engineers.

Francis, R. L., 2001, Kirtland Air Force Base, Public Affairs, Albuquerque, New Mexico, Personal Communication to K. L. Peters, IT Corporation, Albuquerque, New Mexico.

Grant, P. R., 1981, "Geothermal Potential on Kirtland Air Force Base Lands, Bernalillo County, New Mexico," SAND81-7141, Sandia National Laboratories, Albuquerque, New Mexico.

Jackson, M., 1991, Kirtland Air Force Base, Public Affairs, Albuquerque, New Mexico, Personal Communication to B. A. Sladek, IT Corporation, Albuquerque, New Mexico.

Kelley, V. C., 1977, "Geology of the Albuquerque Basin, New Mexico," Memoir 33, New Mexico Bureau of Mines and Mineral Resources, Socorro, New Mexico.

Lisenbee, A. L., L. A. Woodward, and J. R. Connolly, 1979, "Tijeras-Canoncito Fault System—A Major Zone of Recurrent Movement in North-Central New Mexico," New Mexico Geological Society Guidebook 30, pp. 89–99.

Machette, M. N., 1982, "Quaternary and Pliocene Faults in the La Jencia and Southern Part of the Albuquerque-Belen Basins, New Mexico: Evidence of Fault History from Fault-Scarp Morphology and Quaternary Geology," New Mexico Geological Society Guidebook, 33rd Field Conference, Albuquerque Country II, pp. 161-169.

Maynard, S. R., L. A. Woodward, and D. L. Giles, 1991, "Tectonics, Intrusive Rocks, and Mineralization of the San Pedro-Ortiz Porphyry Belt, North-Central New Mexico," New Mexico Bureau of Mines and Mineral Resources Bulletin 137, pp. 57–69, Socorro, New Mexico.

Meyers, L., 1991, Kirtland Air Force Base, Construction and Engineering Department, Albuquerque, New Mexico, Personal Communication to B. A. Sladek, IT Corporation, Albuquerque, New Mexico.

SAIC, see Science Applications International Corporation.

Science Applications International Corporation (SAIC), 1985, "Installation Restoration Program Phase II, Confirmation/Quantification Stage I," Report 2-827-06-351-33, prepared for Sandia National Laboratories, Albuquerque, New Mexico.

U.S. Army Corps of Engineers (COE), 1979, "Special Flood Hazard Information Tijeras Arroyo and Arroyo del Coyote, KAFB, New Mexico," U.S. Army Corps of Engineers, Albuquerque, New Mexico.

U.S. Census Bureau, 2000, American FactFinder Census 2000 Summary File, U.S. Census Bureau, Washington, D.C.

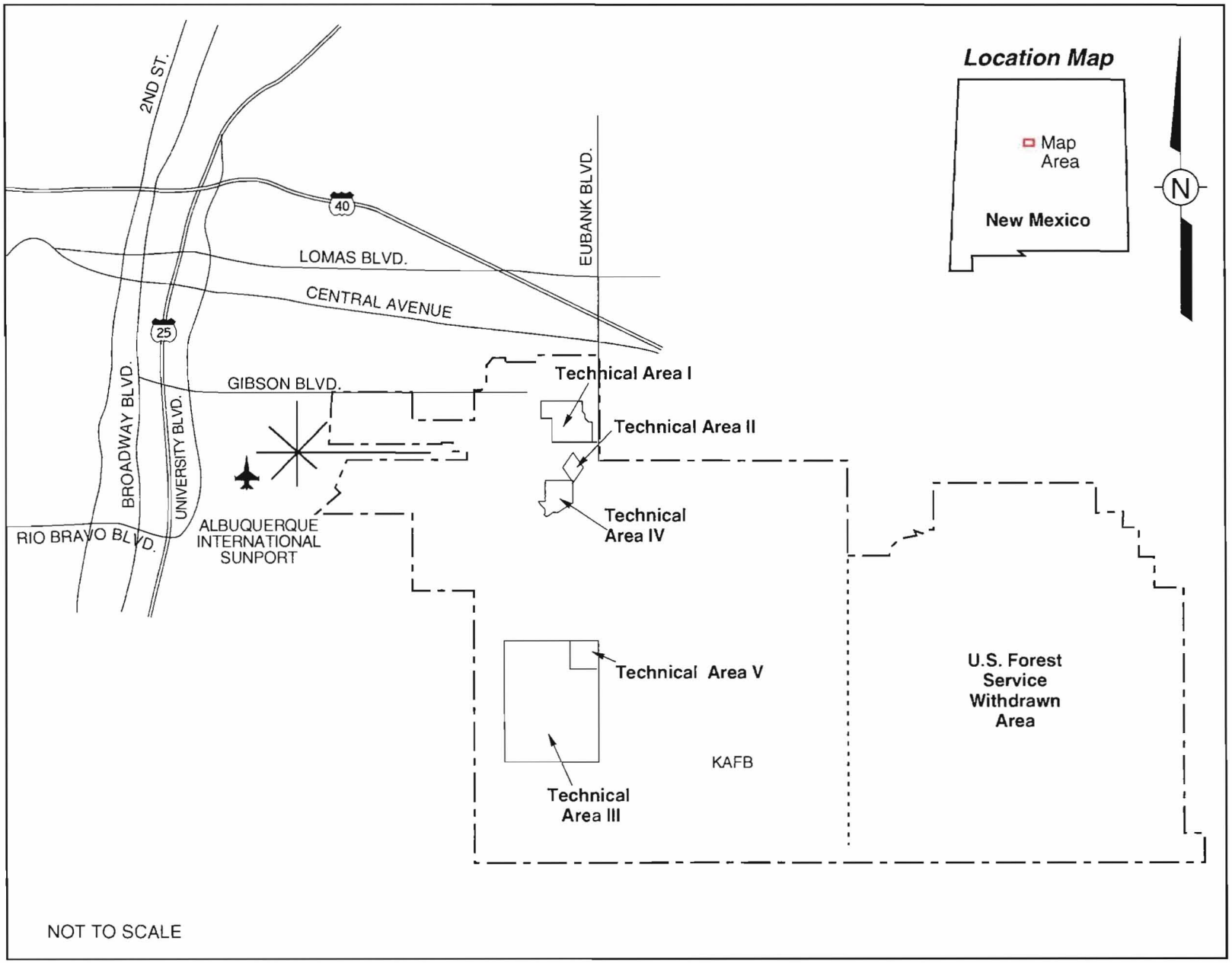


Figure A-1
Site Location Map, Albuquerque and Kirtland Air Force Base (KAFB)

774470.14000000 A1red

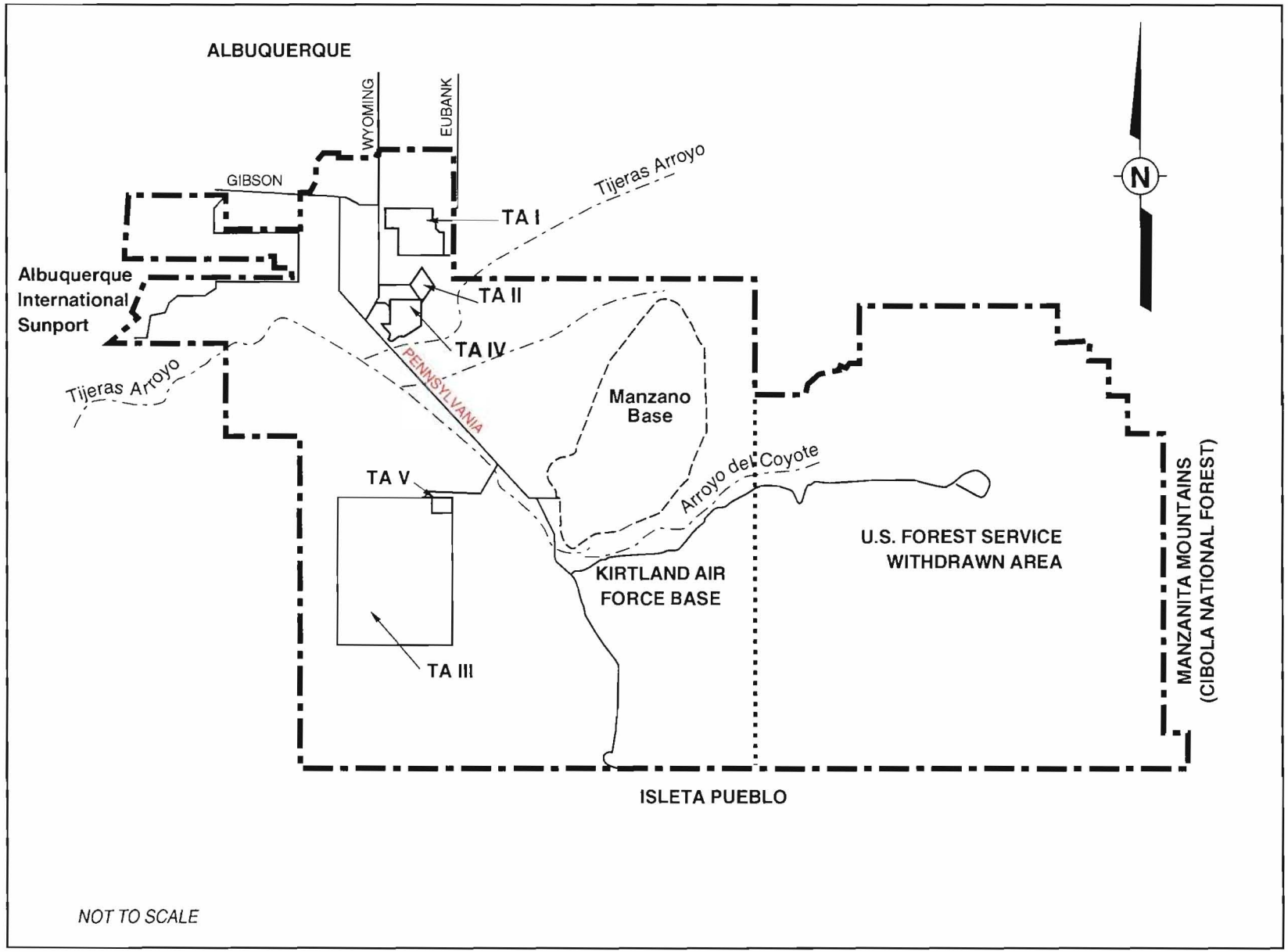


Figure A-3
Sandia National Laboratories/New Mexico
Technical Areas (TAs) in Relation to Kirtland Air Force Base

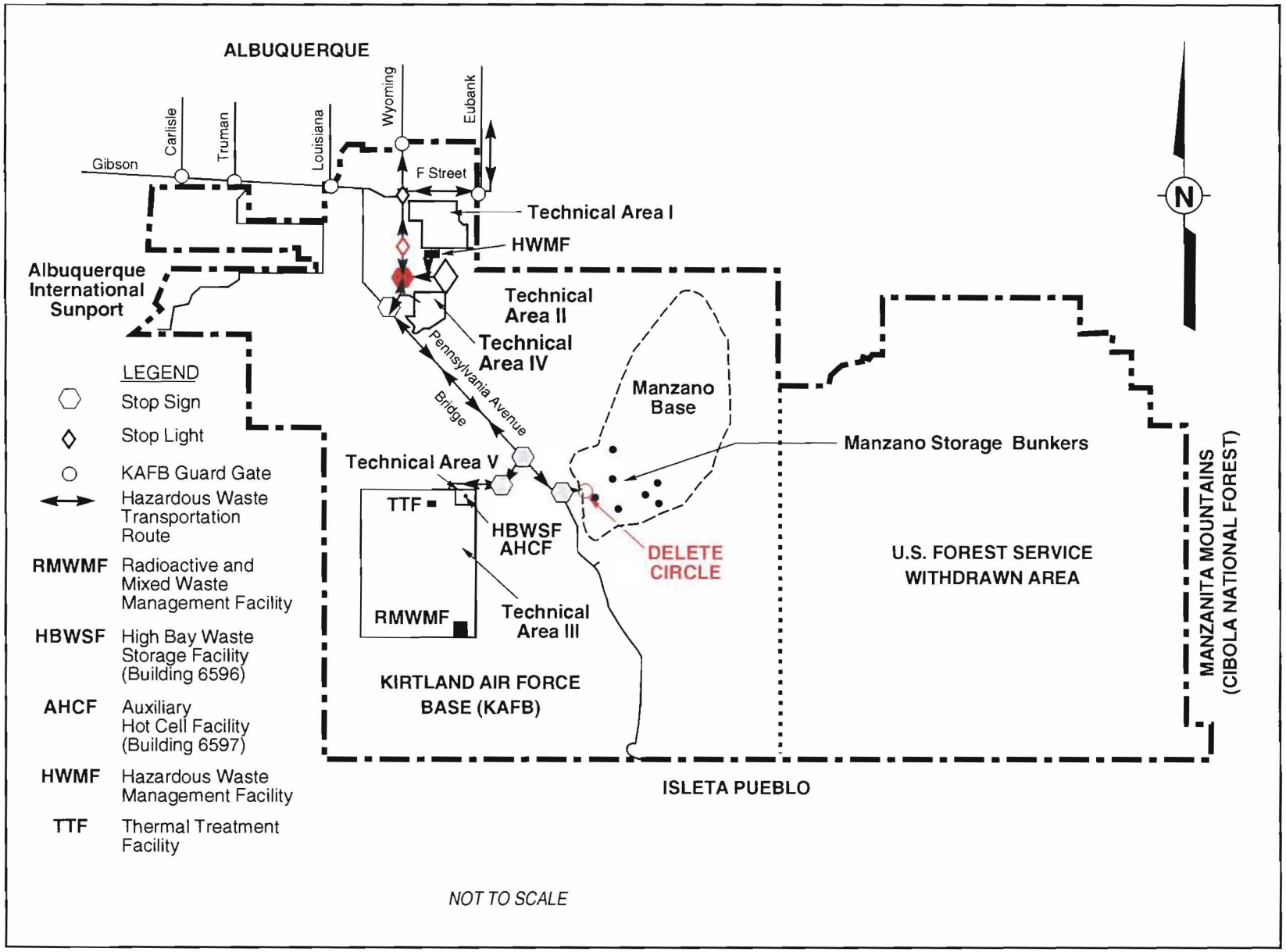


Figure A-4
Resource Conservation and Recovery Act-Regulated Waste Transportation Routes, Sandia National Laboratories/New Mexico

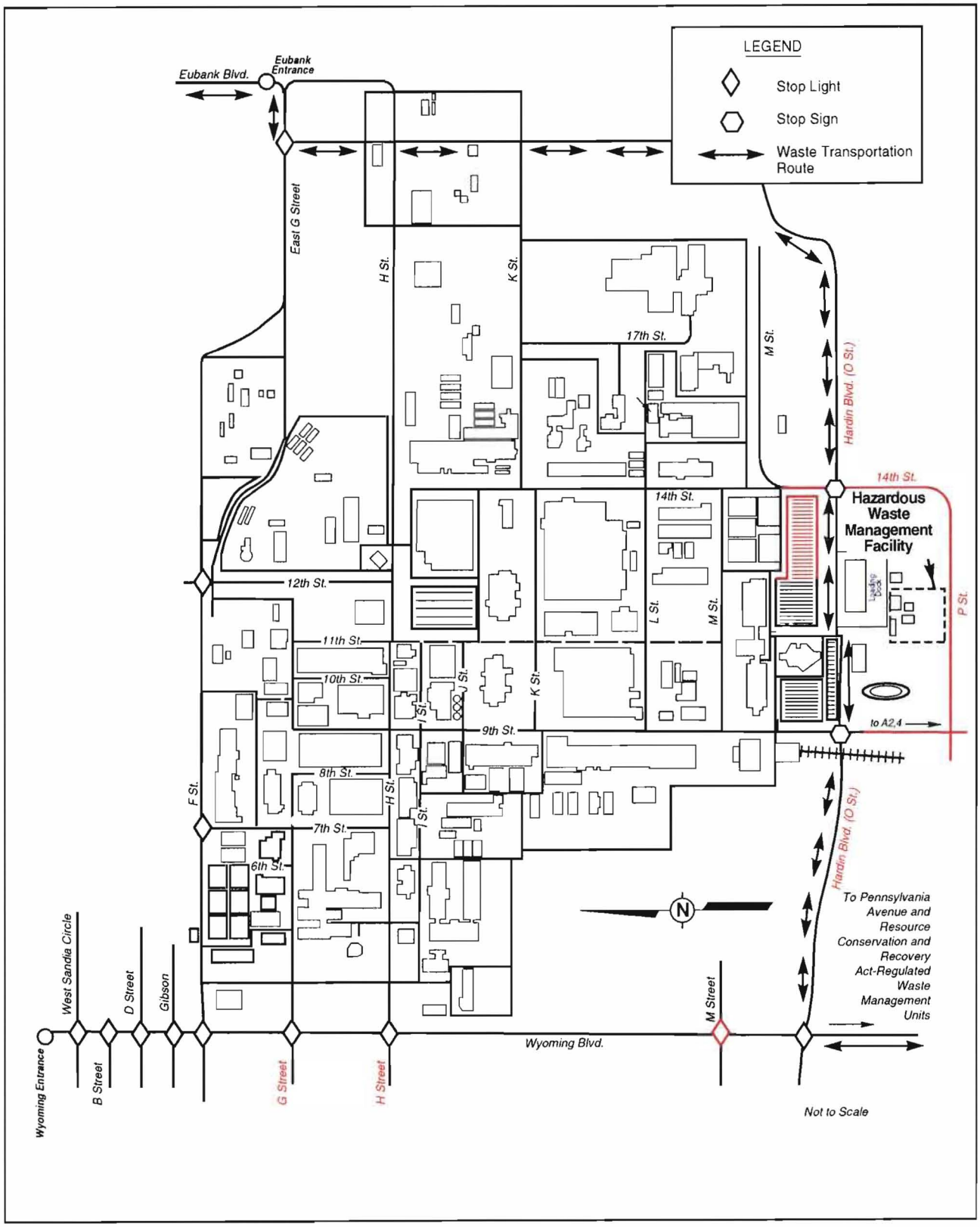


Figure A-5
Resource Conservation and Recovery Act-Regulated Waste Transportation Routes Around Technical Area I

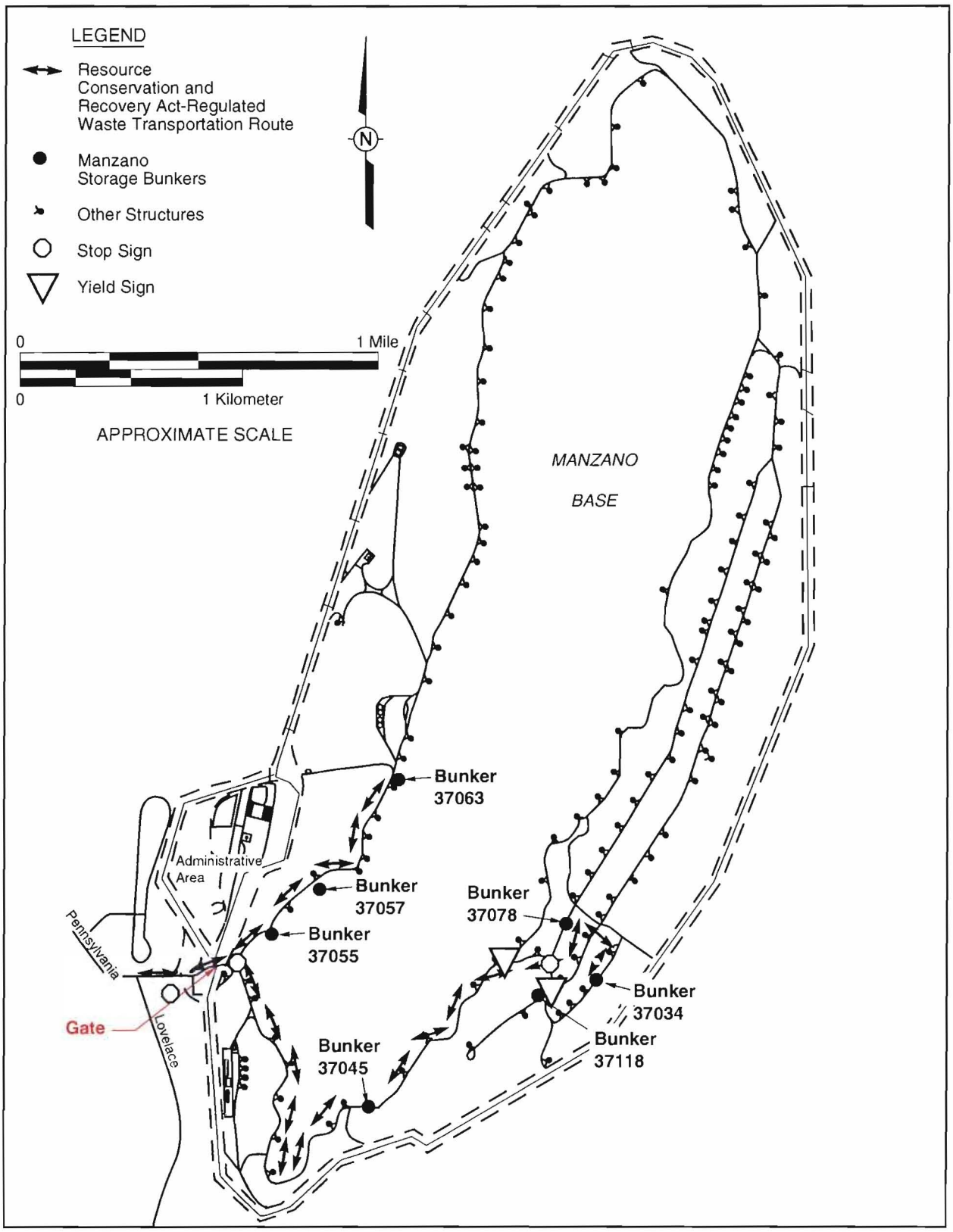
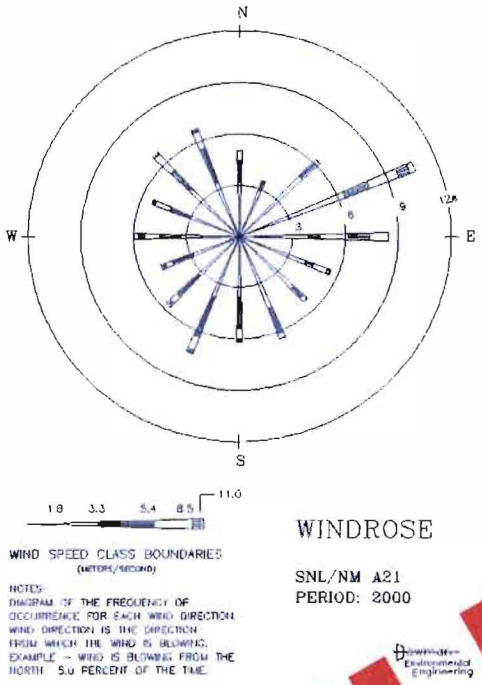


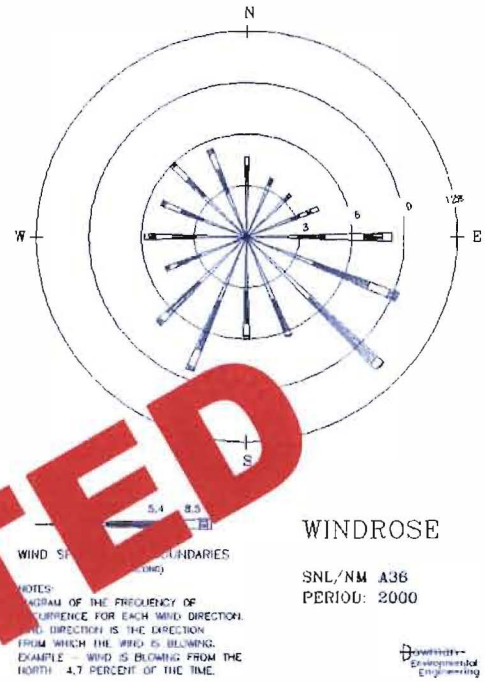
Figure A-7

Resource Conservation and Recovery Act-Regulated Waste Transportation Routes at Manzano Base

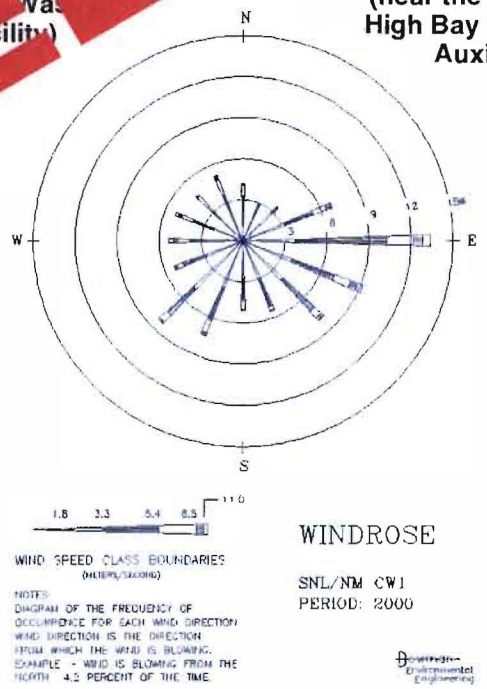
774470.14000000 A69red



Technical Area II
(near the Ha[illegible]dou[illegible] Was[illegible]
Ma[illegible]eme[illegible]acility)



Northeast Corner of Technical Area III
(near the Thermal Treatment Facility, High Bay Waste Storage Facility, and Auxiliary Hot Cell Facility)



Southeast Corner of Technical Area III
(At the Chemical Waste Landfill near the Radioactive and Mixed Waste Management Facility)

DELETED

Figure A-8

Average Annual Wind Direction Near Resource Conservation and Recovery Act-Regulated Waste Management Units (2000)

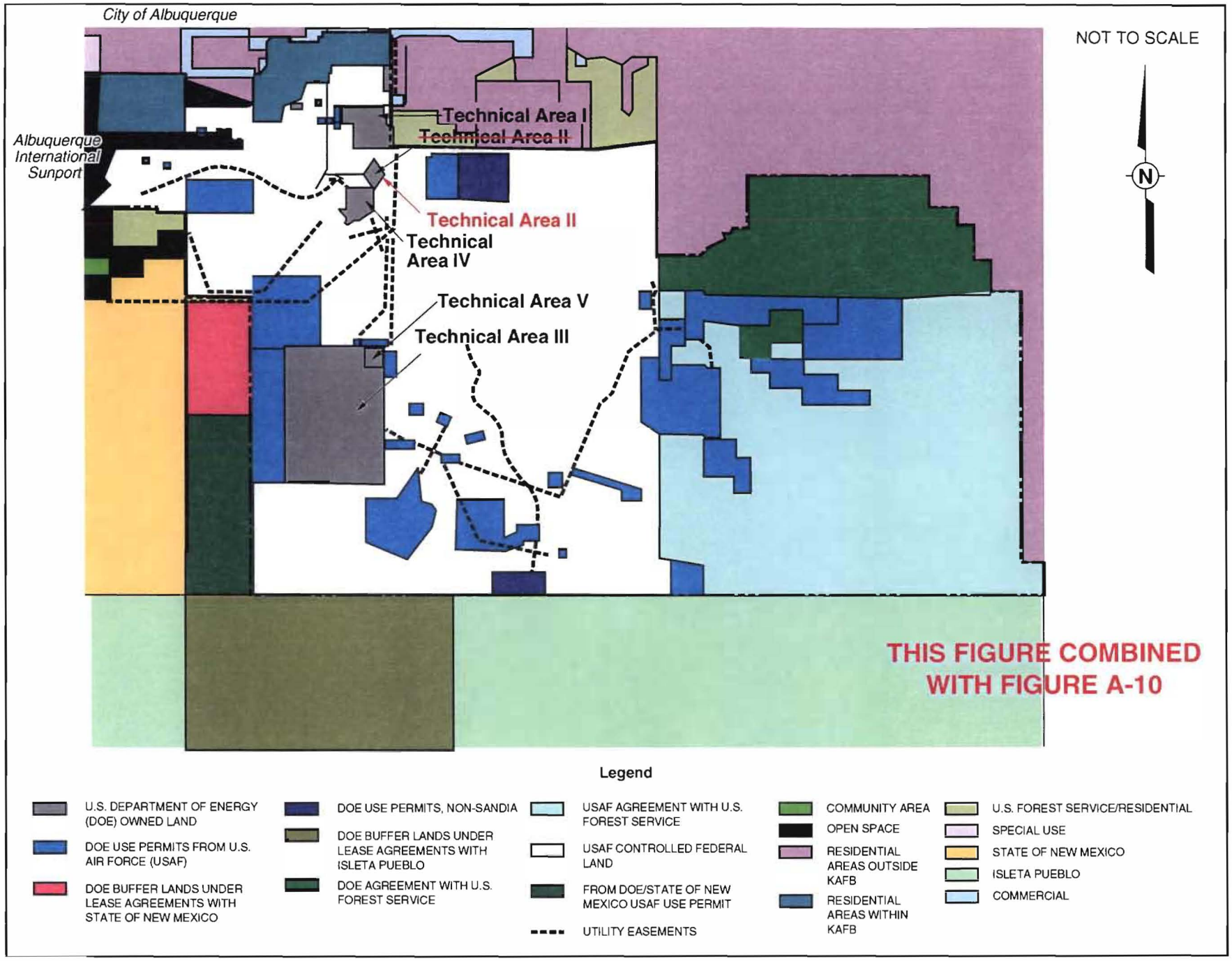


Figure ~~A-9~~ A-8

Land Uses Adjacent to and Within Sandia National Laboratories/New Mexico and Kirtland Air Force Base

774470.14000000.A13

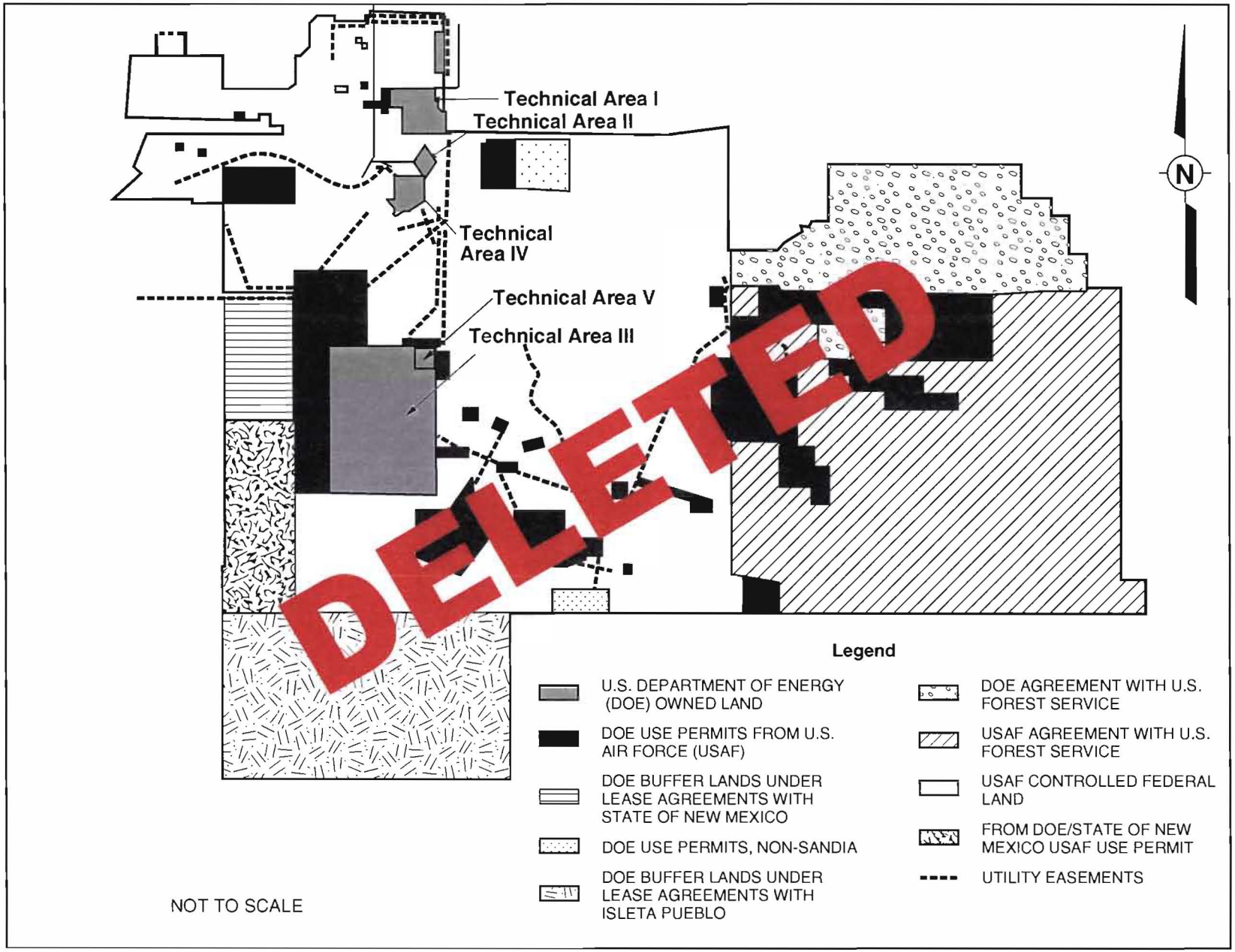


Figure A-10
Land Uses within Kirtland Air Force Base (including Sandia National Laboratories/New Mexico)

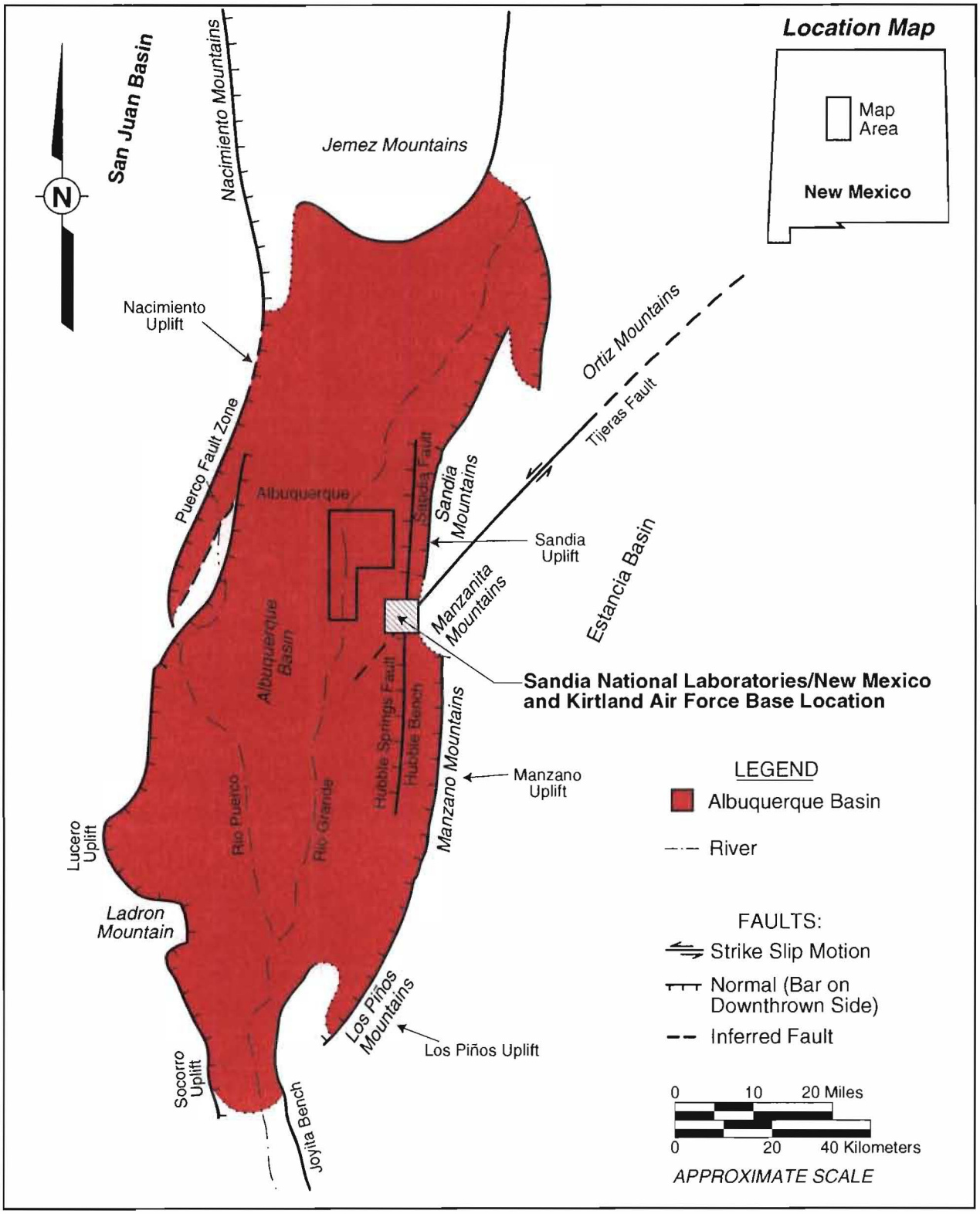


Figure ~~A-11~~ ~~A-10~~ A-9
Geologic Features in Relation to Sandia National Laboratories/New Mexico

APPENDIX C

SITE-WIDE INSPECTION PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF FIGURES ..... SW-C-ii
ACRONYMS AND ABBREVIATIONS ..... SW-C-iii
C.1 INSPECTION REQUIREMENTS FOR UNITS SW-C-1
C.1.1 Inspection Records SW-C-2
C.1.2 Remedial Action SW-C-2
C.2 TYPICAL INSPECTION SCHEDULE AND REQUIREMENTS FOR UNITS SW-C-3
C.2.1 Daily SW-C-3
C.2.2 Weekly SW-C-3
C.2.3 Monthly SW-C-4
C.3 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART AA REQUIREMENTS SW-C-4
C.4 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART BB REQUIREMENTS SW-C-4
C.5 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART CC REQUIREMENTS SW-C-4

LIST OF FIGURES

Figure No.	Title
C-1	Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit, Daily Inspection Form – Example
C-2	Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit, Weekly/Monthly Inspection Form – Example

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management unit
WMA	waste management area

SITE-WIDE INSPECTION PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], this appendix presents site-wide inspection requirements applicable to the Resource Conservation and Recovery Act (RCRA)-regulated waste management units (Units) at Sandia National Laboratories/New Mexico (SNL/NM), co-operated by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE).

Pursuant to 20 NMAC 4.1.500/40 CFR 264.15(a) [6-14-00], inspection schedules for the Units have been developed to identify equipment malfunctions and deterioration, operator errors, and discharges that might cause or lead to a release of RCRA-regulated waste and pose a threat to human health and the environment. This inspection plan, which presents general inspection schedules, is being submitted as required by 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00]. Unit-specific inspection requirements, if any, for SNL/NM Units are provided in Section 4.0 ~~Attachment C~~ of each Unit-specific module. Together, information in this appendix and each Unit-specific module meets the applicable regulatory requirements.

C.1 INSPECTION REQUIREMENTS FOR UNITS [20 NMAC 4.1.900/40 CFR 270.14(b)(5), and 20 NMAC 4.1.500/40 CFR 264.15, 264.174, and 264.602]

In accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.15(b)(1), 264.174, and 264.602 [6-14-00], SNL/NM Units are inspected for malfunctions and deterioration, operator errors, and discharges which may be causing, or may lead to, a release of hazardous waste constituents to the environment or a threat to human health. Inspections include monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, and responding to environmental or human health hazards caused by RCRA-regulated waste. Containers of RCRA-regulated waste stored at a Unit are also routinely inspected to assess container integrity, closure, labeling, secondary containment, location with respect to incompatible wastes, and waste and container compatibility. Additional detail about specific items and areas is included in each Unit-specific module.

~~Written inspection schedules have been developed for each Unit at SNL/NM (see Section C.2). These schedules are followed for the inspection of monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, and responding to environmental or human health hazards caused by RCRA-regulated waste. Inspections may be conducted at any time during the applicable time period (e.g., day, week, month) specified in the inspection schedule.~~ A copy of this Appendix~~inspection plan~~, which includes relevant inspection schedules, is maintained at each Unit, together with the Unit-specific inspection plan, unless specified otherwise in Section 4 ~~Attachment C~~ of each Unit-specific module, as required in 20 NMAC 4.1.500/40 CFR 264.15(b)(2) [6-14-00].

~~The U.S. Air Force, which operates Kirtland Air Force Base, may, for security or other reasons, deny access to Sandia/DOE personnel performing periodic Unit inspections. In such cases, Unit personnel will resume inspections as soon as possible after access is granted, and will document the missed inspections and reasons on the next inspection report.~~

C.1.1 Inspection Records [20 NMAC 4.1.500/40 CFR 264.15(d)]

Unit personnel are assigned to conduct inspections and record the information on inspection forms. Figures C-1 and C-2 are representative of the inspection forms completed by personnel inspecting SNL/NM Units. Figures C-1 and C-2 are provided for informational purposes only; the forms are subject to change. Any forms used will be functionally equivalent to the ones shown as Figures C-1 and C-2. The inspection forms identify the items to be inspected and the potential problems that may occur (20 NMAC 4.1.500/40 CFR 264.15(b)(3) [6-14-00]). Additional detail is included in each Unit-specific inspection plan. The following information is recorded on the inspection forms.

- Name of inspector
- Date and time of inspection
- Notation of observations and results of the inspection
- Date and nature of any repairs or remedial action.

For each Unit, inspection records are maintained for a minimum of three years from the date of inspection. Current calendar year records are maintained at the Unit. Previous calendar year records may be maintained at the Unit, SNL/NM Records Center, or as noted in Section 4~~Attachment C~~ of each Unit-specific module.

C.1.2 Remedial Action [20 NMAC 4.1.500/40 CFR 264.15(c)]

For every item requiring inspection, a response indicating the condition of each item must be entered in the appropriate column on the form. If any defects, deterioration, damage, or potential hazards are discovered during an inspection, Unit personnel begin taking corrective action upon discovery to ensure that the problem does not lead to an environmental or human health hazard. Appropriate action may include evaluation and removal of accumulated liquids from secondary containment, ~~appropriate corrective measures (e.g.,~~ transfer of waste from a defective container to an appropriate container in good condition, or repair or replacement of nonfunctioning equipment and/or systems.~~, or removal of any accumulated liquids) are completed on an appropriate schedule which ensures that the problem does not lead to an environmental or human health hazard.~~ If an inspection reveals that a nonemergency problem has developed, corrective action including repairs, maintenance, and replacement will be completed as soon as practical to preclude further damage and reduce the need for emergency repairs. ~~If a hazard appears to be imminent or if a hazardous situation already exists, RCRA-regulated waste management activities in the affected waste management area(s) (WMA[s]) will stop and corrective action will be initiated immediately.~~

Corrective action(s) taken in response to conditions discovered during an inspection are~~is~~ noted on the inspection forms. The corrective action(s) taken (along with time, date, and other pertinent information) are recorded in the appropriate section of the inspection form on which

the corrective action was first noted or the first weekly inspection form completed following implementation of the corrective action.

C.2 TYPICAL INSPECTION SCHEDULE AND REQUIREMENTS FOR UNITS [20 NMAC 4.1.500/40 CFR 264.15(b)(4), 264.174, and 264.602]

~~Written inspection schedules have been developed for each Unit at SNL/NM (see Section C.2).~~ The~~se~~ schedules described in this Section are followed for the inspection of the items and areas noted in Section C.1. ~~monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, and responding to environmental or human health hazards caused by RCRA-regulated waste.~~ Inspections may be conducted at any time during the applicable time period (e.g., day, week, month) specified in the inspection schedule.

The U.S. Air Force, which operates Kirtland Air Force Base, may, for security or other reasons, deny access to Sandia/DOE personnel performing periodic Unit inspections. In such cases, Unit personnel will resume inspections as soon as possible after access is granted, and will document the missed inspections and reasons on the next inspection report.

SNL/NM Units are typically inspected according to the schedule provided below. Inspection frequencies have been developed based on ~~are adequate based on~~ the deterioration rates of equipment/systems and likelihood of failure, and the probability of harm to human health or the environment if: 1) the equipment/system fails between inspections;~~,~~ or 2) operator error goes undetected between inspections. Equipment and systems most likely to fail and those whose failure could lead to severe consequences are inspected most frequently.

The inspection frequencies for specific equipment and areas of operation at each Unit are listed in Section 4 of each Unit-specific module. Those detailed schedules are consistent with the general schedule described here.

C.2.1 Daily

A daily Unit inspection is conducted during each day that RCRA-regulated waste handling occurs at that Unit. Waste handling includes when RCRA-regulated waste is received at, moved or opened within, treated at, or removed from a WMA. An example of a daily inspection form (Figure C-1) lists the items typically addressed. A detailed list of items is included in Section 4 of each Unit-specific module.

C.2.2 Weekly

A weekly Unit inspection is conducted at least once during each week that RCRA-regulated waste is stored at that Unit. The example of a weekly inspection form (Figure C-2) lists the items typically addressed (included in Item 10 on the form). A detailed list of items is included in Section 4 of each Unit-specific module. For the purposes of inspections, weekly is defined as Sunday through the following Saturday.

C.2.3 Monthly

Safety and emergency equipment, security devices, and Unit operating and structural equipment are inspected on a monthly schedule at each active and inactive Unit. Monthly inspections are conducted at WMAs not currently in use for RCRA-regulated waste management. Items 7, 8, and 9 on the monthly inspection form (Figure C-2) identify the items to be inspected at active and inactive WMAs. A detailed list of items is included in Section 4 of each Unit-specific module.

C.3 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART AA REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART AA]

Sandia/DOE do not manage RCRA-regulated wastes with organic concentrations ≥10 percent by weight using process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations. Therefore, Sandia/DOE are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00].

C.4 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART BB REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART BB]

Sandia/DOE do not routinely manage RCRA-regulated wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 264.1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 1050(f) [6-14-00]. The equipment use will be noted in the Unit operating log.

C.5 INSPECTION and MONITORING FOR UNITS SUBJECT TO SUBPART CC REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART CC]

Containers are visually inspected either at the time of pickup from a generator site or within 24 hours of acceptance at a Unit. The visual inspection assures that there are no cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. Containers holding RCRA-regulated wastes managed in accordance with 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] air emission standards are also subject to an inspection and monitoring plan as required by 20 NMAC 4.1.500/40 CFR 264.1088(b) [6-14-00].

Figure C-1
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Daily Inspection Form – Example

1. Area(s) Inspected (i.e., Loading/Unloading Area, Treatment Area) _____
2. Structure(s) Inspected (i.e., HWMF, TTF, RMWMF, HBWSF, AHCF, MSB Bunker #)
3. Inspection Date _____
4. Inspection Time _____ am/pm
5. Inspector Name (print) _____

5. Loading/ Unloading Area(s)[a]	Inspection Criteria	Yes	No	NA ( ) load	Corrective Action Issue	Corrective Action Taken and Closure Date
Loading/Unloading Area[c]	Good condition, safe working surface, no spills					
Waste Handling Equipment[c]	Good condition, operational					
Container(s) Loaded/ Unloaded	Good condition					

6. Treatment Area(s)[b,c]	Inspection Criteria	Yes	No	NA ( ) treat	Corrective Action Issue	Corrective Action Taken and Closure Date
Treatment Area	Good condition					
Treatment Unit	Good condition (i.e., no releases or corrosion), maintains established parameters					
Monitoring Equipment	Good condition, operational					

7. Comments and Notes Comment on deficiencies by referencing section and question.

Inspector Signature: _____

Immediately file the completed inspection form in the Unit operating record.

[a] Required on days RCRA-regulated waste loading/unloading operations are conducted.
[b] Required on days RCRA-regulated waste treatment operations are conducted.
[c] Required monthly with facility operating and structural equipment if RCRA-regulated wastes are not managed at Unit during the month.

Figure C-2
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Weekly/Monthly Inspection Form – Example

1. Structure(s) Inspected (i.e., HWMF, TTF, RMWMF, HBWSF, AHCF, MSB Bunker #) _____
2. Inspection Date _____ 5. Monthly ☐
3. Inspection Time _____ am/pm Weekly ☐
4. Inspector Name (print) _____

6. Storage Status[a]	Inspection Criteria	Yes	No
RCRA-Regulated Waste Currently Stored at Structure	Storage status (Yes–waste present, No–waste not present)		

7. Safety & Emergency Equipment[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Spill Control Equipment	Present, good condition					
Fire Extinguisher(s)	Present, good condition, charged					
Decontamination Equipment	Present, good condition					
External Communication System	Present, operational					
Internal Communication and Alarm System	Present, operational					
Fire Suppression System (e.g., Water, Dry Chemical)	Present					

8. Security Devices[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Facility Fence	Good condition					
Gate(s) and Door(s)	Operational					
Warning Sign(s)	Present, legible					
Lock(s) and Tamper Indication Device(s)	Present, good condition					

9. Facility Operating & Structural Equipment[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Floor, Walls, Ceiling	Good condition					
Lighting	Operational					

Refer to footnotes at end of form.

Figure C-2 (Concluded)
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Weekly/Monthly Inspection Form – Example

10. Container Storage[c]	Inspection Criteria	Yes	No	NA ( ) monthly	Corrective Action Issue	Corrective Action Taken and Closure Date
Container Placement	Correct aisle space, correct stacking					
Container Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)					
Container Sealing	Correct lid/cover placement (i.e., closed)					
Container Labeling	Correct information, correct location, legible					
Storage Area (i.e., floor, walls) Condition	Good condition					
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition					
Storage Conditions	Waste compatibility, container compatibility					

11. Comments and Notes Comment on deficiencies by referencing section and question.

Inspector Signature: _____

Immediately file the completed inspection form in the facility operating record.

[a] Weekly inspection criteria are not applicable if RCRA-regulated waste is not stored at structure. Monthly inspection criteria are still applicable.
[b] Required during a monthly inspection. Criteria are not applicable during weekly (only) inspection.
[c] Required during a weekly inspection. Criteria are not applicable during monthly (only) inspection.

Inspector Name (signature) _____

APPENDIX D

SITE-WIDE PERSONNEL TRAINING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-D-iii
LIST OF FIGURES ..... SW-D-iiiv
ACRONYMS AND ABBREVIATIONS ..... SW-D-iiv
D.1 RCRA-REGULATED WASTE MANAGEMENT RESPONSIBILITIES SW-D-1
D.2 JOB TITLE/JOB DESCRIPTION SW-D-1
D.3 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES SW-D-2
D.4 TRAINING DIRECTOR SW-D-2
D.5 EMERGENCY TRAINING SW-D-7
D.6 IMPLEMENTATION OF TRAINING PROGRAMS SW-D-7
~~D.1 RCRA-REGULATED WASTE MANAGEMENT RESPONSIBILITIES ..... SW-D-1~~
~~D.2 JOB TITLE/JOB DESCRIPTION [20 NMAC 4.1.900/40 CFR 270.14(B)(12) and 20 NMAC 4.1.500/40 CFR 264.16(D)(1), (20 and (3) ..... SW-D-1~~
~~D.3 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES [20 NMAC 4.1.900/40 CFR 270.14(b)(12), and 20 NMAC 4.1.500/ 40 CFR 264.16(a), (b), (d) and (e)] ..... SW-D-1~~
~~D.4 TRAINING DIRECTOR [20 NMAC 4.1.500/40 CFR 264.16(a)(2)] ..... SW-D-1~~
~~D.5 EMERGENCY TRAINING [20 NMAC 4.1.500/40 CFR 264.16(a)(3) and (c)] ..... SW-D-1~~
~~D.6 IMPLEMENTATION OF TRAINING PROGRAMS [20 NMAC 4.1.500/ 40 CFR 264.16(b) and (c)] ..... SW-D-1~~

LIST OF TABLES

Table No.	Title
D-1	Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Training Content
D-2	Training for Each Job Title

LIST OF FIGURES

Figure No.	Title
D-1	Job Title, Description, And Qualifications RCRA Training Director
D-2	Job Title, Description, And Qualifications RCRA Project Leader
D-3	Job Title, Description, And Qualifications RCRA Emergency Coordinator
D-4	Job Title, Description, And Qualifications RCRA Chemist
D-5	Job Title, Description, And Qualifications RCRA Field Technician
D-6	Job Title, Description, And Qualifications RCRA Special Project Staff
D-7	Job Title, Description, And Qualifications RCRA Inspector
D-8	Job Title, Description, And Qualifications RCRA Transportation Manager
D-9	Job Title, Description, And Qualifications RCRA Unit Operations Support Staff

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
RCRA	Resource Conservation and Recovery Act
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management ~~unit~~Unit

SITE-WIDE PERSONNEL TRAINING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

This appendix describes site-wide personnel training requirements for Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (Unit) workers. Unit-specific training requirements, if any, for SNL/NM Unit workers are provided in Attachment D of each Unit-specific module. Together, information in this appendix and in each Unit-specific module meets the applicable regulatory requirements.

Training requirements for Unit personnel are specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V, (20 NMAC 4.1.500), adopting by reference the Code of Federal Regulations, Title 40, Part 264 including Section 264.16 (40 CFR 264.16), revised June 14, 2000 [6-14-00], "Personnel Training." The primary objective of the training program is to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste, in accordance with 20 NMAC 4.1.500/40 CFR 264 [6-14-00]. This training program applies to all employees of the U.S. Department of Energy, Sandia Corporation, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at SNL/NM Units included in this SNL/NM General Part B. The degree of training varies with the job duties.

D.1 RCRA-REGULATED WASTE MANAGEMENT RESPONSIBILITIES

This program provides employees with training relevant to their positions. Unit personnel are given, at a minimum, a basic understanding of the RCRA regulatory requirements for waste management, emergency procedures, and operating procedures. Some employees receive additional classroom and on-the-job training designed for specific duties. Employees who have not received training or are unable to provide relevant and appropriate training documentation receive the required training within six months of assignment to RCRA-regulated waste management activities and prior to managing RCRA-regulated waste without supervision.

D.2 JOB TITLE/JOB DESCRIPTION [20 NMAC 4.1.900/40 CFR 270.14(b)(12) and 20 NMAC 4.1.500/40 CFR 264.16(d)(1), (2) and (3)

Job titles and descriptions are provided in Figures D-1 through D-9. The job descriptions include requisite skills, education, and/or other qualifications as well as RCRA-regulated waste management job duties. The required training for each job title is found in Table D-2.

A file of all Unit personnel, including their job titles and job descriptions, is maintained at each Unit unless specified differently in Section 5~~Attachment D~~ of each Unit-specific module. For each job title, the file contains information on the minimum activities performed by employees, requisite qualifications, and training records.

D.32 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES [20 NMAC 4.1.900/40 CFR 270.14(b)(12), and 20 NMAC 4.1.500/ 40 CFR 264.16(a), (b), (d) and (e)]

This program provides employees with training relevant to their positions and specific to the safe performance of assigned tasks. For example, personnel who are directly involved in RCRA-regulated hazardous waste handling are informed of the potential hazards associated with waste management activities, procedures for safe handling of wastes, and emergency procedures. Individuals in supervisory or decision-making positions receive a comprehensive overview of all aspects of RCRA-regulated hazardous waste management. Personnel (e.g., special projects staff, temporary staff) with specific or short-term assignments, such as visitors or temporary contractors, may only receive training on the contingency plan and emergency response procedures. are trained at a level appropriate to their job duties. Hands-on RCRA-regulated waste management personnel receive training commensurate with their assigned duties.

The training program includes a combination of classroom instruction, reviews of written documents, and on-the-job training exercises. Training information is provided according to training topics (e.g., Contingency Plan), frequency (e.g., initial or refresher), and methods (e.g., classroom instruction, procedure review, on-the-job exercises). Training course content includes, at a minimum, the topics shown in Table D-1. As regulatory compliance requirements change, training courses are evaluated and modified, as necessary. The content is reviewed annually. Some training is standardized and given to all employees. Job-specific training appropriate to job function is given to Unit employees. Training is provided at the frequencies shown on Table D-1. Training that may be applicable to each job title is provided in Table D-2.

D.43 TRAINING DIRECTOR [20 NMAC 4.1.500/40 CFR 264.16(a)(2)]

The Unit-specific Department Manager or designee will function as the Training Director. The Manager maintains responsibility for ensuring that all Unit-specific required training is obtained. Each The Manager/Training Director is knowledgeable about the applicable RCRA-regulated waste management regulations and specific RCRA-regulated waste management operations employed at a Unit. A The Manager/Training Director or designee determines the exact content and duration of training required for individual employees.

The Manager/Training Director may perform or delegate training to qualified trainers. Trainers are qualified on the basis of attainment of one or more of the following, as applicable:

- Certification in the subject matter addressed by the training;
- Demonstration of knowledge and competence in the training subject; and/or
- Previous on-the-job and/or classroom training in the topics covered.

Table D-1
Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Training Content

---

RCRA Regulation Training

Duration: Variable (Typically 4 hours or more)
Frequency: Initial/Periodic Refresher (Typically annual)
Method: Classroom instruction, on-the-job training, and/or document review

Minimum content may include (as applicable to the specific Unit to which an employee is assigned):

- Identification of RCRA-regulated hazardous waste
- Treatment, storage, and disposal facility requirements
- Generator and transporter requirements

RCRA Contingency Plan and Emergency Procedures

Duration: Variable (Typically 1-4 hours)
Frequency: Initial/Annual Refresher
Method: Classroom instruction, document review, and/or on-the-job exercises

Minimum content must include (as applicable to the specific RCRA-regulated hazardous waste management unit to which an employee is assigned):

- Emergency notification procedures
- Response to emergencies
- Evacuation route and procedure
- Emergency equipment and personal protective equipment
- Emergency Coordinator responsibilities
- Post-emergency actions
- Contingency Plan
- Shutdown procedures (if any)

Table D-1 (Continued)
Sandia National Laboratories/New Mexico
RCRA-Regulated Waste Management Unit
Training Content

Technical Work Documents and Refresher

Duration: Variable (Typically 1 hour or more)
Frequency: Initial/Periodic Refresher
Method: Document review, on-the-job training

Minimum Content: This training is function-specific and may be divided into sections or modules. Each employee must participate in the sections that apply to his or her specific job function. Sections may include, but are not limited to:

- Waste Analysis Plan
- Unit-specific safety practices
- Unit-specific operational procedures (e.g., loading and unloading)
- Unit security, entry, and control
- Operation, maintenance, and inspection of equipment
- Prevention of the ignition/reaction of ignitable/reactive wastes
- Permit conditions
- Emergency response
- Unit tour

Table D-1 (Concluded)
Sandia National Laboratories/New Mexico
RCRA-Regulated Waste Management Unit
Training Content

Hazardous Waste Operations and Emergency Response

Duration: Variable (Typically 24 hours or more with an 8-hour refresher)
Frequency: Initial/Refresher (Typically annual)
Method: Classroom instruction, hands-on exercises

Minimum Content:

- RCRA-regulated hazardous waste management and regulations
- Sources of information
- Compatibility of RCRA-regulated hazardous wastes
- Personnel protection
- Principles of safety
- Emergency procedures

Table D-2
Training for Each Job Title

Required Training	Job Titles								
	Training Director	RCRA Project Leader	Emergency Coordinator	Chemist	Field Technician (Waste Handler)	Special Projects Staff	Inspector	Transportation Manager	Unit Operations Support Staff
Resource Conservation and Recovery Act (RCRA) Regulations (Applicable Modules)	X	X	X	X	X	X	X	X	
RCRA Contingency Plan and Emergency Procedures	X	X	X	X	X	X	X	X	X
Technical Work Documents (Applicable Modules)	X	X		X	X	X	X		
Hazardous Waste Operations and Emergency Response (24- or 40-hour course)	X	X	X	X	X	X	X	X	
Hazardous Waste Operations and Emergency Response (8-hour course)	X	X	X	X	X	X	X	X	

D.54 EMERGENCY TRAINING [20 NMAC 4.1.500/40 CFR 264.16(a)(3) and (c)]

Appendix E of this permit renewal request/application provides a more detailed discussion of emergency procedures, personnel, and equipment.

Unit employees participate in Unit-specific emergency response training to assure effective emergency response. Emergency response training consists of classroom instruction, document reviews, and/or on-the-job exercises. The content is reviewed annually and revised as needed to incorporate changes in regulatory compliance requirements. Topics covered include at a minimum:

- Emergency notification procedures
- Response to emergencies, including fires, explosions, and releases of RCRA-regulated wastes
- Procedures for using, inspecting, maintaining, and replacing emergency equipment and personal protective equipment
- Procedures for the shutdown of operations (if any)
- Procedures for evacuation (i.e., communications/alarms)
- Responsibilities of the Emergency Coordinator
- Post-emergency reports and actions
- Contingency Plan.

D.65 IMPLEMENTATION OF TRAINING PROGRAMS [20 NMAC 4.1.500/ 40 CFR 264.16(b) and (c)]

The training program is implemented to assure that Unit personnel receive appropriate training in a timely manner. Employees who require training receive the specified training within six months of their date of hire or their transfer to a new position. Personnel do not work unsupervised in RCRA-regulated waste management areas until they successfully complete the indicated training requirements.

Training records are kept to document the type and amount of training received for each Unit employee who manages RCRA-regulated waste. Contents of these records include the following, at a minimum:

- Job title for each position related to RCRA-regulated waste management
- The name of the employee assigned to each job title

- Written job description
- Written training requirements for each job title
- Records that document training received, such as attendance or signature lists, certificates, memoranda of training, or reports from computerized databases of training completion status.

Training records for current and former Unit employees are kept at the Unit to which an employee is/was assigned, unless specified differently in ~~Attachment D~~ Section 5.0 of each Unit-specific module. Training records for current Unit employees are kept until closure of the Unit. Training records for any former Unit employee are kept for a minimum of three years from the date the employee last worked at the Unit.

Job Title: RCRA Training Director

Job Description:
The RCRA Training Director ensures that all appropriate personnel meet the site-wide personnel training requirements for SNL/NM RCRA-regulated waste management Unit workers, including the Unit-specific RCRA training requirements. RCRA Training Director duties may include, but are not limited to:

- identifying and/or coordinating training required by RCRA regulations and SNL/NM RCRA-regulated waste management worker training requirements.
- ensuring maintenance of training records required by RCRA regulations and demonstrating compliance with SNL/NM RCRA-regulated waste management worker training requirements for all personnel.
- informing personnel when specific training is required.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for the RCRA Training Director is:

- high school diploma or equivalent, or bachelor's degree from an accredited post-secondary institution; or
- three years experience with RCRA waste management regulations

Training:
Initial and refresher training will be as required in Table D-2

FIGURE D-1
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
RCRA TRAINING DIRECTOR

Job Title: RCRA Project Leader

Job Description:
A RCRA Project Leader oversees, supervises, and coordinates collection, storage, and shipment of RCRA-regulated hazardous waste at the Sandia National Laboratories/New Mexico. Duties may include, but are not limited to:

- ensuring operation of the Unit in compliance with applicable RCRA regulations;
- identifying and coordinating training required by RCRA regulations;
- determining training and reading requirements specific to positions, tasks or Unit activities;
- coordinating activities related to management of RCRA regulated hazardous waste at the Unit;
- ensuring maintenance of records required by RCRA regulations, such as training records, inspection records, waste analysis records, and a RCRA Contingency Plan;
- ensuring maintenance of additional records required for the Unit operating record;
- preparing, reviewing, submitting documents on waste management activities;
- ensuring compliance with RCRA regulations for RCRA-regulated hazardous waste shipments; and
- coordinating activities pertaining to RCRA-regulated hazardous waste audits.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a RCRA Project Leader is:

- high school diploma or equivalent, or bachelor's degree from an accredited post-secondary institution; or
- three years experience in managing RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-2
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
RCRA PROJECT LEADER

Job Title: Emergency Coordinator

Job Description:
An Emergency Coordinator evaluates, coordinates, and implements emergency actions in accordance with the RCRA Contingency Plan during an emergency (as defined in the Contingency Plan). As defined in the RCRA Contingency Plan, Emergency Coordinator duties during and after an emergency may include, but are not limited to:

- identifying the character, exact source, amount, and extent of released RCRA-regulated hazardous waste by observation, records reviews, or chemical analysis;
- assessing possible resulting hazards to human health or the environment considering both direct and indirect effects;
- taking all reasonable measures necessary to ensure fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the Unit including stopping processes and operations, collecting and containing released waste, and removing or isolating containers;
- monitoring for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment if the facility stops operations;
- providing for properly treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material;
- ensuring that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
- ensuring that all equipment listed in the Contingency Plan is cleaned and fit for its intended use before resuming operations.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for an Emergency Coordinator is:

- high school diploma or equivalent; or
- three years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-3
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
EMERGENCY COORDINATOR

Job Title: Chemist

Job Description:
A Chemist conducts supporting characterization of RCRA-regulated hazardous waste managed at Sandia National Laboratories/New Mexico. Duties may include, but are not limited to:

- evaluating generator provided characterization data;
- identifying treatment options for RCRA-regulated hazardous waste; and
- segregating RCRA-regulated hazardous waste.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a Chemist is:

- high school diploma or equivalent; or
- two years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-4
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
CHEMIST

Job Title: Field Technician (Waste Handler)

Job Description:
A Waste Handler conducts RCRA-regulated hazardous waste handling, segregating, and storing operations at the Sandia National Laboratories/New Mexico. Waste Handler duties may include, but are not limited to:

- transporting and handling RCRA-regulated hazardous waste;
- conducting daily inspections of waste management Units where RCRA-regulated hazardous waste loading, unloading, or treatment operations occur;
- performing basic maintenance and housekeeping activities;
- segregating RCRA-regulated hazardous waste
- sorting, packaging, marking, labeling, storing, treating, and segregating RCRA-regulated hazardous waste; and
- compiling and entering into a database specific operating record information.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a Waste Handler is:

- high school diploma or equivalent; or
- two years experience in handling RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-5
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
FIELD TECHNICIAN

Job Title: Special Projects Staff

Job Description:
A Special Projects Staff member performs special project duties at Sandia National Laboratories/New Mexico. Special Projects Staff member duties may include, but are not limited to:

- handling RCRA-regulated hazardous waste during a special project;
- performing special project related maintenance and housekeeping activities;
- operating RCRA-regulated hazardous waste treatment equipment associated with a special project;
- storing, labeling, and segregating RCRA-regulated hazardous waste associated with a special project; and
- identifying and scheduling RCRA-regulated hazardous waste special project activities;
- monitoring RCRA-regulated hazardous waste special project activities for safety and procedural compliance; and
- compiling special project information for the facility operating record.

Required Skill, Education, or Other Qualifications:
At a minimum, the qualification for a Special Projects Staff member is:

- high school diploma or equivalent; or
- two years experience in handling RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-6
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
SPECIAL PROJECT STAFF

Job Title: Inspector

Job Description:
An Inspector conducts inspections of RCRA-regulated hazardous waste and RCRA-regulated waste management Units at the Sandia National Laboratories/New Mexico. Inspector duties may include, but are not limited to:

- inspecting at least daily areas subject to RCRA-regulated hazardous waste spills when these areas are in use;
- inspecting at least weekly containers holding RCRA-regulated hazardous waste, container equipment, and secondary containment;
- inspecting at least monthly emergency equipment, security devices, and structural equipment at RCRA-regulated waste management Units; and
- recording inspection date, time, name, observations, and repairs in an inspection log (in the form of an inspection checklist).

Skill, Education, and Other Qualifications:
At a minimum, the qualification for an Inspector is:

- high school diploma or equivalent; or
- two years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-7
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
INSPECTOR

Job Title: Transportation Manager

Job Description:
A Transportation Manager coordinates the shipment of RCRA-regulated hazardous waste from the Sandia National Laboratories/New Mexico. Transportation Manager duties may include, but are not limited to:

- preparing documentation and paperwork for off-site shipments of RCRA-regulated hazardous waste;
- ensuring proper packaging, labeling, marking, and placarding are in place for off-site shipments of RCRA-regulated hazardous waste; and
- coordinating the loading of RCRA-regulated hazardous waste for off-site shipment.

Required Skill, Education, or Other Qualifications:
At a minimum, the qualification for a Transportation Manager is:

- high school diploma or equivalent; or
- two years experience coordinating shipments of RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-8
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
TRANSPORTATION MANAGER

Job Title: Unit Operations Support Staff

Job Description:
A Unit Operations Support Staff member has unescorted access to the facility but performs no activities that require contact with RCRA-regulated hazardous waste or waste containers. Unit Operations Support Staff may include, but are not limited to:

- administrative personnel;
- information systems (database) personnel;
- radiation support personnel; and
- generator interface personnel.

Skill, Education, and Other Qualifications:
The Training Supervisor determines the requisite level of experience for each position.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-9
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
UNIT OPERATIONS SUPPORT STAFF

APPENDIX E

SITE-WIDE CONTINGENCY PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-E-iiiii
LIST OF FIGURES ..... SW-E-iiiiv
ACRONYMS AND ABBREVIATIONS ..... SW-E-ivv
DEFINITIONS ..... SW-E-vvi
E.1 SNL/NM SITE DESCRIPTION SW-E-1
E.1.1 Unit Descriptions SW-E-1
E.1.2 Waste Description SW-E-2
E.1.3 Operating Schedule SW-E-3
E.2 CONTINGENCY PLAN DISTRIBUTION AND AMENDMENTS SW-E-3
E.3 EMERGENCY RESPONSE RESOURCES SW-E-3
E.3.1 Emergency Coordinator and Responsibilities SW-E-3
E.3.2 Emergency Response Groups SW-E-4
E.3.3 Emergency Chain of Command SW-E-5
E.3.4 Support Agreements and Coordination with Outside Agencies SW-E-5
E.4 EMERGENCY EQUIPMENT SW-E-6
E.5 CONTINGENCY PLAN IMPLEMENTATION SW-E-6
E.5.1 Emergencies SW-E-8
E.5.1.1 Fire SW-E-9
E.5.1.2 Explosion SW-E-10
E.5.1.3 Uncontrolled Release SW-E-11
E.5.2 Evacuation SW-E-12
E.5.3 Coordination with Off-Site Parties and Emergency Notification SW-E-13
E.6 POST-EMERGENCY ACTIONS SW-E-14
E.7 EMERGENCY RESPONSE RECORDS AND REPORTS SW-E-14
~~E.1 SNL/NM SITE DESCRIPTION ..... SW-E-1~~
~~E.1.1 Unit Descriptions ..... SW-E-1~~
~~E.1.2 Waste Description ..... SW-E-1~~
~~E.2 CONTINGENCY PLAN DISTRIBUTION ..... SW-E-3~~
~~E.3 EMERGENCY RESPONSE RESOURCES ..... SW-E-3~~
~~E.3.1 Emergency Coordinator ..... SW-E-3~~
~~E.3.2 Emergency Response Groups ..... SW-E-3~~
~~E.3.3 Emergency Chain of Command ..... SW-E-4~~
~~E.3.4 Support Agreements and Coordination with Outside Agencies ..... SW-E-4~~
~~E.3.5 Coordination with Off-Site Parties ..... SW-E-4~~
~~E.4 EMERGENCY EQUIPMENT ..... SW-E-5~~
~~E.5 CONTINGENCY PLAN IMPLEMENTATION ..... SW-E-6~~
~~E.5.1 Emergency Response ..... SW-E-6~~
~~E.5.2 Evacuation ..... SW-E-7~~
~~E.5.3 Emergency Notification ..... SW-E-7~~
~~E.6 POST-EMERGENCY ACTIONS ..... SW-E-8~~
~~E.7 EMERGENCY RESPONSE RECORDS AND REPORTS ..... SW-E-8~~
~~E.8 CONTINGENCY PLAN AMENDMENT ..... SW-E-9~~

LIST OF TABLES

Table No.	Title
E-1	RCRA-Regulated Waste Management Units Included in Contingency Plan
E-2~~1~~	Agreements and Memoranda of Understanding
E-3~~2~~	Sandia National Laboratories/New Mexico (SNL/NM) Facility Emergency Equipment
E-4~~3~~	~~Incident Command~~ Emergency Response System ~~(ICS)~~ Notification, Sandia National Laboratories/New Mexico

LIST OF FIGURES

Figure No.	Title
E-1	Sandia National Laboratories/New Mexico, Technical Areas (TAs) Resource Conservation and Recovery Act-Regulated Waste Management Units

ACRONYMS AND ABBREVIATIONS

40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
DOE	U.S. Department of Energy
EC	Emergency Coordinator
EOC	Emergency Operations Center
ERO	Emergency Response Organization
IC	Incident Commander
ICS	Incident Command System
KAFB	Kirtland Air Force Base
NMED	New Mexico Environment Department
OKSO	Office of Kirtland Site Operations
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management unit

DEFINITIONS

Emergency: Any imminent or existing fire or, explosion, or unplanned sudden or nonsudden release of Resource Conservation and Recovery Act (RCRA)-regulated waste or hazardous waste constituents to air, soil, or surface water that significantly threatensthat threatens human health or the environment. Examples of emergencies include but are not limited to: outside the Unit.

- A RCRA-regulated waste release within the Unit that cannot be contained with secondary containment or application of absorbents.
- An imminent or existing fire or explosion involving RCRA-regulated waste.
- A structure fire, grass fire, or forest fire that threatens to ignite RCRA-regulated waste.

Facility: A facility is defined by 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], as all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of RCRA-regulated waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them). The U.S. Environmental Protection Agency Identification Number assigned to Sandia National Laboratories/New Mexico is NM5890110518.

Hazardous Waste: A waste that meets the definition of RCRA solid waste, is not exempt from regulation, and exhibits one or more of the characteristics described in 20 NMAC 4.1.200/40 CFR 261, Subpart C [6-14-00], or is listed in 20 NMAC 4.1.200/40 CFR Part 261, Subpart D [6-14-00].

Mixed Waste: Waste that contains both hazardous waste and radioactive materials waste (including source, special nuclear, or by-product material) subject to the Atomic Energy Act of 1954 *(42 United States Code 2011 et seq.).*

Radioactive Waste: Solid, liquid, or gaseous waste that contains radionuclides regulated under the Atomic Energy Act of 1954, as amended.

RCRA-Regulated Waste: For the purposes of this site-wide Contingency Plan and the Unit-specific Contingency Plans, a waste that meets the definition of either hazardous waste or mixed waste.

RCRA-Regulated Waste Management Unit (Unit): A specific operational area used for the treatment and/or storage of RCRA-regulated waste.

SITE-WIDE CONTINGENCY PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

This appendix presents site-wide contingency measures applicable to all Resource Conservation and Recovery Act (RCRA)–regulated waste management units (Unit) at Sandia National Laboratories/New Mexico (SNL/NM), co-operated by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE). Unit-specific Contingency Plan information is provided in Section 6 ~~Attachment E~~ of each Unit-specific module. Together, information in this appendix and in each Unit-specific module meets the applicable regulatory requirements.

This Contingency Plan is intended to meet the requirements specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V (20 NMAC 4.1.500), adopting by reference the Code of Federal Regulations, Title 40, Part 264 (40 CFR 264), Subpart D, revised June 14, 2000 [6-14-00], "Contingency Plan and Emergency Procedures," and 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00], for RCRA-regulated waste treatment, storage, or disposal facilities.

The provisions of this Contingency Plan will be carried out immediately to minimize hazards whenever there is an emergency~~, an imminent or existing fire, explosion, or unplanned sudden or nonsudden 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) [6-14-00].

E.1 SNL/NM SITE DESCRIPTION

SNL/NM is a multidisciplinary laboratory engaged in research and development of weapons and alternative energy sources. SNL/NM is managed by Sandia, a wholly owned subsidiary of Lockheed Martin, for the DOE, with work also performed for others. SNL/NM falls under North American Industry Classification System Numbers 92811 (National Security) and 54171 (Research and Development in the Physical, Engineering, and Life Sciences).

SNL/NM is located on Kirtland Air Force Base (KAFB) immediately southeast of the Albuquerque~~, New Mexico,~~ city limits in Bernalillo County, New Mexico. SNL/NM occupies an area of approximately 2,842 acres (1,150 hectares) within ~~the eastern portion of the~~ the 80~~492~~-square-mile ~~Kirtland Air Force Base (KAFB)~~. SNL/NM consists of five Technical Areas, I through V, and remote test areas situated in the eastern half of ~~the~~ KAFB (Figure E-1).

E.1.1 Unit Descriptions

~~Descriptions of each Unit subject to 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00] are provided in Attachment E of each Unit-specific module.~~
The Units subject to 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00] and this Contingency Plan are listed in Table E-1. Additional detail about each Unit is provided in Section 6 of each Unit-specific module.

Table E-1
RCRA – Regulated Waste Management Units Included in Contingency Plan

Name	Acronym	Location, size	Types of operations	Operating hours	Staff
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II. Includes Buildings 958, 959. 1.35 acres	Storage, Repackaging	M-F 8:00 am 4:30 pm	Staffed during operating hours
Thermal Treatment Facility	TTF	Northern part of TA-III, south of Building 6715. 196 square feet	Treatment	M-F 7:00 am 5:00 pm	Staffed only during operations at Unit
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III. Includes Buildings 6920, 6921, 6925, and 6926. 3.11 acres	Storage, Treatment, Repackaging	M-Th 7:00 am – 5:30 pm	Staffed during operating hours
High Bay Waste Storage Facility	HBWSF	TA-V, Building 6596. 5670 square feet	Storage	M-Th 7:00 am – 5:30 pm	Staffed only during operations at Unit
Auxiliary Hot Cell Facility	AHCF	TA-V, Building 6597. 5578 square feet	Storage, Treatment, Repackaging	M-F 8:00 am – 4:30 pm	Staffed during operating hours
Manzano Storage Bunkers	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 7 bunkers (approximately 1600 to 2400 square feet in each bunker)	Storage	M-Th 7:00 am – 5:30 pm	Staffed only during operations at Unit

E.1.2 Waste Description

RCRA-regulated wastes at SNL/NM are generated primarily from laboratory research activities, process operations, and environmental restoration activities. Typical laboratory research waste includes bottles of excess or residual chemical mixtures and solutions and solid laboratory waste such as rags, batteries, and equipment. Typical process waste includes larger volumes (5- to 55-gallon containers) of solvents, oils, and corrosive solutions. Typical environmental restoration activity waste includes contaminated soil cuttings, debris, personal protective equipment, and decontamination fluids.

Because Sandia/DOE research and other activities are subject to change, waste streams and volumes stored at SNL/NM Units vary. The general types of wastes and capacities of each Unit are summarized in Section 6 of each module. The detailed description, location, and quantity of the RCRA-regulated wastes managed are identified in the Operating Record maintained for each Unit.

E.1.3 Operating Schedule

The operating schedules of the RCRA-regulated Units are summarized in Table E-1. Sandia/DOE security personnel check each Unit periodically during the time the Units are closed. If an emergency is discovered during these inspections, the SNL/NM Emergency Operations Center (EOC) and the Unit Emergency Coordinator (EC) (Section E.3.1) will be notified immediately.

E.2 CONTINGENCY PLAN DISTRIBUTION AND AMENDMENTS [20 NMAC 4.1.500/40 CFR 264.53-54]

Copies of the current~~is~~ site-wide Contingency Plan and the applicable Unit-specific information (Section 6.0 of each Unit-specific module) ~~Contingency Plan~~ are maintained at the following locations: each Unit, ~~and at~~ the SNL/NM ~~Emergency Operations Center (~~EOC), and SNL/NM Records Center. Sandia/DOE also provide copies of the Plan and any amendments and updates to the KAFB Fire Department and the New Mexico Environment Department (NMED) for their use.

This site-wide Contingency Plan and the Unit-specific information will be reviewed periodically by the EC(s) and Sandia ERO personnel. The plan(s) will be amended, if necessary, whenever one or more of the following occur:

- Applicable regulations or RCRA permit conditions are revised;
- There is a significant change in facility or Unit design, construction, maintenance, operation, or other circumstance that increases the potential for emergencies or changes the response necessary in an emergency;
- The list of designated emergency coordinators changes;
- The list of required emergency equipment changes significantly; or
- Actual implementation of the plan during an emergency demonstrates inadequacies.

E.3 EMERGENCY RESPONSE RESOURCES [20 NMAC 4.1.500/40 CFR 264.52(c) and 264.53]

Resources are available at each Unit, at SNL/NM, within KAFB, and in Albuquerque as described in this section.

E.3.1 Emergency Coordinator and Responsibilities [20 NMAC 4.1.500/40 CFR 264.52(d), 264.55, and 264.56(a)–(h)]

The Unit-specific ~~Emergency Coordinator (~~EC~~)~~ has thorough familiarity with this Contingency Plan and the applicable Unit-specific attachment(s), Unit layout, operations, the location of records, ~~and~~ the locations and characteristics of the RCRA-regulated waste managed at the Unit(s), and the emergency equipment and supplies. The EC has the authority through the Sandia department

manager to commit the necessary Unit resources (including personnel, materials, and funds) to respond to an emergency at SNL/NM.

During emergencies at each Unit, or until the SNL/NM emergency response Incident Commander (IC) arrives (E.3.3), the EC has three primary responsibilities:

1. **Assess the Situation.** By observing the scene, interviewing personnel, and/or reviewing records, the EC must gather information relevant to the response, such as the type of event, quantity and type of released material, and actual or potential hazards to human health or the environment.

2. **Protect Personnel.** The EC should take any reasonable measures to ensure the safety of personnel, such as activating the fire alarm, accounting for Unit personnel, attending to injuries, or coordinating the evacuation of Unit personnel, if necessary. If evacuation is indicated for other personnel, the IC must be informed.

3. **Contain or Mitigate the Hazards.** The EC should take reasonable measures to ensure that fires, explosions, or releases do not occur, recur, or spread.

After emergencies, the EC must ensure that the facility and equipment are cleaned, waste is properly handled and disposed, the Unit is safe to resume operation, and all information necessary for notifications and reports is provided to Sandia/DOE personnel, as outlined in Sections E-6 and E-7.

In the event the EC is not on site or immediately available during an emergency, an alternate EC is contacted. The names, addresses, and phone numbers of the primary and alternate ECs for each SNL/NM Units are included in ~~Attachment E of~~ each Unit-specific module. A Unit-specific EC or alternate EC is on site or immediately available during the operating hours of each Unit. ECs are also available during non-routine RCRA-regulated waste management operations that may be conducted outside normal operating hours.

E.3.2 Emergency Response Groups

The SNL/NM Emergency Response Organization (ERO) consists of two response groups that respond to an emergency situation: (1) a field response group led by an ~~Incident Commander (IC)~~ under the Incident Command System (ICS) and (2) an EOC cadre. The ICS also includes Sandia/DOE Security, ~~and~~ the KAFB Fire Department, and Sandia/DOE personnel with relevant technical skills. An IC is on site at SNL/NM at all times (24 hours per day, 7 days per week). Sandia/DOE security and the KAFB Fire Department personnel are also available at all times. Sandia/DOE technical personnel are available on site at SNL/NM from 8:00 am – 4:30 pm Monday through Friday and are on call the rest of the time. The SNL/NM EOC staff includes an Emergency Director and a staff of Sandia and DOE personnel who are responsible for the management decisions and notifications to outside parties that ~~may be~~ are required during an emergency response (Section E.5.3). EOC staff personnel are available on site at SNL/NM from 8:00 am–4:30 pm, Monday through Friday, and are on call the rest of the time.

In the field, the IC maintains overall management and control of response operations at the emergency site. The IC works in a unified command with the KAFB Fire Department and in concert

with safety personnel, Unit-specific personnel (e.g., EC), and other emergency responders to develop and execute response plans, including on-site protective actions and recommendations for off-site protective actions. The ICS system is implemented at the time an emergency occurs, is expanded to control the emergency as needs arise, and remains in effect until the need for emergency management no longer exists.

E.3.3 Emergency Chain of Command

When the EC is notified of an incident, he must first determine if procedures for emergencies (Section E-5) should be implemented. The EC manages the emergency response (Section E.3.1) until the IC arrives at the Unit and relinquishes control to the arriving IC. If possible, the EC maintains communication with the IC by telephone or radio before the IC arrives at the Unit. The EC remains at the Unit and assists in emergency response as directed by the IC. The EC advises the IC, as needed, on Unit operations, Unit layout, characteristics of RCRA-regulated waste on site, ~~characteristics,~~ location of records, radio and cellular communication systems, and other information as necessary to respond to the emergency.

The SNL/NM IC is the liaison for communications with other emergency response~~ICS~~ organizations and functions, including medical and fire protection support. The EC can request both medical and fire protection services, if necessary, at the same time that he/she notifies the IC~~S~~ of the emergency.

E.3.4 Support Agreements and Coordination with Outside Agencies [20 NMAC 4.1.500/40 CFR 264.37]

~~20 NMAC 4.1500/40 CFR 264.37 [6-14-00], requires that arrangements be made with local authorities.~~

Sandia/DOE maintain sufficient response resources to handle most emergencies arising from RCRA-regulated waste management activities as described in this contingency plan. These response resources include personnel, emergency equipment, medical facilities, and communications systems. DOE also has established mutual aid agreements and memoranda of understanding with several off-site agencies and facilities for additional response capabilities for SNL/NM. These agencies and facilities include:

Table E-2~~1~~
Agreements and Memoranda of Understanding for Emergency Response

Agency or Facility	Type of Service
New Mexico Department of Public Safety	Mutual aid involving an actual or potential emergency. ~~Assiatance~~assistance in training and emergency response for local and tribal governments.
377th Air Base Wing, Kirtland Air Force Base	Various categories of support, including fire protection, police services, communications, and utilities. ~~Fire protection, law enforcement~~
U.S. Forest Service	Cooperative fire fighting arrangement between the USFS and KAFB for wildland fires. ~~Wildland fire protection~~

Table E-21 (Concluded)
Agreements and Memoranda of Understanding for Emergency Response

Agency or Facility	Type of Service
City of Albuquerque	Mutual support and responsibilities during a potential or actual emergency requiring the combined resources of DOE and the City of Albuquerque. Mutual emergency response support
University of New Mexico Medical Center	Mutual cooperation and assistance inassistance in providing timely and effective emergency medical services. Emergency medical services
St. Joseph Medical Center	Mutual cooperation and assistance inassistance in providing timely and effective emergency medical services. Emergency medical services
Lovelace Medical Center	Mutual cooperation and assistance inassistance in providing timely and effective emergency medical services. Emergency medical services
Presbyterian Health Care Services	Mutual cooperation and assistance inassistance in providing timely and effective emergency medical services. Emergency medical services

E.3.5 Coordination with Off-Site Parties

In addition to the agreements described in Section E.3.4, Sandia/DOE will verbally notify the City of Albuquerque or Isleta Pueblo, respectively, as soon as possible in the unlikely event that residents of Albuquerque or Isleta Pueblo outside KAFB are or could be affected. The notification will include available information about the nature and location of the emergency, the materials involved, and the recommended protective actions. The most likely protective actions are expected to include evacuation or sheltering indoors with doors and windows closed and ventilation systems shut off. The IC is responsible for issuing such recommendations to off-site parties.

E.4 EMERGENCY EQUIPMENT [20 NMAC 4.1.500/40 CFR 264.32, 264.33, 264.34, and 264.52(e)]

20 NMAC 4.1. 500/40 CFR 264, Subpart D [6-14-00], requires a listing of all emergency response equipment available for use in the event of an emergency. Lists of emergency equipment available for use at each Unit are presented in Attachment E of each Unit-specific module. A list of equipment available through the SNL/NM emergency response system is provided in Table E-32. Lists of emergency equipment available for use at each Unit are presented in each Unit-specific module.

E.5 CONTINGENCY PLAN IMPLEMENTATION [20 NMAC 4.1.500/40 CFR 264.56]

The following sections discuss guidelines used to implement this Contingency Plan, emergency notification, and EC actions.

Table E-32
Sandia National Laboratories/New Mexico (SNL/NM) Facility[a] Emergency Equipment
2-18-2003

Item or Equipment	Description/Telephone
Emergency Vehicles (owned by Sandia/DOE unless noted)	
Emergency Response Vehicle	Mobile Command Post equipped with communications equipment, typically located at SNL/NM EOC[b].- SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Ambulance	Typically located at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Security Vehicles	Vans and trucks equipped with communications equipment and utilized for transportation of personnel and equipment, typically located throughout SNL/NM. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Fire Trucks (owned by KAFB Fire Department)	Fire-fighting vehicles outfitted with equipment for fighting fires, typically located at KAFB fire stations. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Medical Supplies (owned by Sandia/DOE)	
Stretchers/Stokes Litter	Equipment for movement of injured personnel. Stokes litter will immobilize personnel so they may be moved vertically. Typically located in ambulance or at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Blankets	Normal blankets, typically located in ambulance or at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Medical Kits	Emergency first-aid supplies, typically located in ambulance or at SNL/NM medical facility.. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Safety Supplies (owned by Sandia/DOE)	
Air Packs	Self-contained breathing apparatus for use by personnel entering hazardous atmospheres, typically located in ambulance or response vehicle. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Monitoring Instruments	Typically located in ambulance or emergency response vehicle. SNL/NM Emergency Response System — Call 911 or (505) 844-0911

[a] Lists of equipment available at each Unit are included in ~~Table 3 of~~ a table in each Unit-specific module.
[b] The SNL/NM EOC is located in TA-I.

~~E.5.1 Emergency Response [20 NMAC 4.1.500/40 CFR 264.56(b-f)]~~

~~In an emergency, evacuation procedures described in Section E.5.2 and notification procedures described in Section E.5.3 are followed.~~ Unit pPersonnel who become aware of an incident contact the EC immediately. If the incident is ~~identify~~ an emergency, personnel ~~first~~ implement evacuation procedures identified in Section E.5.2.~~-~~ Personnel also immediately notify the Unit-specific EC or alternate EC of the emergency condition. The EC will then assess the situation and determine the scale of the incident.

If the EC determines that an emergency situation exists at the Unit, he will immediately notify the SNL/NM EOC and activate this Contingency Plan. ~~The EC or alternate EC contacts ICS representatives to identify the emergency or verify identification of activated alarm systems (Sandia/DOE Security and the KAFB Fire Department monitor SNL/NM fire alarm systems located at Units).~~ The methods for contacting emergency response ~~ICS~~ representatives are listed in Table E-4~~3~~.

Table E-4~~3~~
Emergency Response~~Incident Command~~ System ~~(ICS)~~ Notification, Sandia National Laboratories/New Mexico

Method	Number
Telephone (at Unit)	911
Mobile Telephone	(505) 844-0911
Portable Radio	NA
Automatic notification of emergency response ~~ICS~~ when smoke detector or pull station is activated and/or water flows in sprinkler system	NA

Note: Any person in any Unit is authorized to implement the evacuation procedures, notify the EC or alternate EC, and/or contact the emergency response ~~ICS~~ representatives in the unlikely event that the EC or alternate EC cannot be contacted or respond in a timely manner.

E.5.1 Emergencies

In the event of an emergency, the EC, an assignee, or Unit personnel (see note above) will immediately telephone the SNL/NM EOC (911 or 844-0911) or notify them in some other way (see Section E.5). Emergencies require the activation of this Contingency Plan and SNL/NM emergency response resources.

The EC will relinquish authority to the IC upon arrival as described in Section E.3.3. The EC and the IC will:

- Determine the extent of the emergency;
- Identify the character, source, amount, and areal extent of released materials by observation, records reviews, or chemical analysis;

- Assess possible resulting hazards to human health or the environment, considering both direct and indirect effects;

- Take all reasonable measures necessary to ensure fires, explosions, and releases do not occur, recur, or spread to other RCRA-regulated waste at the Unit, including collecting and containing released waste, and removing or isolating containers; and

- Monitor for leaks, pressure buildup, gas generation, and ruptures in equipment. ~~valves, pipes, or other equipment if the Unit stops operations.~~

~~Personnel trained at SNL/NM to use fire extinguishers may respond to fires in accordance with training requirements. The KAFB Fire Department will work in a unified command with the IC to respond to emergencies at SNL/NM. As directed by the IC, the Sandia Rescue/Recon Team and Hazardous Materials Team will respond to releases, as appropriate.~~

E.5.1.1 Fire

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing fire.

1. All non-essential Unit personnel should evacuate (Section E.5.2) to an upwind point at least 100 yards away from the fire as directed by the EC. All Unit personnel may evacuate at this time.

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. ONLY if safe to do so, Unit personnel may consider taking action to put out the fire or minimize its spread. These actions may be taken only after the SNL/NM IC and KAFB Fire Department have been notified. Personnel must not jeopardize their own safety or the safety of other personnel.

   - If the fire is small and the fuel source is small, portable fire extinguishers may be used to put out the fire.

   - Fire extinguishers may only be used by personnel trained in their use and in this Contingency Plan, and only for very small fires.

   - Flammable materials should be removed from the area of fire if safe to do so.

   - Only Lith-X fire extinguishers are to be used for water-reactive waste.

4. If the fire spreads or increases in intensity, all remaining personnel must evacuate (see Step 1).

5. The EC should remain near the site, but at a safe distance, so he can advise the personnel responding to the fire of the known hazards.

6. Upon arrival at a fire, the KAFB Fire Department officer-in-charge will be in command of fire fighting. He will accept and evaluate the advice of Sandia/DOE Unit and emergency response personnel, but he retains the responsibility to select the fire-fighting methods and tactics.

7. The IC will be in overall control of Sandia/DOE emergency response efforts until the emergency is terminated.

8. RCRA-regulated wastes involved in a fire can be identified in the following ways: The location of the container may indicate the contents. If the location does not indicate its contents, the label number can be used to identify the material. Records on the contents of each container can be accessed from outside the Unit or in the Unit office. If the label has been burned and the container cannot be identified, the material will be treated as an unknown and analyzed according to methods in the Waste Analysis Plan (Appendix B to the General Part B.)

9. Residues of RCRA-regulated wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

10. If needed, affected surfaces will be cleaned using cleaners appropriate to the chemicals.

11. If possible and safe to do so, responding personnel will take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, personnel will build dikes around storm drains.

12. Any fire-fighting waters collected in the stormwater catchment and retention ponds at the HWMF and RMWMF or the floor trenches at the HBWSF and AHCF will be analyzed to determine an appropriate disposal method.

E.5.1.2 Explosion

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing explosion.

1. Unit personnel will immediately evacuate the area (Section E.5.2).

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. The EC will remain near the site, but at a safe distance, so he can advise the response personnel of the known hazards involved and the degree and location of the explosion and associated fires.

4. Upon arrival at the site, the KAFB fire department officer-in-charge will be in command of fire fighting. He will accept and evaluate the advice of Sandia/DOE personnel and emergency response organization members, but he retains the responsibility to select the fire-fighting methods and tactics.

5. The IC will be in overall control of Sandia/DOE emergency response efforts until the emergency is terminated.

6. Residues of RCRA-regulated wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

7. If needed, affected surfaces will be cleaned using cleaners appropriate to the chemicals.

8. If possible, responding personnel will take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, personnel will build dikes around storm drains.

9. Any fire-fighting waters collected in the stormwater catchment and retention ponds at the HWMF and RMWMF or the floor trenches at the HBWSF and AHCF will be analyzed to determine an appropriate disposal method.

10. The EC will secure all operational units (e.g., process equipment, ventilation equipment) that may be affected directly or indirectly by the explosion once the areas needed to be entered have been determined safe by the IC or a safety officer.

E.5.1.3 Uncontrolled Release

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing release of RCRA-regulated waste or constituents.

1. Evacuate the immediate area (Section E.5.2).

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. Take actions to minimize, contain, and clean up the release only if safe to do so.

4. Review facility records (e.g., waste inventory database) to determine the identity and chemical nature of released material.

5. Don appropriate personal protective equipment for exposure to the material.

6. If possible, secure the source of the release.

7. If necessary and possible, build a dike to contain runoff.

8. Take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, build dikes around storm drains.

9. Released wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

10. No waste that may be incompatible with the released material will be treated, stored or disposed of until cleanup procedures are complete.

11. After collection of a released material, the release site will be sampled and evaluated. If contamination is found to exist, contaminated materials may be collected, drummed (if appropriate), and removed from the site for disposal at a permitted disposal facility. Depending on the specific conditions, however, Sandia/DOE may choose to implement an alternative decontamination method such as surface cleaning or in situ neutralization or stabilization. Any such alternative will be discussed with the NMED prior to implementation.

E.5.2 Evacuation [20 NMAC 4.1.500/40 CFR 264.52(f)]

~~An evacuation is implemented when an imminent or existing fire, explosion, or unplanned sudden or nonsudden release threatens the health or safety of personnel within a Unit.~~

During an emergency that threatens the health or safety of personnel within a Unit, ~~,~~ the following steps will be taken as needed ~~procedures will be followed~~ to facilitate safe, coordinated evacuation:

~~A~~1. Stop work.

2. If safe to do so, close containers and shut down equipment or otherwise place it in a safe mode.

3. Alert personnel in the affected area by announcing the evacuation by voice command "Evacuate the Area."

4. Activate the available Unit-specific evacuation signal consistent with the internal communications and alarm systems that are listed in Section 6 of each Unit-specific module.

5. Notify the Sandia/DOE ERO by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

6. Check to see whether there is evidence that the designated evacuation route is not safe.

7. If there is no evidence of danger or obstacles, ~~When internal communication or alarm systems are activated,~~ exit the Unit according to the evacuation routes provided in Section 6 of the Unit-specific module.

8. If there is evidence of danger or obstacles, exit the Unit by any safe route available.

9. If safe to do so, check for other personnel in other areas of the Unit.

~~8~~10. ~~and~~ ~~P~~proceed to the designated ~~appropriate~~ assembly area for roll call to be taken by the EC or designee. ~~Evacuation routes are provided in Attachment E of each Unit-specific module;~~

11. If the EC and unit personnel are assembling at an alternate location, proceed to that location.

12. Inform the EC or designee about any other people still believed to be inside the Unit.

~~Do not reenter the Unit until the IC determines that it is safe to do so; and~~

13. ~~If further evacuation is required, implement operations directed by the IC.~~ Do not reenter the Unit until the IC or EC determines that is safe to do so. ~~to ensure traffic control, transportation of evacuees, secutiry of classified materials, maintain necessary communitaions, and restrict access to evacuated areas.~~

E.5.3 Coordination with Off-Site Parties and Emergency Notification [20 NMAC 4.1.500/40 CFR 264.56(a) and (b)]

The Sandia EOC notifies ~~the~~ DOE~~/Office of Kirtland Site Operations (OKSO)~~ of all emergencies at SNL/NM. Sandia/~~DOE/OKSO or the Sandia EOC~~ DOE will notify~~ies~~ state and local agencies if state or local response resources are required (see Section E.3.4), ~~or~~ if human health or the environment are threatened outside the SNL/NM facility, or if areas outside the SNL/NM facility may require protective action. Sandia/DOE will verbally notify the City of Albuquerque or Isleta Pueblo, respectively, as soon as possible in the unlikely event that residents of Albuquerque or Isleta Pueblo outside KAFB are or could be affected. The notification will include available information about the nature and location of the emergency, the materials involved, and the recommended protective actions. The most likely protective actions are expected to include evacuation or sheltering indoors with doors and windows closed and ventilation systems shut off.

In the event of an emergency involving injuries that require medical services from one of the hospitals listed in Table E-2, Sandia/DOE will provide all available information about the event and the materials involved to the responders as soon as possible.

Sandia/DOE will also notify the National Response Center (1-800-424-8802) if human health or the environment are threatened outside the facility. ~~In the event of an emergency involving a~~

~~release of a reportable quantity of hazardous materials outside SNL/NM, DOE/OKSO or the EOC notifies~~ The notification ~~the National Response Center (1-800-424-8802) to report~~ will include the following:

- Name and telephone number
- Facility name and address
- Time and nature of emergency
- Type and quantities of materials involved to the extent known
- Personnel injuries, and
- Potential hazards to human health, or the environment, outside the facility.

Sandia/DOE ~~DOE/OKSO or the EOC~~ will also provide~~s~~ this information to the ~~New Mexico Environment Department (~~NMED~~)~~ in accordance with regulatory requirements.

E.6 POST-EMERGENCY ACTIONS [20 NMAC 4.1.500/40 CFR 264.56(f-i)]

Immediately after an emergency, the EC (and the IC, when present) will:

- Continue to monitor for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment if the Unit stops operations;
- Provide for properly treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material;
- Ensure that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
- Ensure that all equipment used in responding to the emergency that is listed in either this site-wide plan or the Unit-specific Contingency Plan is cleaned and fit for its intended use before resuming operations.

Prior to resuming operations after an emergency involving RCRA-regulated waste in the affected area(s) of the Unit, Sandia/DOE will notify NMED that incompatible waste will not be managed until cleanup procedures are complete and equipment listed in the Unit-specific Contingency Plan is cleaned and fit for use.

E.7 EMERGENCY RESPONSE RECORDS AND REPORTS [20 NMAC 4.1.500/ 40 CFR 264.56(j)]

The time, date, and details of an emergency involving RCRA-regulated waste that require implementation of this Contingency Plan will be noted in the Operating Record maintained for the affected Unit. Within 15 days after the incident, a written report will be submitted to the NMED identifying:

- Name, address, and telephone number of the facility owner or operator
- Name, address, and telephone number of the facility
- Date, time, and type of incident (e.g., fire, explosion, release)
- Name and quantity of material(s) involved
- Extent of injuries (if any)
- Assessment of actual or potential hazards to human health or the environment, where applicable, and
- Estimated quantity and disposition of recovered material that resulted from the incident.

~~E.8 CONTINGENCY PLAN AMENDMENT [20 NMAC 4.1.500/40 CFR 264.54]~~

~~This site-wide Contingency Plan and the Unit-specific Contingency Plans will be reviewed periodically by the EC(s) and Sandia ERO personnel. The plan(s) will be amended, if necessary, whenever:~~

~~□Applicable regulations or RCRA permit conditions are revised;~~

~~□There is a significant change in facility or Unit design, construction, maintenance, operation, or other circumstance that increases the potential for emergencies or changes the response necessary in an emergency;~~

~~□The list of designated emergency coordinators changes;~~

~~□The list of required emergency equipment changes significantly; and~~

~~□Actual implementation of the plan during an emergency demonstrates inadequacies.~~

Sandia National Laboratories/New Mexico Hazardous Waste Management Facility Part B Permit Renewal Request

Module I

Revision 2~~1~~.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... HWMF-iiiii
LIST OF FIGURES ..... HWMF-iiiiv
~~LIST OF ATTACHMENTS ..... HWMF-iv~~
ACRONYMS AND ABBREVIATIONS ..... HWMF-~~v~~vi
1.0 GENERAL UNIT OPERATIONS HWMF-8
1.1 Designated Waste Management Areas HWMF-8
1.1.1 Hazardous Waste Packaging Building (Building 959) HWMF-8
1.1.2 Hazardous Waste Storage Building (Building 958) HWMF-9
1.1.3 Modular Storage Buildings (958B and 958C) HWMF-10
1.2 Unit Operations HWMF-11
1.2.1 Operation of Containment Systems HWMF-11
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes HWMF-12
1.2.3 Preparedness and Prevention HWMF-12
1.2.3.1 Required Equipment HWMF-13
1.2.3.2 Testing and Maintenance of Equipment HWMF-13
1.2.3.3 Access to Communications or Alarm Systems HWMF-13
1.2.4 Hazards Prevention HWMF-14
1.2.4.1 Preventing Hazards in Unloading HWMF-14
1.2.4.2 Preventing Runoff or Flooding HWMF-14
1.2.4.3 Preventing Contamination of Water Supplies HWMF-14
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages HWMF-15
1.2.4.5 Preventing Undue Exposure HWMF-15
1.2.4.6 Preventing Releases to the Atmosphere HWMF-15
1.3 Container Storage Practices HWMF-15
1.3.1 Container Types and Labeling HWMF-15
1.3.2 Container Handling HWMF-15
1.3.2.1 Condition of Containers HWMF-16
1.3.2.2 Aisle Space and Storage Configuration HWMF-16
1.3.2.3 Compatibility of Waste with Containers HWMF-16
2.0 UNIT DESCRIPTION AND INFORMATION HWMF-22
2.1 Security Procedures and Equipment HWMF-23
2.1.1 Barriers and Means to Control Entry HWMF-23
2.1.2 Warning Signs HWMF-23
2.2 Traffic Pattern, Volume, and Controls HWMF-24
2.2.1 Traffic Patterns HWMF-24
2.2.2 Traffic Volumes HWMF-24
2.2.3 Traffic Control Signals HWMF-24
2.3 Unit Location Information HWMF-24
2.3.1 Seismic Standard HWMF-25
2.3.2 Floodplain Standard HWMF-25
2.4 Topographic Maps HWMF-25
2.5 Groundwater Monitoring HWMF-26
3.0 WASTE ANALYSIS PLAN HWMF-29
4.0 INSPECTION PLAN HWMF-31

TABLE OF CONTENTS (Concluded)

5.0 PERSONNEL TRAINING HWMF-35
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE HWMF-37
7.0 CLOSURE PLAN HWMF-47
7.1 Estimate of Maximum Waste in Storage HWMF-47
7.2 Closure Conditions HWMF-47
7.3 Closure Schedule HWMF-48
8.0 TREATMENT PLAN HWMF-50
9.0 REFERENCES HWMF-52
~~1.0 GENERAL UNIT OPERATIONS ..... HWMF-1~~
~~1.1 Designated Waste Management Areas ..... HWMF-2~~
~~1.1.1 Hazardous Waste Packaging Building (Building 959) ..... HWMF-2~~
~~1.1.2 Hazardous Waste Storage Building (Building 958) ..... HWMF-3~~
~~1.1.3 Modular Storage Buildings ..... HWMF-3~~
~~1.2 Unit Operations ..... HWMF-4~~
~~1.2.1 Inspections ..... HWMF-4~~
~~1.2.2 Containment Systems ..... HWMF-4~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... HWMF-4~~
~~1.2.4 Closure ..... HWMF-5~~
~~1.2.5 Preparedness and Prevention ..... HWMF-5~~
~~1.2.5.1 Required Equipment ..... HWMF-5~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... HWMF-5~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... HWMF-5~~
~~1.2.6 Hazards Prevention ..... HWMF-5~~
~~1.2.6.1 Preventing Hazards in Unloading ..... HWMF-5~~
~~1.2.6.2 Preventing Runoff or Flooding ..... HWMF-6~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... HWMF-6~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... HWMF-6~~
~~1.2.6.5 Preventing Undue Exposure ..... HWMF-6~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... HWMF-6~~
~~1.3 Container Storage Practices ..... HWMF-7~~
~~1.3.1 Container Types and Labeling ..... HWMF-7~~
~~1.3.2 Container Handling ..... HWMF-7~~
~~1.3.2.1 Condition of Containers ..... HWMF-7~~
~~1.3.2.2 Aisle Space and Storage Configuration ..... HWMF-7~~
~~1.3.2.3 Compatibility of Waste with Containers ..... HWMF-7~~
~~1.4 Treatment Operations ..... HWMF-7~~
~~2.0 OTHER FEDERAL LAWS ..... HWMF-8~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... HWMF-9~~
~~4.0 REFERENCES ..... HWMF-10~~

LIST OF TABLES

Table No.	Title
1	Secondary Containment Capacity for Building 958
2	Fire Suppression Systems at the Hazardous Waste Management Facility
3	Hazardous Waste Management Facility Inspection Criteria and Frequency
~~4~~2	Hazardous Waste Management Facility Emergency Equipment and Locations
5~~3~~	Hazardous Waste Management Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location of the Hazardous Waste Management Facility at Sandia National Laboratories/New Mexico
2	Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas
3	Hazardous Waste Packaging Building (Building 959), Floor Plan
4	Hazardous Waste Storage Building (Building 958), Floor Plan
5	Hazardous Waste Management Facility, Traffic Routes and Controls
6	Topographic Map, Hazardous Waste Management Facility
7	Hazardous Waste Management Facility, Access Control Features
8	Hazardous Waste Management Facility, Drainage Control Features
9	Hazardous Waste Management Facility, Evacuation Routes
10	Hazardous Waste Management Facility, Emergency Response and Access Information

~~LIST OF ATTACHMENTS~~

~~**Attachments**~~

~~A Unit Description for the Hazardous Waste Management Facility~~

~~B Waste Analysis Plan for the Hazardous Waste Management Facility~~

~~C Inspection Plan for the Hazardous Waste Management Facility~~

~~D Personnel Training Plan for the Hazardous Waste Management Facility~~

~~E Contingency Plan for the Hazardous Waste Management Facility~~

~~F Closure Plan for the Hazardous Waste Management Facility~~

~~G Treatment Plan for the Hazardous Waste Management Facility~~

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
ft	foot/feet
ft^2	square foot/feet
HWMF	Hazardous Waste Management Facility
HSWA	Hazardous and Solid Waste Amendments
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	Solid Waste Management Unit
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO HAZARDOUS WASTE MANAGEMENT FACILITY PART B PERMIT RENEWAL REQUEST

This Sandia National Laboratories/New Mexico (SNL/NM) Hazardous Waste Management Facility (HWMF) Part B Permit Renewal Request is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~–IX (20 NMAC 4.1.5~~1~~00 and ~~–~~.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the HWMF. 20 NMAC 4.1.5~~1~~00 and ~~–~~.900, adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264~~0 through 266, 268,~~ and 270 (40 CFR 264~~0–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 200~~2a~~3a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002~~b~~), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002~~b~~) serves as a companion document to the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) and Unit-specific Part B modules, including this HWMF Part B Permit Renewal Request.

In both the SNL/NM General Part A (SNL/NM, 2002~~b~~) and SNL/NM General Part B (SNL/NM, 200~~2a~~3a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Hazardous Waste Management Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The HWMF occupies 1.35 acres on DOE property between TA-I and TA-II. It is a fenced compound with several buildings and waste management areas (WMAs). Operations include storage of RCRA-regulated wastes in containers and repackaging the wastes into suitable containers for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HWMF. Sandia/DOE currently operate the HWMF in accordance with the terms of NMED Permit NM5890110518-1, issued August 6, 1992 (NMED, 1992).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart I [6-14-00].~~ This section provides descriptions of the HWMF ~~waste management areas (~~WMAs~~)~~ and specific Unit waste management operations. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~1a~~3a).

Specific information in this section ~~applicable to the HWMF~~ includes: ~~addressed in this module is provided for the following subject areas:~~

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; hazards prevention; and

- Container storage of RCRA-regulated wastes. ~~practices.~~

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, ~~2001a~~2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.-14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

~~The HWMF at SNL/NM is used for storage of RCRA-regulated wastes in accordance with "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992) issued by the New Mexico Environment Department on August 6, 1992, to Sandia/DOE.~~ The location of the HWMF at SNL/NM is shown on Figure 1. The HWMF has three designated WMAs, shown on Figure 2:

- The Hazardous Waste Packaging Building (Building 959),
- The Hazardous Waste Storage Building (Building 958), and
- Two modular storage buildings.

The following sections provide descriptions of the storage structure, location, ~~and~~ capacity, and secondary containment of each WMA.

1.1.1 Hazardous Waste Packaging Building (Building 959)

In the Hazardous Waste Packaging Building, ~~small containers of waste are emptied and the contents are bulked into larger containers. L~~lab packs are ~~also~~ prepared by placing small containers into larger containers filled with absorbent material.

The Hazardous Waste Packaging Building is the easternmost WMA at the HWMF and provides 1,800 square feet (ft^2) of enclosed floor space (Figures 2 and 3). The building is constructed of precast concrete construction with an eave height of 12 feet (ft). Eight recessed waste-holding cells and a recessed waste packaging area are located in the building. The floors of the cells and packaging area are constructed of reinforced concrete and metal grating. Waste containers are placed on shelves over metal grating over the secondary containment areas. The load-bearing capacities of the reinforced concrete floor and the metal grating are 450 and 2,000 pounds per ft^2, respectively. The entire floor of the building and~~and~~ the bottom seven inches of ~~lower~~ wall surface in ~~of~~ each recessed area are covered with an epoxy-based chemical-resistant coating. The coating forms a continuous protective barrier over the concrete and protects the floor from the effects of solvents and corrosive chemicals that may be released from the containers.

Secondary containment is provided by the recessed areas. The recessed area in each holding cell is 5 feet by 4.5 feet and 7 inches deep, with a capacity of 71 gallons. The recessed area under the packaging area is 5 feet by 12 feet and 7 inches deep, with a capacity of 188 gallons.

Based on the secondary containment capacity (10% of the stored volume or the volume of the largest container), each of the eight holding cells in the Hazardous Waste Packaging Building can hold a maximum of 13 55-gallon drums, or an equivalent volume. The packaging area can hold a maximum of 34 55-gallon drums, or an equivalent volume. The stacking configuration of waste containers will not exceed the load-bearing capacity of the reinforced concrete or metal grating. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

1.1.2 Hazardous Waste Storage Building (Building 958)

The Hazardous Waste Storage Building (Building 958) is located west of the Hazardous Waste Packaging Building (Figure 2). The Hazardous Waste Storage Building is a 3,250-ft^2 precast concrete building with an eave height of 14 ft. In the Hazardous Waste Storage Building, eight separate and recessed waste storage compartments for segregation of waste groups are contained in the building (Figure 4). The floors of Cells 1, 2, 3, 4, 6, 7, and 8 are constructed of reinforced concrete and metal grating. The floor of Cell 5 is constructed of reinforced concrete. The entire floor (all cells and walkway) is coated with an epoxy-based chemical-resistant coating. The coating protects the concrete from the effects of solvents and corrosive chemicals that may be released on the floor. Waste containers are placed on metal grating over the secondary containment area, or on pallets on the reinforced concrete floor in Cell 5. The load-bearing capacity of the reinforced concrete and metal grating are 450 and 2,000 pounds per ft^2, respectively. The storage compartments vary in size, secondary-containment capacity, and waste-container capacity.

The secondary containment in Bays 1, 2, 3, 4, 6, 7, and 8 is provided by the recessed areas under the grating. The secondary containment capacity in Bay 5 is provided by the volume of the entire recessed area. For example, the recessed area in Bay 1 is 11.75 feet by 14.67 feet by 5 inches deep, with a capacity of 542 gallons. The secondary containment capacity is 10% of the stored volume or the volume of the largest container; thus the storage capacity is 5420 gallons, 98 55-gallon drums, or an equivalent volume. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

Based on the secondary containment capacity, the storage compartments are limited to the following maximum storage capacity of 55-gallon drums, or equivalent volume, as listed in Table 1.

Table 1
Secondary Containment Capacity for Building 958

Bay No.	Maximum Number of 55-Gallon Drums
1	98
2	79
3	79
4	79
5	518[a]
6	79
7	79
8	79

[a]A portion of the secondary containment capacity is taken up by pallets.

The stacking configuration of waste containers will not exceed the load-bearing capacity of the reinforced concrete floor or the metal grating.

1.1.3 Modular Storage Buildings (958B and 958C)

The modular storage buildings are located west of Building 958 (Figure 2) and are used for storage of reactive wastes, including, but not limited to, lithium batteries, gas cylinders, and flammable solids.

The exterior dimensions of each modular storage building are 22 ft long, 8 ft wide, and 8 ft high. The buildings are constructed of welded 10- and 12-gauge steel supported by structural steel sections. Each building has three doors, each with a three-point locking system to provide access and security. Each has a 6-inch-deep integral spill containment reservoir under the entire building; the containment capacity is 500 gallons. ~~The secondary spill-containment reservoirs within each building, the walls, and the ceilings are covered with two coats of chemical-resistant epoxy.~~ The secondary~~pill~~-containment subfloor is constructed of continuously welded 10-gauge steel, which is epoxy-coated to resist chemical attack; the coating is compatible with reactive wastes. The floors are 1-inch-thick epoxy-coated, fire resistant plywood. The load-bearing capacity of the floor for each structure is 250 pounds per square foot. The inside walls and ceiling are also coated with chemical-resistant epoxy. Each building rests on structural supports that elevate it and allow visual inspections of the underside of the spill containment reservoir. The secondary containment capacity is 10% of the stored volume or the contents of the largest container; thus the storage capacity is 5000 gal. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

1.2 Unit Operations

The HWMF WMAs are used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002~~1b~~).

General information regarding:~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes;~~ closure;~~ preparedness and prevention; and~~,~~ hazards prevention requirements applicable to the HWMF WMAs are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002~~a~~3a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5]; 20 NMAC 4.1.500/ 40 CFR 264.15 and 264.174)~~

~~HWMF inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175[b][5])

The shelves in the holding cells in Building 959 have edges, but the shelves are not used to provide additional containment. Containers are inspected for integrity when the wastes arrive at the HWMF, before they are placed on the shelves. Containers of highly corrosive liquids may be placed within larger containers to capture any releases that may occur. Containers on the shelves are inspected regularly as noted in Appendix C (SNL/NM, 2002c). Released materials are cleaned up as described in Section 1.1 of the General Part B (SNL/NM, 2003a).
~~Liquids that might accumulate at the HWMF WMAs are contained within secondary containment systems that are sufficiently impervious to contain leaks, spills, or accumulated precipitation until the liquid is removed, as described in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002a), in accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00].~~

Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery. Personnel attempt to identify the source, if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed into containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[c] and [d]; 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HWMF. The general precautions and practices employed by Unit personnel are described in Section 1.1.2 of the General Part B (SNL/NM, 2003a). Additional HWMF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes and stored in the modular storage buildings. They may temporarily be managed in Building 959 after receipt and during repackaging activities.
- Forklifts are not used for waste movement in Building 959 to minimize potential sources of ignition in the building.
- Unit personnel use the process described in Section 1.1.2 to ground containers during transfer of flammable liquids between containers.
- The modular storage buildings are grounded by a 10-ft-long grounding rod and cable and equipped with a dry chemical fire suppression system to assure that water-reactive wastes will not be exposed to water during fire emergencies.
- Wastes are mixed together on a very limited basis during the repackaging operations at the Unit. Ignitable and reactive wastes are only mixed on a case-by-case basis. Unit personnel will use waste characterization data during repackaging to identify the hazards and potential consequences, as described in Appendix B, Section B.5.
- Containers of wastes ~~Incompatible wastes~~ are labeled and segregated in different holding cells in Building 959 ~~and different bays in Building 958~~according to compatibility criteria in 20 NMAC 4.1.500/40 CFR 264 Appendix V. Containers in Building 958 are labeled. They are segregated into different bays according to general DOT hazard classes in 49 CFR 172 and 20 NMAC4.1.500/40 CFR 264 Appendix V as appropriate. The h~~H~~olding cells and bays are separated from each other by concrete walls and independent containment systems.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~HWMF closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarms systems at the HWMF.

~~1.2.5.1~~1.2.3.1 *Required Equipment (20 NMAC 4.1.500/40 CFR 264.32~~ and 264.34~~)*

General information about fire hydrants at each Unit is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant at the HWMF is shown in Figure 10.

The modular storage buildings are grounded by a 10-ft-long grounding rod and cable. All buildings at the HWMF are equipped with automatic fire suppression systems, which are summarized in Table 2.

Table 2
Fire Suppression Systems at the Hazardous Waste Management Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
959	13, 30	Special	Automatic sprinkler, wet pipe	GB/FS
958	13, 30	Special	Automatic sprinkler, dry pipe	GB/FS
958B	17	N/A	Dry chemical	
958C	17	N/A	Dry chemical	

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on ~~the~~ other required equipment located at the HWMF is provided in Section 6 and Table 4 ~~Attachment E~~ of this module.

~~1.2.5.2~~1.2.3.2 *Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)*

Information on equipment testing and maintenance at the HWMF is provided in Section 1.1.3.2 and in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b), and in Section 4 ~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 *Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)*

Information about ~~of~~ the types and locations of communications or alarm systems at the HWMF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6~~Attachment E~~ of this module.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the HWMF to prevent hazards. Additional information applicable to the HWMF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM 2003a).

~~1.2.6.1~~1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

HWMF personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent hazards in unloading. Loading and unloading activities typically take place on the south side of buildings 958 and 959 (Figure 7). The surface is level, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Containers are typically shrink-wrapped to hold them together on a pallet before being loaded onto vehicles by a forklift for off-site shipment. Containers are typically transported within the Unit with drum dollies or pallet jacks.

~~1.2.6.2~~1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

~~HWMF personnel employ the practices described in Section 1.1.6.2 of the SNL/NM General Part B (SNL/NM, 2002a) to prevent runoff or flooding.~~

The land around the HWMF is generally level, sloping gently toward the south and west. The paved areas of the HWMF are higher than the surrounding land on all sides, preventing s~~S~~heet-flow run-on of surface water from surrounding areas. The western edge of the paved area is also surrounded by a 6-inch high asphalt curb, further preventing runon and runoff from HWMF WMAs.

Within the HWMF, the paved areas are sloped toward ~~are prevented from entering/leaving the WMAs by curbs, gutters, and a stormwater collection system. Paved areas south and east of the WMAs are sloped to~~ a 74,800-gallon catchment pond located at the northwest corner of the Unit. During normal operations, the catchment pond collects only storm water. The catchment pond does not provide secondary containment for RCRA-regulated waste.

~~1.2.6.3~~1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the HWMF will affect water supplies, as~~personnel employ the practices~~ described in Section 1.1.4~~6~~.3 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). ~~to prevent contamination of water supplies.~~

~~1.2.6.4~~1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). The HWMF is equipped with battery-operated lights which will automatically turn on in the event of a power failure. A permanent power transformer can provide emergency power from the SNL/NM emergency power network.

~~1.2.6.5~~1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

HWMF personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

HWMF personnel employ the practices described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent releases to the atmosphere.

RCRA-regulated waste containers may be opened to sample waste or transfer waste to another container. These activities are done only in the Hazardous Waste Packaging Building (959). A fume hood and drum vacuum hoods are available if there is a need to open a vapor-generating waste container. Only one category of waste is present in a ventilation system at any time.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

The HWMF is permitted for container storage of RCRA-regulated wastes in accordance with the conditions of "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Container storage practices applicable to the HWMF are presented in the following sections.

1.3.1 Container Types and Labeling

HWMF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

HWMF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

~~RCRA-regulated wastes are delivered to the Hazardous Waste Packaging Building (959) where wastes are unloaded, identified, and segregated into separate waste holding cells or bays by hazard class.~~

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the HWMF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

HWMF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Aisle width is typically 2.5 feet in all buildings. This is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked in Building 958 are stored on pallets, and are not stacked more than two pallets high. Box-shaped containers may be stacked two high without pallets. Containers may also be stored directly on the floor or on the grating.

Drums stored in the modular buildings are not stacked. Smaller containers may be stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

HWMF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

~~1.4 Treatment Operations~~

~~Sandia/DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the HWMF.~~

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... HWMF-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... HWMF-A-iii~~
~~A.1 HWMF General Unit Description ..... HWMF-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... HWMF-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... HWMF-A-2~~
~~A.2.2 Warning Signs ..... HWMF-A-2~~
~~A.3 Traffic Pattern, Volume, and Controls ..... HWMF-A-2~~
~~A.3.1 Traffic Patterns ..... HWMF-A-3~~
~~A.3.2 Traffic Volumes ..... HWMF-A-3~~
~~A.3.3 Traffic Control Signals ..... HWMF-A-3~~
~~A.4 Unit Location Information ..... HWMF-A-3~~
~~A.4.1 Seismic Standard ..... HWMF-A-3~~
~~A.4.2 Floodplain Standard ..... HWMF-A-3~~
~~A.5 Topographic Maps ..... HWMF-A-4~~
~~A.6 Groundwater Monitoring ..... HWMF-A-5~~
~~Reference ..... HWMF-A-5~~

~~LIST OF FIGURES~~

~~Figure No.~~	~~Title~~
~~A-1~~	~~Location of the Hazardous Waste Management Facility at Sandia National Laboratories/New Mexico~~
~~A-2~~	~~Hazardous Waste Management Facility, Layout~~
~~A-3~~	~~Hazardous Waste Management Facility, Traffic Routes and Controls~~
~~A-4~~	~~Topographic Map, Hazardous Waste Management Facility~~
~~A-5~~	~~Hazardous Waste Management Facility, Access Control Features~~
~~A-6~~	~~Hazardous Waste Management Facility, Drainage Control Features~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~HWMF~~	~~Hazardous Waste Management Facility~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION AND INFORMATION ~~FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (~~20 NMAC 4.1.100–.900/~~), revised June 14, 2000 20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270). The following subject areas are addressed in this section ~~attachment~~:

~~A general description of the Hazardous Waste Management Facility (HWMF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b).

~~A.1 HWMF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[B][1])~~

~~The HWMF is located approximately 1,000 feet (ft) north of the entrance to Technical Area II (Figure A-1). The HWMF is enclosed by an 8-ft-high, single chain-link and barbed-wire fence with a locking gate. A Unit layout for the HWMF is shown on Figure A-2.~~

~~The HWMF RCRA-regulated waste management areas (WMAs) addressed in this permit renewal request are (Figure A-2):~~

~~□The Hazardous Waste Packaging Building (Building 959),~~
~~□The Hazardous Waste Storage Building (Building 958), and~~
~~□Two modular storage buildings.~~

~~The HWMF waste management practices addressed in this permit renewal request are container storage of RCRA-regulated waste and emergency treatment (i.e., stabilization) as needed to render wastes suitable/safe for transport.~~

~~Descriptions of the HWMF WMAs and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures and Equipment~~ECURITY PROCEDURES AND EQUIPMENT~~ (20 NMAC 4.1.900/40 CFR 270.14[~~B~~b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the HWMF.

2.1.1 ~~A.2.1.~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the HWMF fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~

The HWMF is located on DOE property between TA-I and TA-II (Figure 1) The Unit is surrounded by an 8-ft ~~high, single chain~~high chain-link fence topped with ~~and~~ barbed ~~-~~-wire. ~~fence.~~ A single entrance gate is located on the east side of the HWMF. The gate is locked during nonwork hours. An emergency exit gate is located on the west side of the Unit, as shown in ~~the figures~~Figures 6 and 7. This gate is locked at all times and can only be opened from the inside by pressing on the handle. All buildings are also kept locked during non-operational hours. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the HWMF gates during non-operational hours.

During work hours, Unit signs instruct personnel and visitors to report to Office Trailer #1 for site entry privileges and instructions. Resident personnel have Sandia-issued badges. Nonresidents are escorted while on site. These procedures limit access to the HWMF RCRA-regulated WMAs, in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00]. ~~(Figure A-2).~~

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fences surrounding the HWMF and the entrance to the HWMF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to ~~any of~~ the HWMF ~~WMAs~~.

2.2~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/ 40 CFR 270.14[~~B~~b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the HWMF include Hardin Boulevard (formerly O Street), Pennsylvania Avenue, Wyoming Boulevard, Eubank Boulevard, and 9th, 14th, and P~~O~~ Streets as shown in Figures A-4 and A-5 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

Waste transport vehicles enter the HWMF from 14th Street (Figure ~~A-3~~5). Within the HWMF, waste is transported on paved surfaces. ~~Waste shipments from the HWMF travel out of Kirtland Air Force Base through the Truman Avenue or Eubank Boulevard gates.~~

2.2.2 ~~A.3.2~~ Traffic Volumes

Traffic volumes on Hardin Boulevard, Wyoming Boulevard, and Eubank Boulevard are generally light to moderate; traffic volumes on Pennsylvania Avenue and 9th, 14th, and P~~O~~ Streets are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

2.2.3 ~~A.3.3~~ Traffic Control Signals

Traffic on the access road is controlled by a stop sign at each end of the road: one at the intersection with P Street, and a ~~There are no traffic control signals or signs within the HWMF fenced area. A~~ stop sign and speed limit sign ~~are~~ posted on the fence adjacent to the HWMF vehicle entrance gate (Figure ~~A-3~~5). The speed limit within the HWMF fenced area is 5 miles per hour and no private vehicles are allowed inside the HWMF. Vehicle presence within the fenced HWMF is limited to work and waste transport vehicles (i.e., no personal vehicles). Therefore, signals or signs are not necessary to control traffic within the HWMF fenced area.

2.3~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[~~B~~b][11])

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11] [i and ii]; 20 NMAC 4.1.5~~9~~00/40 CFR 264.18[a])

The WMAs at the HWMF are not located within 3,000 ft of any fault with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the HWMF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002c]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[~~B~~b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).~~;~~

- Surface waters, including intermittent streams, near the HWMF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6~~A-4~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).~~;~~

- Surrounding land uses are shown on Figures A-2~~9~~ and A-8~~10~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the HWMF is occupied by other Sandia-controlled operations (industrial land use). As noted in Appendix A, the nearest residential areas are located west of Pennsylvania Avenue, north of Hardin Blvd (west of SNL/NM TA-1), more than one mile away from the HWMF. ~~;~~

- Wind roses for SNL/NM are shown on Figure A-2~~8~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6~~A-4~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00])~~;~~.

- Legal boundaries of SNL/NM (including the HWMF) are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).~~;~~

- Access control features at the HWMF (e.g., fences, gates) are shown on Figures 6 and ~~A-5~~7 of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).~~;~~

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the HWMF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure ~~A-4~~ 6 of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00])~~;~~.

- The location of the HWMF and associated WMAs and structures, ~~and~~ loading and unloading areas, roads, and sanitary sewers are shown on Figure 7~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).~~;~~

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure ~~A-6~~ 8 of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).~~; and~~

- Locations of the HWMF and HWMF WMAs are shown on Figures 1, 2, and 5 ~~A-1, A-2, and A-4~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the HWMF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to ~~the New Mexico Environment Department~~ NMED at these scales and contour intervals due to the size of the HWMF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The HWMF is not a regulated Unit. There have been no releases of RCRA-regulated waste in the past, nor is the HWMF likely to affect groundwater quality during normal operations or during unusual events.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure A-4~~
~~[To Be Provided]~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)/, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(2) (~~40 CFR 270.14[b][2]~~)~~; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; and_~~, and~~ 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," ~~revised June 14, 2000~~ [6-14-00], waste analysis requirements applicable to all ~~Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management~~ Uunits, including the HWMF~~Hazardous Waste Management Facility~~, are addressed in Appendix B ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

4.0 INSPECTION PLAN ~~FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management units, including the Hazardous Waste Management Facility (HWMF), are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that waste management areas (WMAs) and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as" Appendix C of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). HWMF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 3, which includes the inspection criteria and frequency. The items listed in the table are inspected in each HWMF WMA.

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

Automatic fire suppression systems are included in Table 3. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

Table 3
Hazardous Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Recovery drums and containers	Present and in good condition	Monthly
Self-contained breathing apparatus	Present and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Secondary containment	Free of liquids, good condition (i.e., no cracks, excessive wear)	Daily when wastes are managed. Weekly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Monitoring equipment	Instruments in good condition, operational, calibrated	Daily when wastes are managed. Monthly otherwise.
Waste transfer pump	Present, operational, and in good condition	Prior to use. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present and in good condition	Monthly
Gates and doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly

Table 3 (Concluded)
Hazardous Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (2 maximum)	Daily for individual containers that were handled. Weekly otherwise.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained at the HWMF. Inspection records for previous calendar years are maintained at the HWMF or the SNL/NM Records Center.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

Training requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)/, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) (~~40 CFR 270.14[b][12]~~)~~, and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training~~.~~," ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the Hazardous Waste Management Facility (HWMF), are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the HWMF.

HWMF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

Training records for HWMF personnel are maintained at the HWMF.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, See Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE ~~CONTINGENCY PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide Contingency Plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA]-Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002a) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental HWMF-specific information is included in this section, in Figures 9 and 10, and in Tables 4 and 5 of this module.

The ~~Hazardous Waste Management Facility (~~HWMF~~)~~ is located at the curve of 14th and P Streets (approximately 1,000 feet (ft) north of the entrance to Technical Area II) at SNL/NM and is used to repackage and store RCRA-regulated wastes. The RCRA-regulated ~~waste management areas (~~WMAs~~)~~ at the HWMF include~~ the container storage areas in~~ Building 958, Building 959, and the two modular storage buildings. The HWMF WMAs are located within a single area surrounded by ~~an 8-ft-high, single chain-link and barbed-wire fence~~a fence.

- Building 959 is an 1,800-square-foot precast concrete building with an eave height of 12 feet. Inside the building are eight waste holding cells, a repackaging area, a restroom, a general use area, an office area, and an area for packing materials. The floor is coated with an epoxy finish. A 1,200-square-foot covered outdoor area extends immediately to the west of Building 959. Small containers of wastes (typically less than 55 gallons) are stored in this building. Containers of incompatible wastes are segregated into different holding cells. The containers are repackaged into larger containers for shipment to off-site facilities. Up to 7,590 gallons of waste may be stored in this building.

- Building 958 (west of Building 959) is a 3,520-square-foot precast concrete building with an eave height of 14 feet. The building includes eight separate and recessed waste storage compartments for segregation of waste groups according to compatibility. Containers of wastes are stored in this building. Up to 99,950 gallons of waste may be stored in this building.

- Buildings 958B and 958C are relocatable, prefabricated safety storage structures used for the storage of reactive and ignitable wastes. Each structure is constructed of welded 10- and 12-gauge steel with supporting structural steel sections, and each has three doors. The 500-gallon containment reservoirs within each building, the walls, and the ceilings are coated with chemical-resistant epoxy. The reservoirs are lined with polypropylene, which is compatible with reactive wastes. The floors are epoxy-coated, fire-resistant plywood. Up to 5,005 gallons of waste may be stored in each building.

- ~~RCRA-regulated wastes bearing the U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002b) may be stored at the HWMF WMAs. Within each WMA, waste is segregated based on compatibility groups.~~ Storage of reactive wastes, lithium batteries, gas cylinders and flammable solids is restricted to these ~~the~~ two ~~modular storage~~ buildings ~~at the HWMF~~ except for temporary storage that may occur in Building 959 following acceptance of the waste at the HWMF.

Figure 9 ~~E-1~~ presents the evacuation routes for the HWMF. Figure 10 ~~E-2~~ presents emergency response and access information ~~necessary to access~~ for the HWMF. Table 4 ~~E-1~~ lists the emergency equipment typically available at the HWMF. Table 5 ~~E-2~~ lists the emergency coordinators for the HWMF.

Current copies of the Site-Wide Contingency Plan and this ~~Unit-specific~~ supplemental information ~~Contingency Plan and the Site-wide Contingency Plan (SNL/NM, 2002a)~~ are maintained at the HWMF and at the SNL/NM Emergency Operations Center.

~~REFERENCES~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

Table 4~~E-1~~
Hazardous Waste Management Facility, Emergency Equipment and Locations

Building 958

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Personal protective equipment~~ ~~Recovery drums and containers SCBA~~ Fixed shower / eyewash Recovery drums and containers SCBA Miscellaneous personal protective equipment (protective suits, goggles, gloves)	Near south entrance ~~Two at the south entrance~~ At south entrance At south entrance At south entrance
Internal Communication and Alarm System	Voice command Fire alarm pull station~~boxes~~ (pulling handle sends signal to KAFB fire department, does not actuate sprinklers) Audible fire alarms	 One each on the exterior ~~walls~~ and interior walls near ~~the~~ north and south personnel doors~~entrances~~
External Communication System	Telephones – unlimited employee access Fire alarm pull stations~~boxes~~ (pulling handle sends signal ~~sent~~ to KAFB fire department~~station~~, does not actuate sprinklers)	One on the interior walls near the north and south entrances One each on the exterior and interior walls near ~~each~~ north and south personnel doors
Fire Extinguishers	Portable (A-B-C)	One at both the north and south entrances
Fire Suppression	Automatic wet-pipe water~~Fire~~ sprinkler system, ~~water deluge-type~~with heat-actuated sprinklers Water supplied by fire hydrants	Coverage throughout the building~~Building-wide~~ One hydrant, location shown in Figure 10

KAFB = Kirtland Air Force Base.
SCBA = Self-contained breathing apparatus.

Table 4~~E-1~~ (Continued)
Hazardous Waste Management Facility, Emergency Equipment and Locations

Building 959

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Personal protective equipment~~ ~~Recovery drums and containers~~ Fixed shower/eyewash ~~First aid kit~~ Recovery drums and containers SCBA Miscellaneous personal protective equipment (protective suits, goggles, gloves) First aid kit	Near south entrance ~~One in the packaging room~~ ~~One in the bathroom~~ Near south entrance Near south entrance Near south entrance One in the bathroom
Internal Communication and Alarm System	Voice command Fire alarm pull station ~~boxes~~ (pulling handle sends signal to KAFB fire department, does not actuate sprinklers). Audible fire alarms	~~At building exits~~ One each on the exterior and interior walls near each personnel door
External Communication System	Telephones – unlimited employee access Fire alarm pull station ~~boxes~~ (pulling handle sends signal to KAFB fire department, does not actuate sprinklers).	One in the office ~~At building exits~~ One each on the exterior and interior walls near each personnel door
Fire Extinguishers	Portable (A-B-C) Lith-X	One at both the north and south entrances One in the general use ~~area~~ ~~One~~area One in the office
Fire Suppression	Automatic wet-pipe water ~~Fire~~ sprinkler system, ~~water deluge-type~~heat-actuated sprinklers Water supplied by fire hydrants	~~Building-wide~~Coverage throughout the building One hydrant, location shown in Figure 10

KAFB = Kirtland Air Force Base.

Table 4E-1 (Concluded)
Hazardous Waste Management Facility, Emergency Equipment and Locations

Modular Storage Buildings

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Personal protective equipment Recovery drums and containers	Buildings 958 and 959
Internal Communication and Alarm System	Voice command	
	Fire alarm pull boxes (pulling handle sends ,-signal sent to KAFB fire department, does not actuate system). Station	Buildings 958 and 959
	Audible fire alarms	
External Communication System	Telephones – unlimited employee access	Buildings 958 and 959
	Fire alarm pull boxes, (pulling handle sends signal sent to KAFB fire stationdepartment, does not actuate system)	Buildings 958 and 959
Fire Suppression	Ansul automatic dDry chemical system	Building-wideCoverage throughout the building

KAFB = Kirtland Air Force Base.

Table 5~~E-2~~
Hazardous Waste Management Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Charles Roma Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 844-0590 (office) (505) 263-7714 (cellular) (505) 540-4333 (pager)	(505) 271-5368
~~First Alternate~~	~~Gabe King~~ ~~Sandia National Laboratories~~ ~~P.O. Box 5800~~ ~~Albuquerque, New Mexico~~	~~(505) 284-4032 (office)~~ ~~(505) 540-9342 (pager)~~	~~(505) 286-6228~~
First ~~Second~~ Alternate	Mark Miller~~Lise Gorgone~~ Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 845-8887~~4-1301~~ (office) (505) 681-492018 (cellular)	(505) 839-4187~~255-7467~~
Second ~~Third~~ Alternate	David Castillo Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-4192 (office) (505) 540-9375 (pager)	(505) 899-1956

One or more of these personnel are routinely available during operating hours (8:00 am to 4:30 pm, Monday through Friday)

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... HWMF-F-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... HWMF-F-iii~~
~~F.1 Unit Description ..... HWMF-F-1~~
~~F.2 Estimate of Maximum Waste in Storage ..... HWMF-F-1~~
~~F.3 Closure Conditions ..... HWMF-F-1~~
~~Reference ..... HWMF-f-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1 Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~HWMF~~	~~Hazardous Waste Management Facility~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

7.0 CLOSURE PLAN
~~CLOSURE PLAN FOR THE HAZARDOUS WASTE MANAGEMENT FACILITY~~

~~The information provided in this Closure Plan is submitted to address the~~ Aapplicable closure requirements are specified in ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)/, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~)~~, and 20 NMAC 4.1.500/ 40 CFR 264, Subparts G and I, ~~revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the Sandia National Laboratories/New Mexico (SNL/NM) Hazardous Waste Management Facility (HWMF).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated ~~waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002)~~ of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b). The general closure information ~~referenced~~ includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

~~F.1 Unit Description~~

~~The HWMF is located approximately 1,000 feet (ft) north of the entrance to Technical Area II. The HWMF is delineated by an 8-ft-high, single chain-link and barbed-wire fence and consists of waste management structures and locations. These structures and locations provide storage for RCRA-regulated wastes and include a waste storage building, a waste packaging building and two modular storage buildings. The RCRA-regulated waste storage structures and locations within the HWMF are shown on Figure F-1.~~

7.1 ~~F.2~~ Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the HWMF is estimated at 69,740 gallons of liquids and/or solids (including lab packs that contain substantial quantities of absorbent).

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b), partial closure activities specified in this plan assume the following conditions were met during the operational life of the HWMF:

- RCRA-regulated waste handling activities involving the opening of waste containers were confined to the interiors of HWMF RCRA-regulated waste management areas (WMAs). If contamination occurred, it would have been confined to these areas; and

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures, and breaches of protective coatings did not occur.

7.3 Closure Schedule

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure F-1 Hazardous Waste Management Facility, RCRA-Regulated Waste Management Areas~~

8.0 TREATMENT PLAN

Sandia /DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the HWMF.

~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SWMU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The HWMF is not a SWMU listed in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

4.0 9.0 REFERENCES

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM58190110518-1," Effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

~~NMED, see New Mexico Environment Department.~~

National Fire Protection Association (NFPA), 2000, "Flammable and Combustible Liquids Code," NFPA 30, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, " Standard for Dry Chemical Extinguishing Systems," NFPA 17, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~b~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 200~~2a~~3a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002c~~2003b, Appendices A-F~~x B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in~~ in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

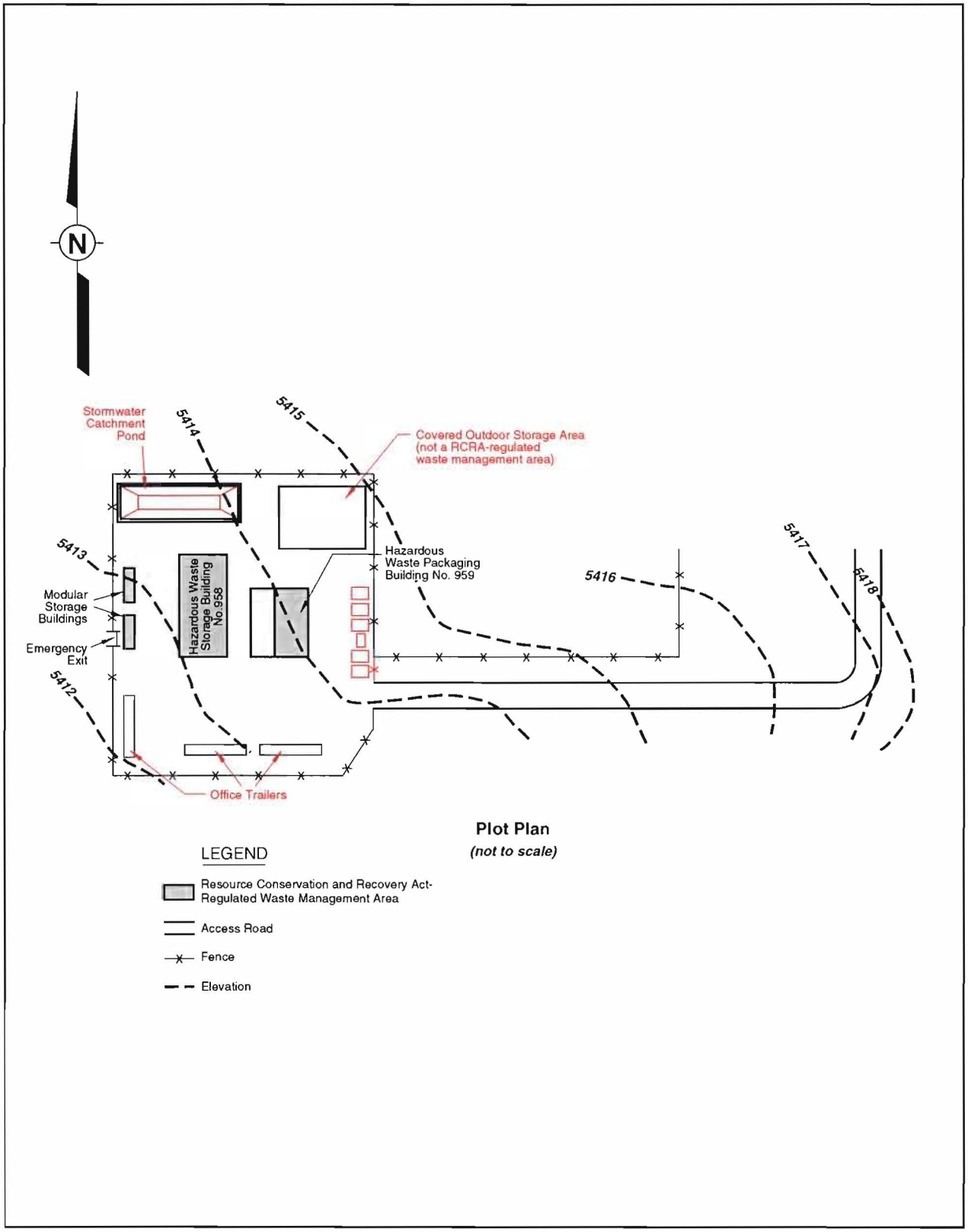
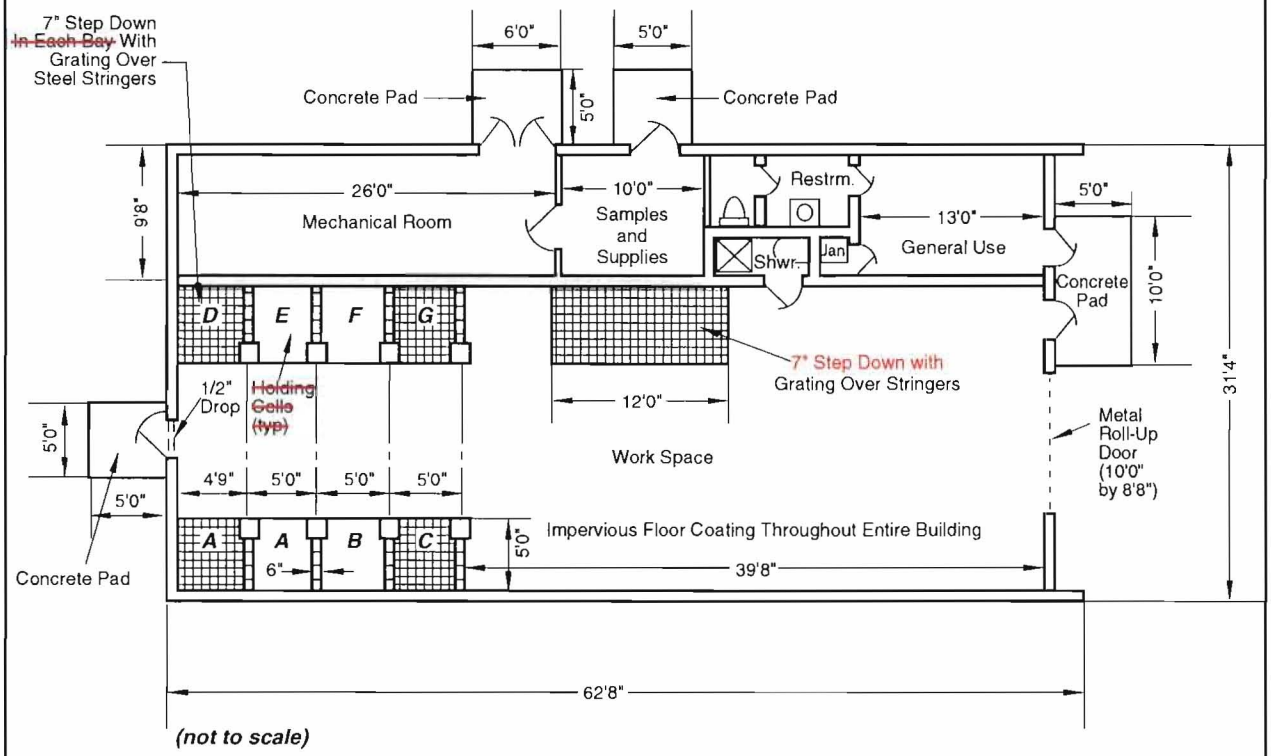


Figure 2
Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

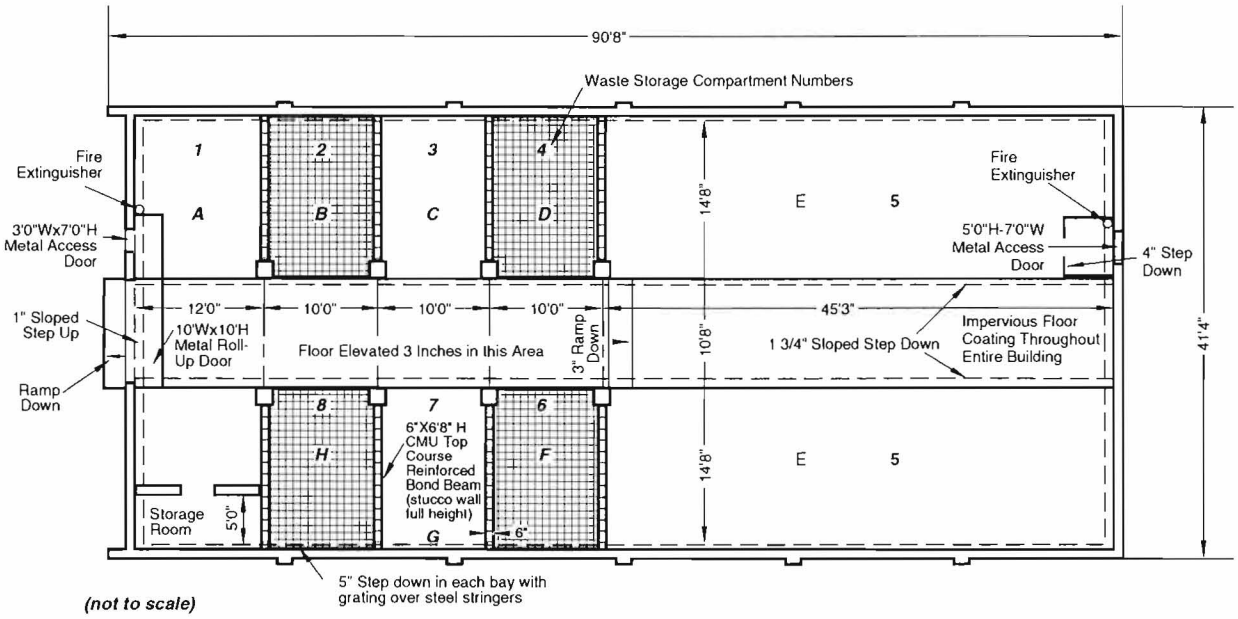


Typical Waste Segregation Groups

- A Hydrocarbons, Organics, and Solvents
- B Class 9 Solids and Liquids
- C Poisons
- D Oxidizing Mineral Acids, Non-Acidic Oxidizers
- E Non-Regulated Waste
- F Caustics
- G Organic Acids, Non-Oxidizing Mineral Acids, Mercury

Note: All storage cells equipped as shown for Cell D: 7" step down and steel grating over stringers.

Figure 3
Hazardous Waste Packaging Building (Building 959), Floor Plan



Typical Waste Segregation Groups

- A Holding Bay
- B Poisons
- C Flammables
- D Oxidizers
- E Hydrocarbons, Organics, Solvents, Non-Regulated Wastes
- F Corrosives (caustics)
- G Corrosives (acids or caustics)
- H Corrosives (acids)

Note: Cells 1-4 and 6-8 are constructed with a 5" step down and grating over steel stringers. Cell 5 is not equipped with grating.

Figure 4
Hazardous Waste Storage Building (Building 958), Floor Plan

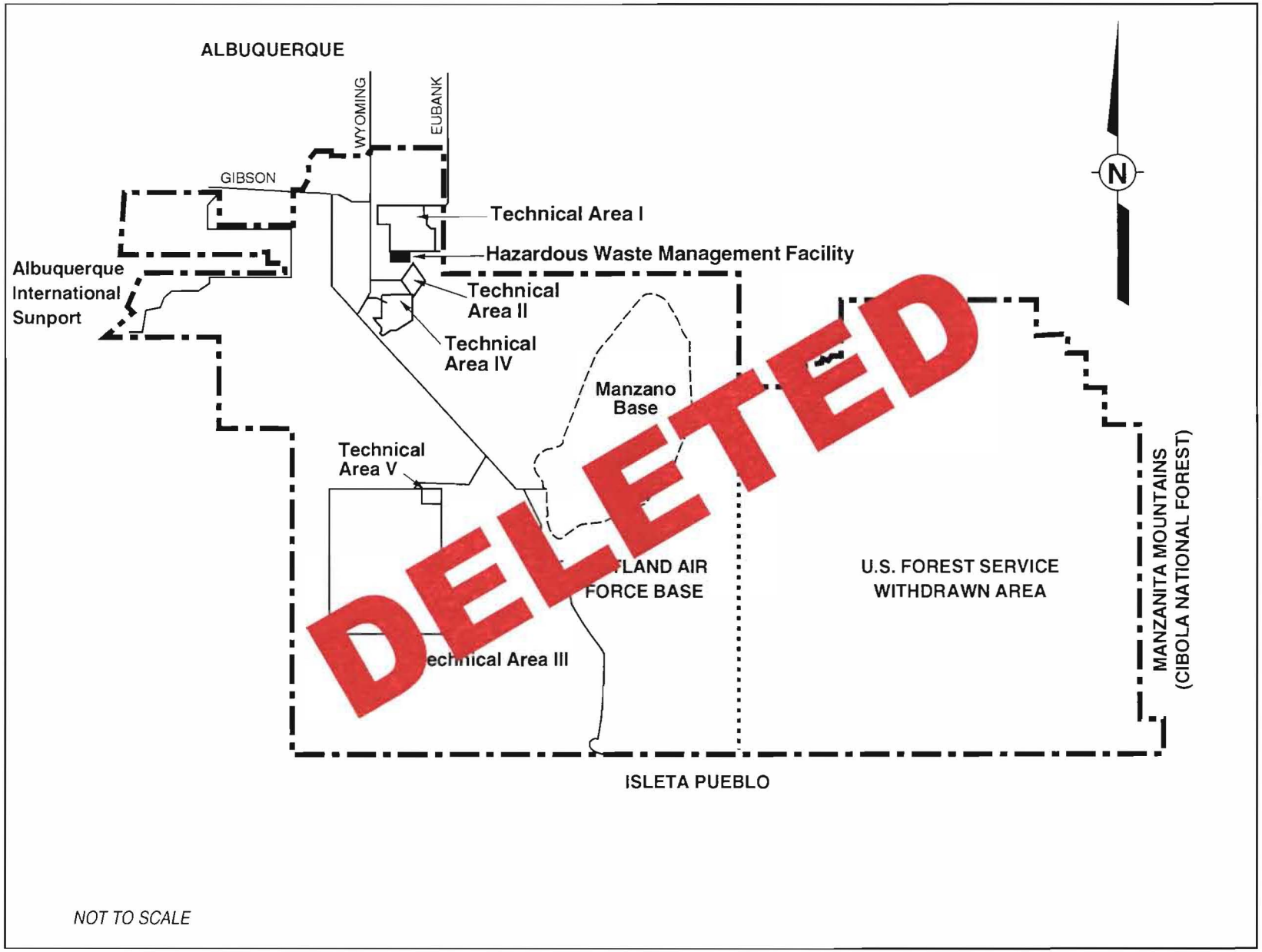


Figure A-1
Location of the Hazardous Waste Management Facility at Sandia National Laboratories/New Mexico

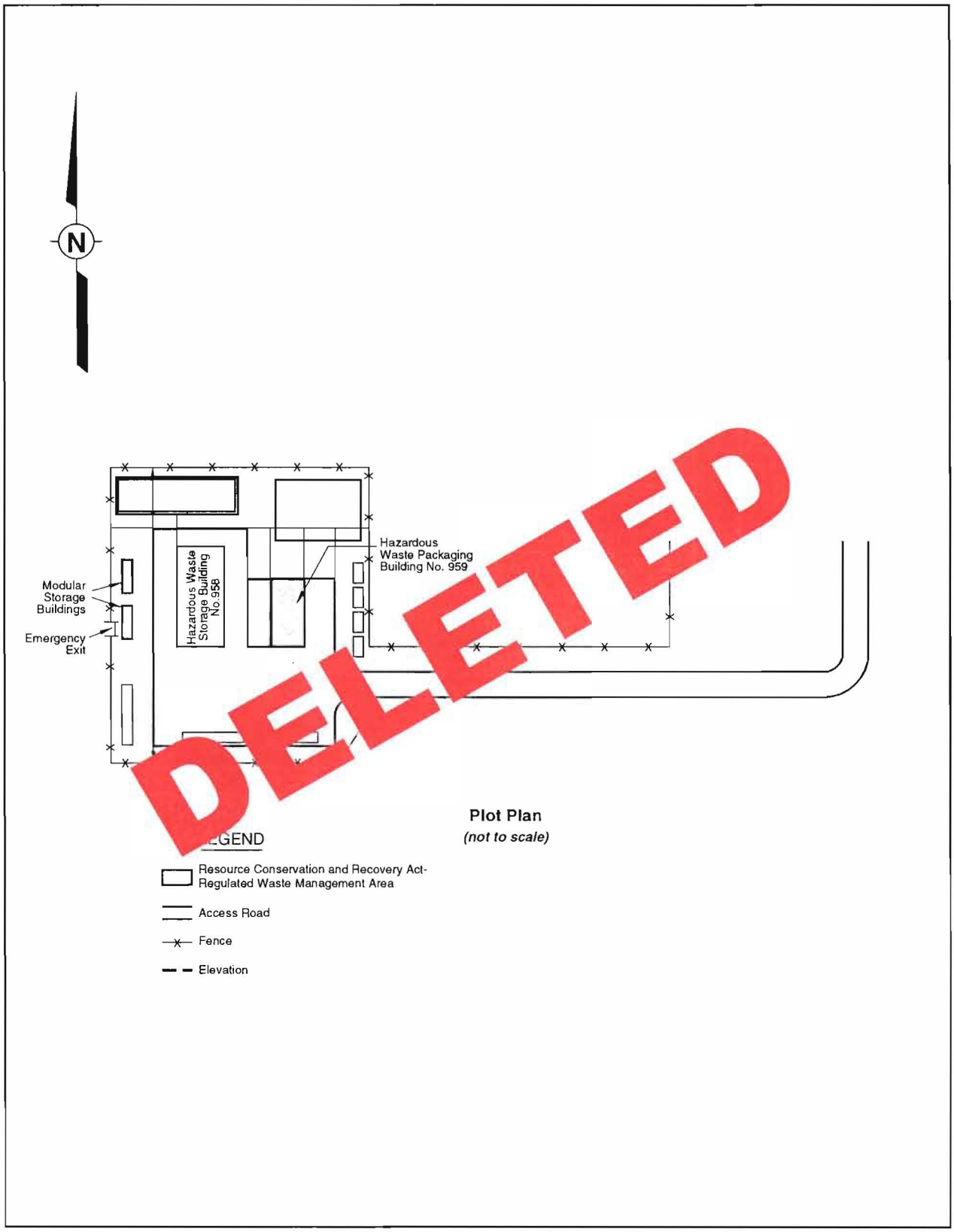


Figure A-2
Hazardous Waste Management Facility, Layout

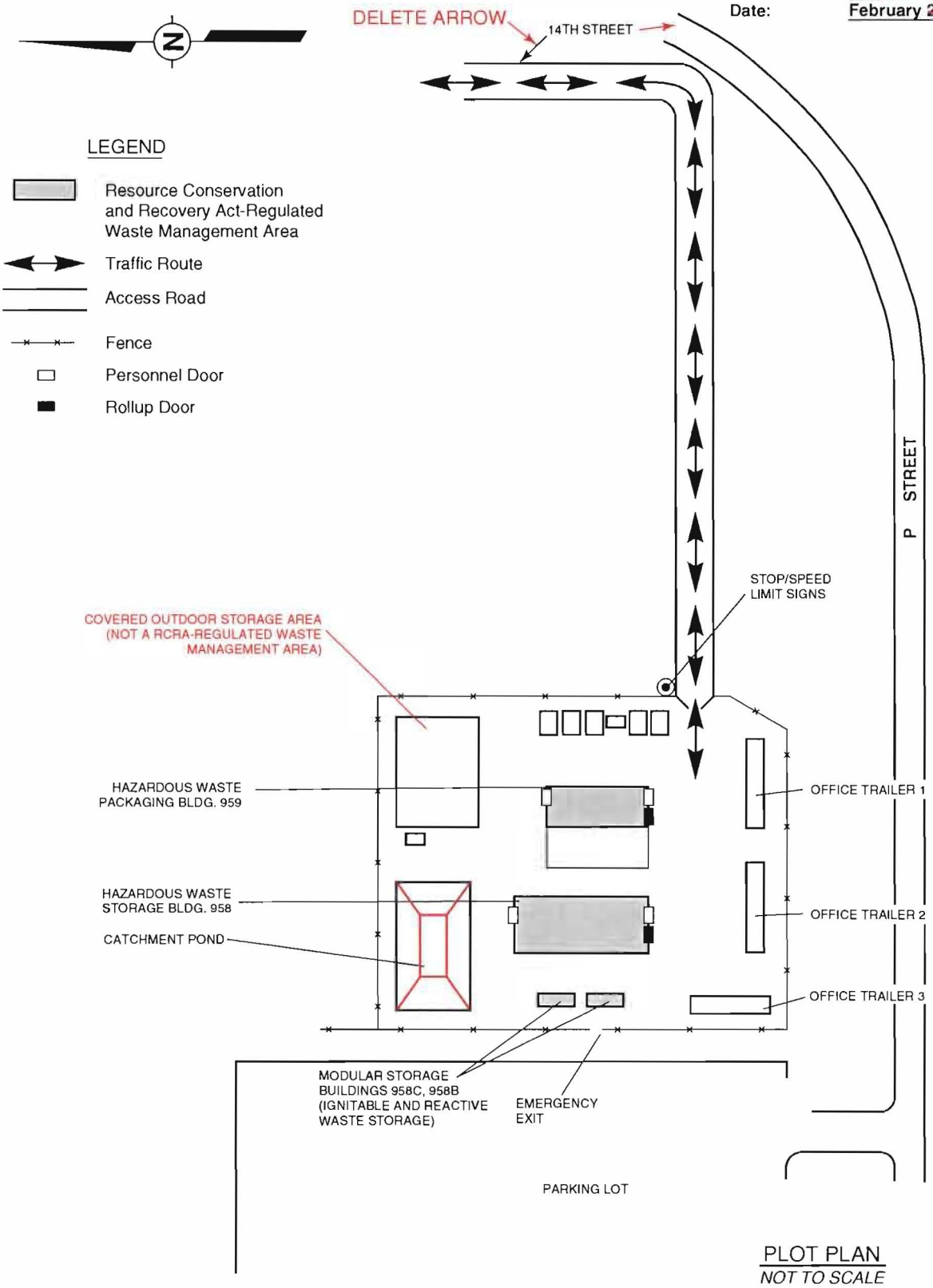


Figure ~~A-3~~ 5

Hazardous Waste Management Facility, Traffic Routes and Controls

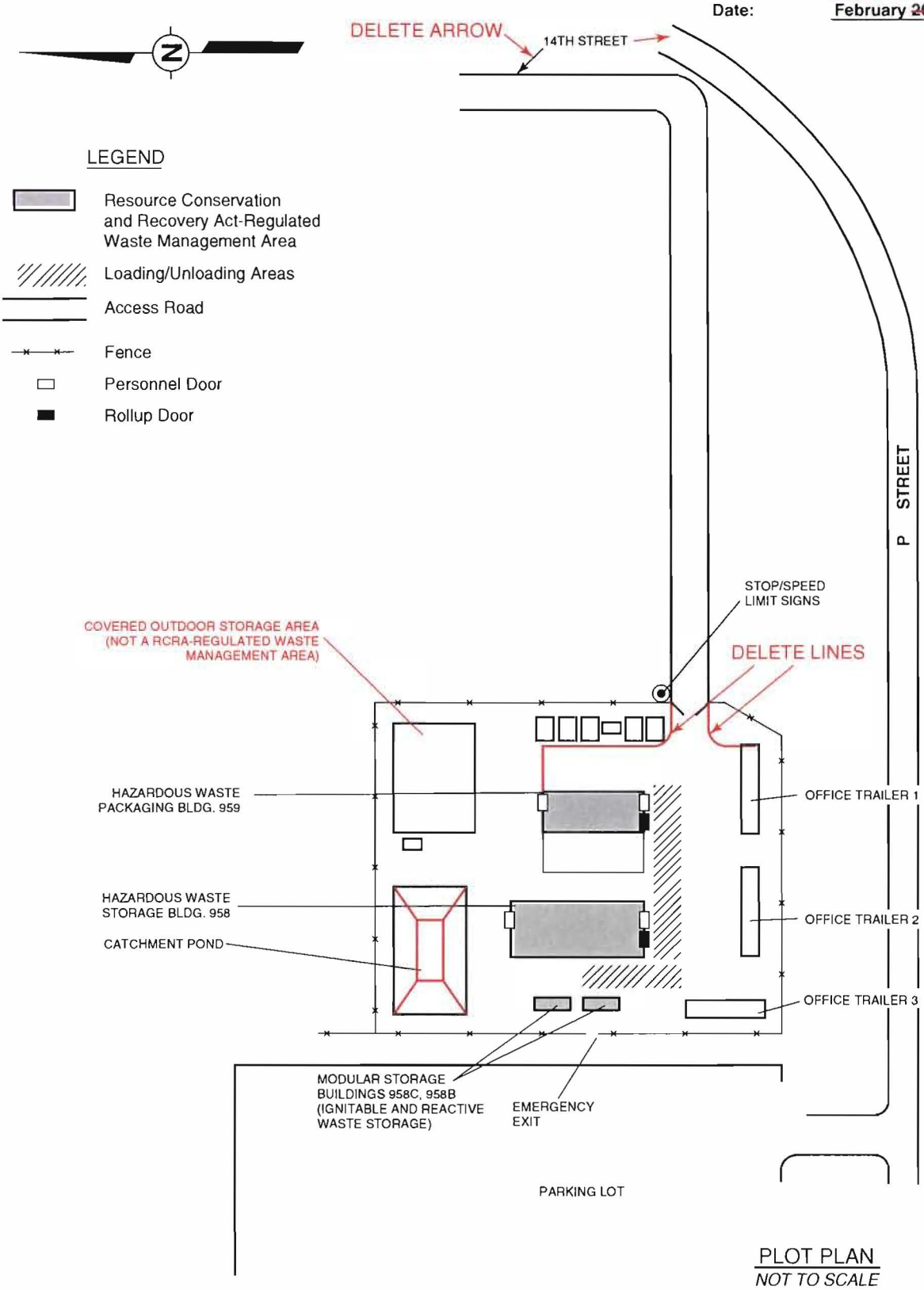


Figure ~~A-5~~ 7

Hazardous Waste Management Facility, Access Control Features

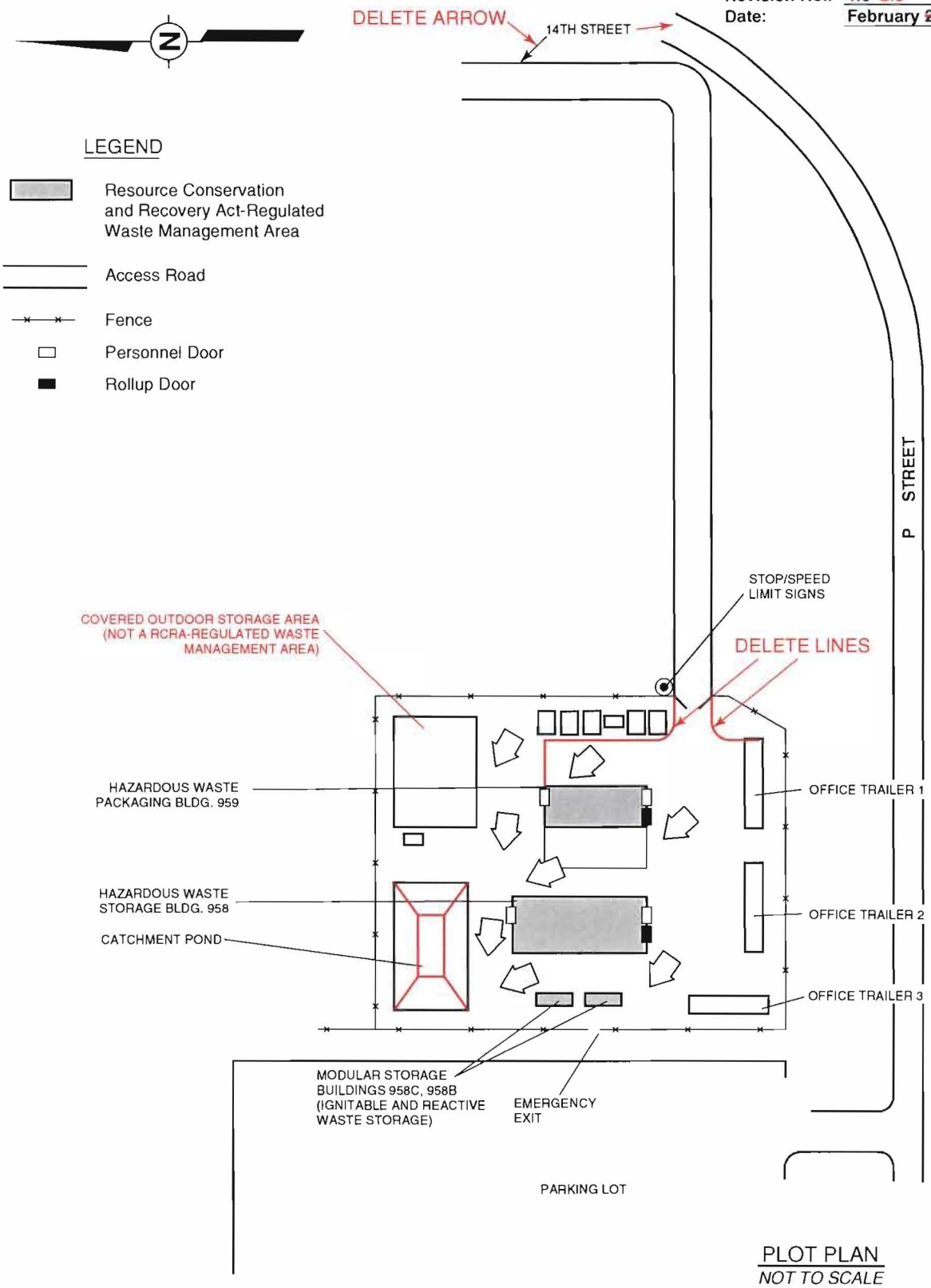


Figure ~~A-6~~ 8

Hazardous Waste Management Facility, Drainage Control Features

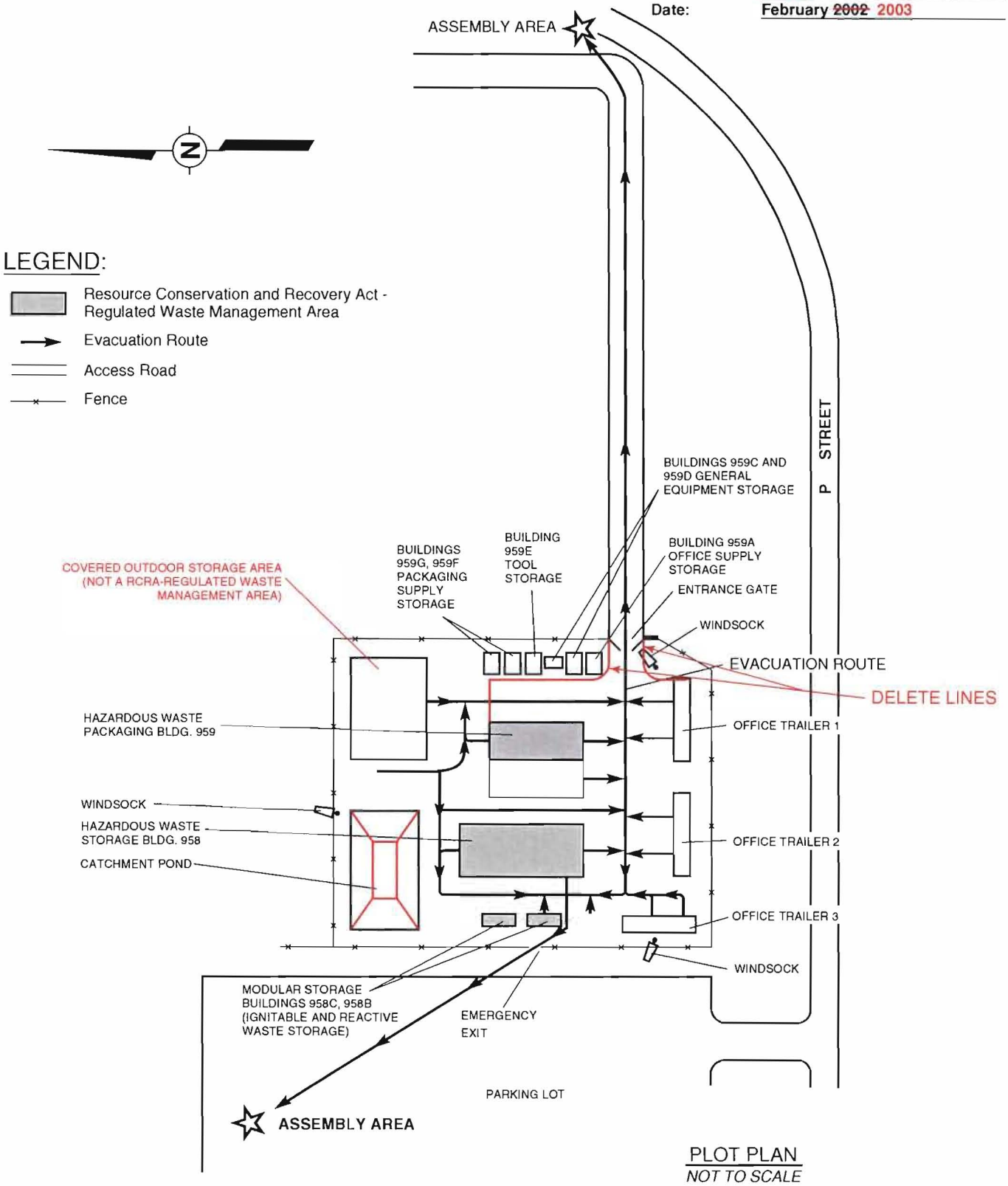


Figure ~~E-1~~ 9

Hazardous Waste Management Facility, Evacuation Routes

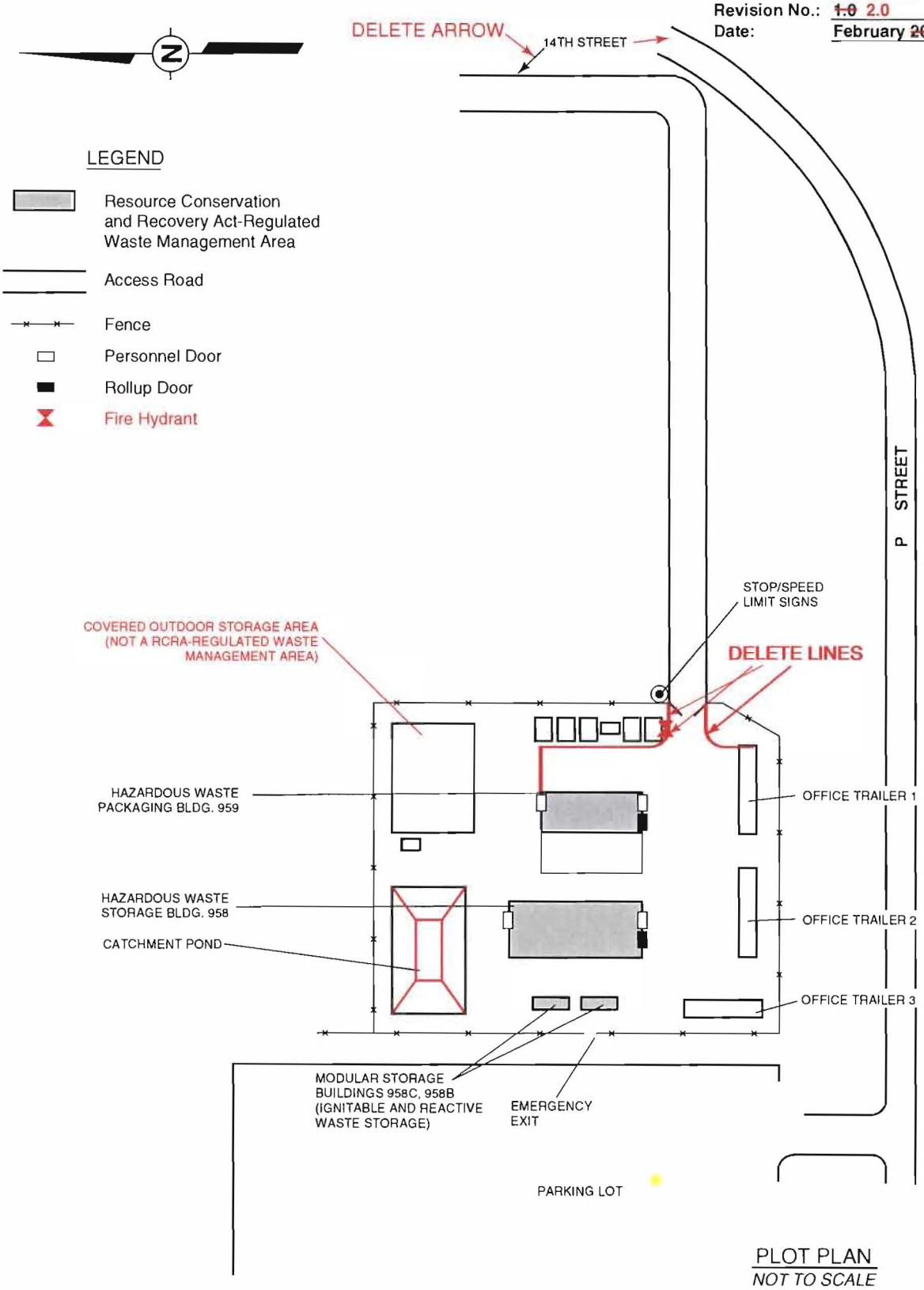


Figure ~~E-2~~ 10

Hazardous Waste Management Facility, Emergency Response and Access Information

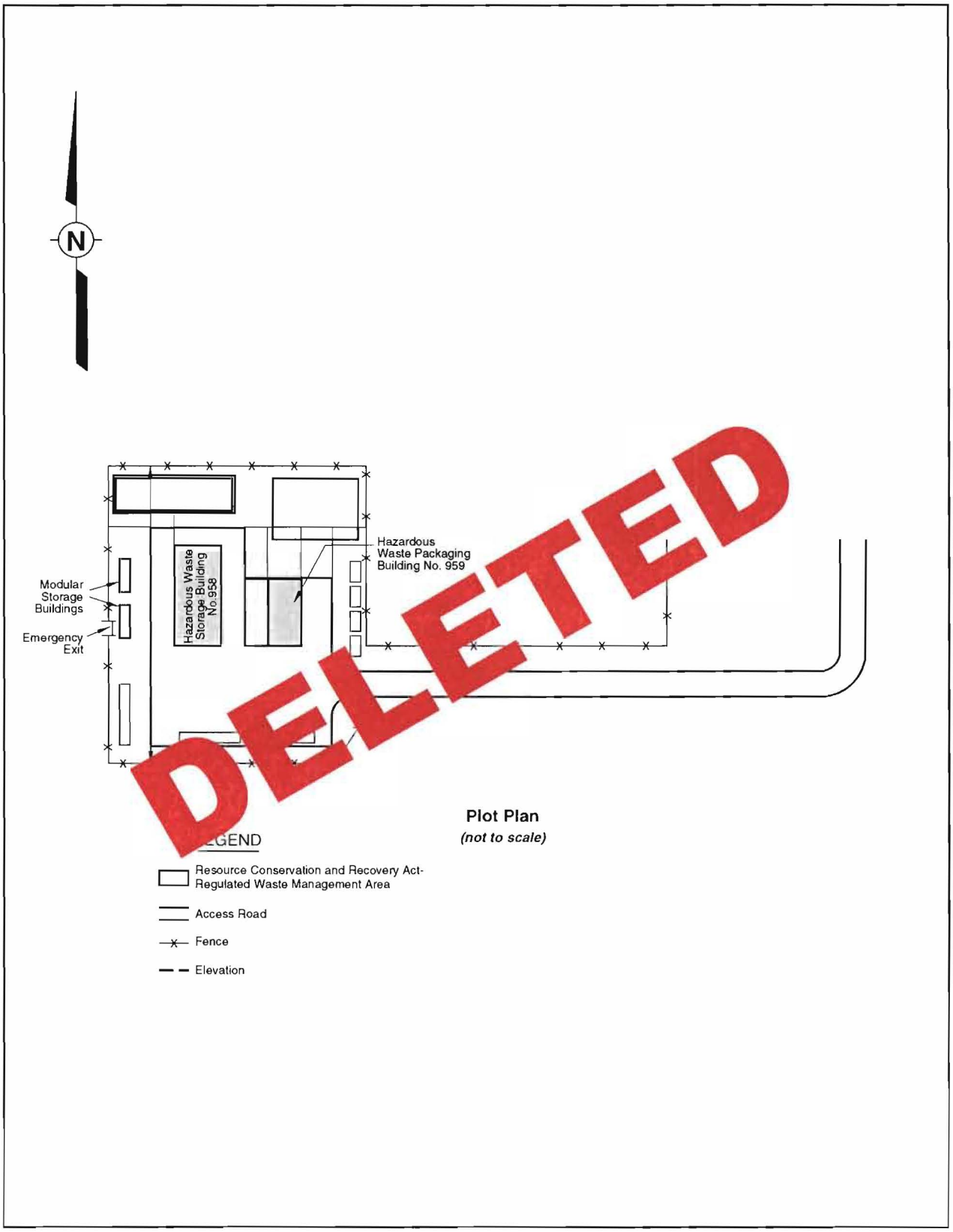


Figure F-1
Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

Sandia National Laboratories/New Mexico
Thermal Treatment Facility
Part B Permit Renewal Request

Module II

Revision 2~~1~~.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... TTF-iiiii
LIST OF FIGURES ..... TTF-ivviii
~~LIST OF ATTACHMENTS ..... TTF-iv~~
ACRONYMS AND ABBREVIATIONS ..... TTF-viv
1.0 GENERAL UNIT OPERATIONS TTF-1
1.1 Designated Waste Management Area TTF-2
1.2 Unit Operations TTF-3
1.2.1 Operation of Containment Systems TTF-3
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes .. TTF-4
1.2.2.1 General Precautions for Handling Reactive Waste TTF-4
1.2.2.2 Engineering Precautions to Prevent Reactions TTF-4
1.2.3 Preparedness and Prevention TTF-4
1.2.3.1 Required Equipment TTF-4
1.2.3.2 Testing and Maintenance of Equipment TTF-5
1.2.3.3 Access to Communications or Alarm Systems TTF-5
1.2.4 Hazards Prevention TTF-5
1.2.4.1 Preventing Hazards in Unloading TTF-5
1.2.4.2 Preventing Runoff or Flooding TTF-5
1.2.4.3 Preventing Contamination of Water Supplies TTF-6
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages TTF-6
1.2.4.5 Preventing Undue Exposure TTF-7
1.2.4.6 Preventing Releases to the Atmosphere TTF-7
1.3 Container Storage Practices TTF-9
1.4 Treatment Operations TTF-10
2.0 UNIT DESCRIPTION AND INFORMATION TTF-16
2.1 Security Procedures and Equipment TTF-17
2.1.1 Barriers and Means to Control Entry TTF-17
2.1.2 Warning Signs TTF-18
2.2 Traffic Pattern, Volume, and Controls TTF-18
2.2.1 Traffic Patterns TTF-18
2.2.2 Traffic Volumes TTF-18
2.2.3 Traffic Control Signals TTF-19
2.3 Unit Location Information TTF-19
2.3.1 Seismic Standard TTF-19
2.3.2 Floodplain Standard TTF-19
2.4 Topographic Maps TTF-19
2.5 Groundwater Monitoring TTF-21
3.0 WASTE ANALYSIS PLAN TTF-27
4.0 INSPECTION PLAN TTF-29
5.0 PERSONNEL TRAINING TTF-33
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE TTF-36
7.0 CLOSURE PLAN TTF-43
7.1 Estimate of Maximum Waste Inventory TTF-43
7.2 Closure Conditions TTF-43

TABLE OF CONTENTS (Concluded)

8.0 TREATMENT PLAN TTF-50
8.1 Treatment Operations TTF-50
8.2 Treatment Effectiveness TTF-51
9.0 Environmental Performance Standards for the Miscellaneous Unit TTF-52
9.1 Protection of Groundwater/Vadose Zone TTF-52
9.2 Protection of Surface Water, Wetlands, and Soil Surface TTF-53
9.3 Monitoring TTF-54
10.0 REFERENCES TTF-56
~~1.0 GENERAL UNIT OPERATIONS ..... TTF-1~~
~~1.1 Designated Waste Management Area ..... TTF-2~~
~~1.2 Unit Operations ..... TTF-2~~
~~1.2.1 Inspections ..... TTF-3~~
~~1.2.2 Containment Systems ..... TTF-3~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... TTF-3~~
~~1.2.3.1 General Precautions for Handling Reactive Waste ..... TTF-3~~
~~1.2.3.2 Engineering Precautions to Prevent Reactions ..... TTF-4~~
~~1.2.4 Closure ..... TTF-4~~
~~1.2.5 Preparedness and Prevention ..... TTF-4~~
~~1.2.5.1 Required Equipment ..... TTF-4~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... TTF-4~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... TTF-4~~
~~1.2.6 Hazards Prevention ..... TTF-5~~
~~1.2.6.1 Preventing Hazards in Unloading ..... TTF-5~~
~~1.2.6.2 Preventing Runoff or Flooding ..... TTF-5~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... TTF-5~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... TTF-5~~
~~1.2.6.5 Preventing Undue Exposure ..... TTF-5~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... TTF-6~~
~~1.3 Container Storage Practices ..... TTF-8~~
~~1.4 Treatment Operations ..... TTF-8~~
~~2.0 OTHER FEDERAL LAWS ..... TTF-9~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... TTF-61~~
~~4.0 REFERENCES ..... TTF-62~~

LIST OF TABLES

Table No.	Title
1	Calculated Silver Concentrations at Selected Distances from the Thermal Treatment Facility
2	Thermal Treatment Facility Inspection Criteria and Frequency
3	Thermal Treatment Facility Resource Conservation and Recovery Act-Regulated Waste Management Unit Training Content
4	Thermal Treatment Facility, Emergency Equipment
5	Thermal Treatment Facility, Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location of the Thermal Treatment Facility at Sandia National Laboratories/New Mexico
2	Thermal Treatment Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area
3	Thermal Treatment Facility (TTF)—Plan View
4	Thermal Treatment Facility (TTF)—Section View
5	Thermal Treatment Facility, Traffic Routes and Controls
6	Topographic Map, Thermal Treatment Facility
7	Thermal Treatment Facility, Access Control Features
8	Thermal Treatment Facility, Drainage Control Features
9	Thermal Treatment Facility, Evacuation Routes and Emergency Response and Access Information

~~LIST OF ATTACHMENTS~~

~~Attachments~~

~~A Unit Description for the Thermal Treatment Facility~~

~~B Waste Analysis Plan for the Thermal Treatment Facility~~

~~C Inspection Plan for the Thermal Treatment Facility~~

~~D Personnel Training Plan for the Thermal Treatment Facility~~

~~E Contingency Plan for the Thermal Treatment Facility~~

~~F Closure Plan for the Thermal Treatment Facility~~

~~G Treatment Plan for the Thermal Treatment Facility~~

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	microgram(s) per cubic meter
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
A/BCAQCB	Albuquerque/Bernalillo County Air Quality Control Board
DOE	U.S. Department of Energy
ft	foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
mi	mile
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SASN	silver acetylide/silver nitrate
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO THERMAL TREATMENT FACILITY PART B PERMIT RENEWAL REQUEST

This Sandia National Laboratories/New Mexico (SNL/NM) Thermal Treatment Facility (TTF) Part B Permit Renewal Request is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~–IX (20 NMAC 4.1.5~~1~~00 and –.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste treatment operations at the TTF. 20 NMAC 4.1.5~~1~~00 and –.900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 26~~4~~0 ~~through 266, 268,~~ and 270 (40 CFR 26~~4~~0 ~~–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002~~a~~3a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002~~b~~), hereinafter referred to as SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002~~b~~) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2002~~a~~3a) and Unit-specific Part B modules, including this TTF Part B Permit Renewal Request.

In both the SNL/NM General Part A (SNL/NM, 2002~~b~~) and SNL/NM General Part B (SNL/NM, ~~2001b~~2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Thermal Treatment Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The TTF occupies 196 square feet south of Building 6715 in Technical Area (TA)-III. It is a thermal treatment unit surrounded by an earthen berm and a fence. The entire area within the fence is 8140 square feet. Operations include treatment of reactive (D003) RCRA-regulated wastes. Wastes generated during operations in Building 6715 are treated at the Unit. Sandia/DOE currently operate the TTF in accordance with the terms of NMED Permit NM5890110518-2, issued November 4, 1994 (NMED, 1994).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.23 [6-14-00],~~

~~and 20 NMAC 4.1.500/40 CFR 264, Subpart X [6-14-00].~~ This section provides descriptions of the TTF waste management area (WMA) and TTF treatment operations. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2002~~a~~3a).

Specific information in this section ~~applicable to the TTF addressed in this module is provided for the following subject areas:~~includes:

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; hazards prevention; and

- Treatment practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2002~~a~~3a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts X, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.23 [6-14-00].

1.1 Designated Waste Management Area

~~The TTF at SNL/NM is used for the treatment of RCRA-regulated wastes in accordance with "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-2" (NMED, 1994), issued by the New Mexico Environment Department on November 4, 1994, to the DOE and Sandia.~~ The location of the TTF at SNL/NM is shown on Figure 1. The TTF has one designated WMA, the treatment area, shown on Figure 2.

The treatment area at the TTF is located outside the south end of Building 6715 in TA-III at SNL/NM. The treatment area consists of a square burn pan constructed of 0.375-inch (in.) steel, 2 feet (ft) 6 in. on a side and 6-in. deep. The burn pan is located near the center of a square curbed slab of concrete 14 ft on a side lined with 0.5-in. steel, with a 4-in. high, steel-lined concrete curb around the edge. The burn pan is enclosed within a square cage approximately 4 ft on a side, consisting of expanded metal screen approximately 8-ft high with a nearly solid metal roof having slots for tracks and cables. An expanded metal screen door, remotely activated from inside Building 6715, provides access to the treatment area (i.e., burn pan). TTF site plans and drawings are presented in Figures 3 and 4.

An enclosure on the east side of the cage houses three propane burners, which can be remotely activated from inside Building 6715. Two propane jets are located at the bottom of the burn pan. The third gas jet, located over the burn pan, ignites flammable vapors above the pan.

Liquids that might accumulate at the TTF WMA are contained within a secondary containment system (i.e., steel-lined concrete pad that drains into a catch tank) that is sufficiently impervious to contain spills or accumulated precipitation until the liquid is removed. The secondary containment system provided by the steel-lined concrete pad is designed to contain the entire volume of potential liquid waste. The maximum volume of RCRA-regulated liquid wastes in the

TTF burn pan at any time is 20.8 gallons. The catch tank has a containment capacity of approximately 157 gallons.

1.2 Unit Operations

The TTF WMA is used to treat RCRA-regulated wastes specified in Section ~~B.~~1.1 of ~~Attachment B in~~ this module. The U.S. Environmental Protection Agency Hazardous Waste Numbers for those wastes are listed in the SNL/NM General Part A (SNL/NM, 2002~~b~~).

General information regarding: ~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; and, hazards prevention requirements applicable to the TTF WMA are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5] and 270.23; 20 NMAC 4.1.500/40 CFR 264.15)~~

~~TTF inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.23; and 20 NMAC 4.1.500/40 CFR 264.175[b][5])

~~Liquids that might accumulate at the TTF WMA are contained within a secondary containment system (i.e., steel-lined concrete pad that drains into a catch tank) that is sufficiently impervious to contain spills or accumulated precipitation until the liquid is removed. The secondary containment system provided by the steel-lined concrete pad is designed to contain the entire volume of potential liquid waste. The maximum volume of RCRA-regulated liquid in the TTF at any time is 20.8 gallons. The catch tank has a containment capacity of approximately 157 gallons.~~

Water collected in the catch tank primarily consists of precipitation. If the water is known to be runoff resulting from precipitation and not suspected to be contaminated with any RCRA-regulated waste constituents, it will be assumed to meet City of Albuquerque wastewater discharge parameters and be discharged (pumped) directly to the Technical Area III sanitary sewer system. If the water is suspected to be contaminated with RCRA-regulated waste constituents, or is derived from RCRA-regulated listed wastes treated at the TTF, it will be containerized and arrangements will be made for disposal into the City of Albuquerque sewer treatment system with a one-time notice placed in the facility file in accordance with 20 NMAC 4.1.800/40 CFR~~4.1, Subpart VIII,~~ 268.7(a)(6) [6-14-00]. If the wastewater cannot be discharged in the City of Albuquerque sewer treatment system, it will be containerized and handled through normal procedures at one of the other SNL/NM Units~~the Hazardous Waste Management Facility~~.

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9], and 20 NMAC 4.1.500/40 CFR 264.17)

~~1.2.3.1~~1.2.2.1 General Precautions for Handling Reactive Waste

The grounds and berms near the TTF are routinely cleared of dry or dead weeds and brush. This helps to prevent brush fires near the TTF. During normal operations, wastes are not stored at the TTF prior to treatment. Reactive explosives and energetic waste (sensitive to impact, heat, shock, and light) are treated soon after transfer to ~~arrival at~~ the TTF.

Incompatible wastes are not accepted for treatment at the TTF. In addition, copper is incompatible with an explosive slurry of silver acetylide/silver nitrate (SASN); therefore, no exposed copper is allowed when the explosive SASN is present. No other materials that would produce undesirable reactions with RCRA-regulated waste (e.g., explosion, toxic fumes, or structural damage) are located at the TTF.

~~1.2.3.2~~1.2.2.2 Engineering Precautions to Prevent Reactions

Reactive waste is protected from open flames by disabling the gas burner system during manual loading of the TTF burn pan; however, the gas burners may be operational when waste is transferred to the burn pan via the waste transfer pump. The gas burner system is disabled by removing the only key from the lock on the control console in Building 6715. Thus, the gas burner system is controlled by the operator who is loading the TTF burn pan while the TTF expanded metal screen door is open. The door is also operable from the control console which reduces the chance of opening the door for loading or unloading without disabling the gas burner system. The gas burner system is reactivated at the control console only after an area check for personnel and a public address announcement is made that the TTF will begin operations.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~TTF closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C)

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the TTF.

~~1.2.5.1~~1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant at the TTF is shown in Figure 9. Information on ~~the~~ other required equipment located at the TTF is provided in Section 6 and Table 4 ~~Attachment E~~ of this module.

~~1.2.5.2~~1.2.3.2 *Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)*

Information on equipment testing and maintenance at the TTF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 *Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)*

Information about ~~on~~ the types and locations of communications or alarm systems at the TTF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6~~Attachment E~~ of this module.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the TTF to prevent hazards. Additional information applicable to the TTF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

~~1.2.6.1~~1.2.4.1 *Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])*

TTF personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent hazards in unloading, as applicable. Waste treated at the TTF is pumped or hand-carried to the Unit. Loading activities are limited to removal of ash residue from the burn pan or contaminated water from the catch tank, and loading the containers on a flatbed truck or other vehicle for transport to another Unit. Vehicles are typically loaded on the paved area southeast of Building 6715 (Figure7). The surface is level, the pavement is in good condition in the area, and there is sufficient room for the smaller vehicles used to transport RCRA-regulated wastes between Units.

~~1.2.6.2~~1.2.4.2 *Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])*

The land surrounding the TTF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas is diverted around the TTF treatment area by an 8-ft-high earthen berm that surrounds the Unit on the east, south, and west. The diverted storm water drains to the west.

Sheet-flow runoff from the berms surrounding the TTF is directed toward the opening on the north side and away from the burn pan. The steel-lined concrete pad is surrounded by a

4-inch-high concrete curb and is elevated approximately 12 to 24 inches above the surrounding soil, further preventing runon.

The curbs also prevent ~~and~~ runoff from the TTF WMA. Storm water that collects in the pad is drains to the catch tank. ~~are prevented from entering/leaving the WMA by the curbs at the edges of the steel-lined concrete pad, an earthen berm, and a containment system. Runon of surface water from surrounding areas is prevented from entering the TTF treatment area by an 8-ft earthen berm on the west, south, and east sides and the 4-in. high concrete curb surrounding the steel-lined concrete pad on which the burn pan sits. Runoff from the earthen berm drains to the east and west sides of the TTF.~~ The containment capacity of the catch tank exceeds the volume expected from runoff from the treatment area during a storm event, as described in Section 1.2.1.

~~1.2.6.3~~1.2.4.3 *Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])*

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the TTF will affect water supplies, as ~~personnel employ the practices~~ described in Section 1.1.4~~6~~.3 of the SNL/NM General Part B (SNL/NM, 2002~~a~~3a). ~~to prevent contamination of water supplies.~~

~~1.2.6.4~~1.2.4.4 *Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a).

~~The TTF will be shut down in the event of a power failure.~~ Four pieces of equipment at the TTF would be affected by a power failure: the burners, the motor-driven burn cage door, the motor-driven burn pan lid, and the waste transfer pump. In the event of a power failure, personnel would take the following actions.

1. If the power failure occurs before waste were placed inside the burn pan, treatment operations will be delayed until power is restored.

2. If the power failure occurs after wastes are present in the burn pan but before the burners are ignited, personnel will manually lower the burn pan lid and wait until power is restored before proceeding with treatment. If the treatment cannot be conducted during the same day, Unit personnel will secure the area and notify Sandia/DOE security personnel of the presence and potential hazards of the waste.

3. If the power failure occurs during treatment, personnel will not enter the TTF. Personnel will complete treatment as soon as power is restored. If the power is not restored in time to complete treatment during the day, personnel will secure the area, manually lower the burn pan lid if it is deemed safe to do so, and allow the waste to remain in the burn pan. Unit personnel will notify Sandia/DOE security personnel of the presence of potential hazards of the waste. Unit personnel will complete the treatment as soon as possible.

~~1.2.6.5~~1.2.4.5 *Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])*

TTF personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, ~~2001a~~2003a) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 *Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.601[c])*

The TTF is subject to the regulations of the Albuquerque/Bernalillo County Air Quality Control Board (A/BCAQCB). Open burning of high explosives is allowed under A/BCAQCB Regulation Number 3 when transporting the material would be unnecessarily hazardous. The TTF is granted a permit for open burning of explosives by the City of Albuquerque on an annual basis. Treatment will be restricted to the open burning conditions imposed by the most current City of Albuquerque open burn permit.

The TTF will burn limited quantities of explosive wastes and explosive-contaminated wastes. The waste may be burned several times to complete the destruction of any explosives. The burns may, therefore, occur over two or three days. Each burn will last a minimum of 30 minutes. The sequence of burns is typically:

- Burning the contents of the burn pan until 30 minutes after audible and/or visual evidence of explosives has ceased;
- Lowering the burn pan cover; and
- Inspecting the contents of the burn pan after several hours to ensure no unburned waste remains and all pan contents are ashed; repeat burn if necessary.

The principal by-products of decomposition of waste~~, listed in Attachment B of this module,~~ are ash (carbon), gases, and silver (only during treatment of SASN). Gases consist primarily of nitrogen, water vapor, carbon dioxide, carbon monoxide, sulfur dioxide, diatomic oxygen, and traces of nitrous oxides.

Equipment

The burn pan is equipped with a cover that is lowered over the pan when the TTF is not operating. This engineering control limits wind dispersal of any ash or particulates remaining in the pan during cool-down between burns and during cool-down after the final burn, as does the expanded metal screen enclosing the unit.

Evaluation of Potential Exposure

Carbon monoxide and nitrous oxide by-products from the TTF appear to have little effect on Albuquerque's air quality. The only contaminant that may migrate from the TTF with the potential to cause adverse effects on human health and the environment is silver in the particulates, resulting from the treatment of SASN.

~~Evaluation of Potential Exposure~~

Because the silver discharge from the TTF to the air cannot be measured, a screening-level evaluation of the potential exposure due to pollutant discharge from the TTF was performed.

The Industrial Source Complex Short-Term Dispersion Model (EPA, 1986) was used to model airborne releases from the TTF. Silver is a key pollutant, although the results apply to any pollutant released at the assumed rate of one gram/second. The following assumptions were used:

- The source is 0.5 square meter in the area at a reference elevation of 0 meter (on the ground);
- Topography was not taken into account because of the open nature of the site;
- National Weather Service data for Albuquerque, New Mexico, were utilized;
- The wind direction is toward the receptor of interest;
- Generic meteorological data consisting of 48 combinations of wind speed and stability classes were used to represent typical meteorological conditions during a burn event; a one-hour duration was arbitrarily assigned to each of the 48 combinations; and
- Thermal buoyancy of the plume from the TTF operation is ignored.

The last three assumptions assure a conservative result when concentrations are calculated at the various receptors. The receptor distances were selected to reflect actual site conditions. Key receptors in the area of the TTF are:

- The McCormick Ranch (unoccupied); nearest structure outside the SNL/NM, Albuquerque, property (14,000 ft, 227°, southwest of site)
- Nearest base housing (18,500 ft, 344°, north-northwest of site)
- Nearest housing to the west (i.e., the most frequent downwind direction) (36,500 ft, 270°, west of site)
- Nearest structure on the west (may or may not be residential) (30,000 ft, 270°, west of site)

- Nearest sensitive population; Veterans Administration Hospital (23,000 ft, 329°, northwest of site).

Table 1 lists the one-hour average concentrations for silver calculated using the assumptions stated above.

Table 1
Calculated Silver Concentrations at Selected Distances from the Thermal Treatment Facility

Distance (feet)	One-Hour Average Silver Concentration[a] ($\mu g/m^3$)
14,000	44.3
18,500	30.4
23,000	22.8
30,000	15.3
36,500	12.3

[a] Calculated using the Industrial Source Code Short-Term Dispersion Model (EPA, 1986), assuming a release rate of 1 gram per second.
$\mu g/m^3$ = micrograms per cubic meter.

The Occupational Exposure Limit (or Threshold Limit Value Time Weighted Average) for silver is 100 micrograms per cubic meter ($\mu g/m^3$). The calculated concentrations are well below this value even at the nearest receptor utilizing the very high emission rate of one gram/second and other conservative assumptions. In reality, the total quantity of silver in 4 liters of slurry would not sustain an emission rate of 1 gram/second over a one-hour span; if all the silver became airborne, the calculated concentration at 14,000 ft would be less than 10 $\mu g/m^3$. These hypothetical airborne silver concentrations from the TTF are unlikely to result in heavy metals concentrations in suspended particulates exceeding state limits for the 30-day average (10 grams per cubic meter).

Wind may blow during cool down. The earthen berms surrounding the TTF are designed primarily to reduce the effects of wind on the burning operation and to limit ash dispersal. The slab and cage enclosure are designed to collect most material that may escape the burn pan due to wind.

1.3 Container Storage Practices

Sandia/DOE do not conduct container storage of RCRA-regulated wastes requiring a permit at the TTF.

1.4 Treatment Operations

The TTF is permitted for the treatment of RCRA-regulated wastes in accordance with the conditions of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-2" (NMED, 1994). Treatment practices applicable to the TTF are presented in Section 8~~Attachment G~~ of this module.

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE THERMAL TREATMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... TTF-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... TTF-A-iii~~
~~A.1 TTF General Unit Description ..... TTF-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... TTF-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... TTF-A-2~~
~~A.2.2 Warning Signs ..... TTF-A-2~~
~~A.3 Traffic Pattern, Volume, and Controls ..... TTF-A-2~~
~~A.3.1 Traffic Patterns ..... TTF-A-2~~
~~A.3.2 Traffic Volumes ..... TTF-A-3~~
~~A.3.3 Traffic Control Signals ..... TTF-A-3~~
~~A.4 Unit Location Information ..... TTF-A-3~~
~~A.4.1 Seismic Standard ..... TTF-A-3~~
~~A.4.2 Floodplain Standard ..... TTF-A-3~~
~~A.5 Topographic Maps ..... TTF-A-4~~
~~A.6 Groundwater Monitoring ..... TTF-A-5~~
~~Reference ..... TTF-A-5~~

~~LIST OF FIGURES~~

~~Figure No.~~	~~Title~~
~~A-1~~	~~Location of the Thermal Treatment Facility at Sandia National Laboratories/New Mexico~~
~~A-2~~	~~Thermal Treatment Facility/Building 6715 Complex, Layout~~
~~A-3~~	~~Thermal Treatment Facility, Traffic Routes and Controls~~
~~A-4~~	~~Topographic Map, Thermal Treatment Facility~~
~~A-5~~	~~Thermal Treatment Facility, Access Control Features~~
~~A-6~~	~~Thermal Treatment Facility (TTF), Drainage Control Features~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~TTF~~	~~Thermal Treatment Facility~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION- AND INFORMATION ~~FOR THE THERMAL TREATMENT FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (~~20 NMAC 4.1.100–.900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~)~~ The following subject areas are addressed in this section~~attachment~~:

- ~~□A general description of the Thermal Treatment Facility (TTF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA) regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]);

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b).

~~A.1 TTF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The TTF is located in the north-central portion of Technical Area (TA)-III (Figure 1A-1) south of Building 6715. The TTF is enclosed within in an 8-foot (ft)-high, single chain-link fence with locking gates. The TTF fenced area is adjacent to and part of the fenced Building 6715 Complex. A Unit layout for the TTF and Building 6715 Complex is provided on Figure 2A-2.~~

~~The TTF RCRA-regulated waste management area (WMA) addressed in this permit renewal request is the waste treatment area (i.e., the burn cage) located south of Building 6715. The TTF RCRA-regulated waste management practice addressed in this permit renewal request is treatment of reactive/explosive RCRA-regulated waste.~~

~~Descriptions of the TTF WMA and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the TTF.

2.1.1 ~~A.2.1~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the TTF fully meet the security requirements of 20 NMAC 4.1.500/ 40 CFR 264.14(b)(2) [6-14-00].~~

The TTF is completely surrounded by an approximately 8-ft high, single chain-link fence topped with three strands of barbed wire. Three gates provide access to the TTF and remain locked except when TTF personnel are performing operations, inspections, maintenance, or repairs. The active portion of the TTF is also the south portion of the Building 6715 complex. Access to the north TTF fence, and, therefore, all three TTF gates, is from inside the Building 6715 complex, which is also completely surrounded by an 8-foot tall chain link fence with three strands of barbed wire at the top and lock-equipped gates. The gates to the Building 6715 complex and the building doors are kept locked during non-operational hours. As noted in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the Building 6715 complex and TTF gates during non-operational hours.

TTF personnel have Sandia-issued badges. Individuals who do not have a Sandia-issued badge are escorted. TTF personnel and visitors typically enter the Building 6715 Complex through the east gate. During treatment events, all TTF gates are locked. These procedures limit access to the TTF RCRA-regulated WMAs, ~~(Figure A-2).~~ in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The Building 6715 complex is ~~TTF is~~ located inside TA-III (Figures 1 and 2). TA III is surrounded by a barbed-wire fence with designated access gates. TA-III access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-III.

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fences surrounding the TTF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to the TTF.

2.2 ~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/ 40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes from ~~to~~ the TTF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P~~O~~ Street, and Pennsylvania Avenue.

Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-III turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Boulevard Kirtland Air Force Base entrance gate as shown on Figure A-4 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

Within TA-III, traffic access to and from the TTF is along the 2-lane asphalt-paved roads shown on Figure A-6 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles entering ~~through~~ the Building 6715 complex travel on a 2-lane asphalt-paved drive from the road to the east gate (Figure 5~~A-3~~). Within the Building 6715 Complex, waste is typically transported on concrete- or asphalt-paved surfaces.

2.2.2 ~~A.3.2~~ Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P~~O~~ Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue ~~and in TA-III~~ are generally light. Traffic volumes within TA-III are light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically enter the compound per week. These include flatbed trucks and trailers carrying supplies, treated residues, and contaminated catch tank water from the TTF. Wastes are generated within the compound and not transported in vehicles to the TTF. Treated residue and contaminated catch tank water are transported to another Unit for storage.

2.2.3 ~~A.3.3~~ Traffic Control Signals

Vehicles must stop at a gate prior to entering or leaving TA-III. Only authorized personnel are permitted into TA-III. Speed limit signs (i.e., "30 mph Unless Otherwise Posted") are located at several locations in TA-III.

There are no traffic control signals or signs at the Building 6715 Complex. The TTF is locked except when personnel are present. Treatment operations~~events~~ are carefully coordinated with appropriate individuals to limit vehicle presence and access to treatment event personnel. The paved access surface from the Building 6715 Complex east gate to the TTF is approximately 100 ft long. Therefore, signals or signs are not necessary to control traffic within the Building 6715 Complex.

2.3 ~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11]~~[i] and [ii]~~; 20 NMAC 4.1.9~~5~~00/40 CFR 264.18)

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMA at the TTF is not located within 3,000 ft of any fault with Holocene displacement (see Section A.4.2 in Appendix A ~~[SNL/NM, 2002]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMA at the TTF is not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 ~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00])~~;~~.
- Surface waters, including intermittent streams, near the TTF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6~~A-4~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00])~~;~~.

- Surrounding land uses are shown on Figures A-29 and A-810 in Appendix A (SNL/NM, 2002c) of the SNL/NM General Part B (SNL/NM, 2003b) and on Figure 6 of this module. (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]).; The area surrounding the TTF is occupied by test areas and Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-28 in Appendix A (SNL/NM, 2002) of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6A-4 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).;

- Legal boundaries of SNL/NM (including the TTF) are shown on Figure A-2 in Appendix A (SNL/NM, 2002) of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).;

- Access control features at the TTF (e.g., fences, gates) are shown on Figures 6 and 7A-5 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).;

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the TTF are shown on Figure A-2 in Appendix A (SNL/NM, 2002) of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6A-4 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).;

- The location of the TTF WMA and associated structures, and loading and unloading areas, roads, and sanitary sewers are shown on Figures 6 and 7A-5 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).;

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figures 76 and 8A-6 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).; and

- The location of the TTF WMA is shown on Figures A-1, A-2, and 6A-4 of this moduleattachment (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the TTF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the New Mexico Environment Department at these scales and contour intervals due to the size of the TTF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 ~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The TTF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the TTF likely to affect groundwater quality during normal operations or during unusual events.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure A-4~~
~~[To Be Provided]~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE THERMAL TREATMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... TTF-B-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... TTF-B-iii~~
~~B.1 IDENTIFICATION OF WASTE TO BE MANAGED ..... TTF-B-1~~
~~B.1.1 Description of Acceptable Waste Categories ..... TTF-B-1~~
~~B.1.2 Chemical and Physical Properties ..... TTF-B-2~~
~~B.1.3 Operations Generating Explosive Hazardous Waste ..... TTF-B-2~~
~~B.2 WASTE CHARACTERIZATION ..... TTF-B-2~~
~~B.2.1 Waste to be Treated at the TTF ..... TTF-B-2~~
~~B.2.2 Treatment-Derived Waste ..... TTF-B-3~~
~~B.3 BOUNDARY CONDITIONS AND PROCESS TOLERANCE LIMITS ..... TTF-B-4~~
~~B.3.1 Boundary Conditions ..... TTF-B-4~~
~~B.3.2 Process Tolerance Limits ..... TTF-B-5~~
~~B.4 PARAMETERS, RATIONALES, AND TEST METHODS ..... TTF-B-5~~
~~B.5 WASTE SCREENING AND VERIFICATION ..... TTF-B-5~~
~~B.5.1 Screening ..... TTF-B-7~~
~~B.5.2 Verification ..... TTF-B-9~~
~~B.6 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM ..... TTF-B-9~~
~~REFERENCE ..... TTF-B-10~~

~~LIST OF FIGURES~~

~~Figure No. Title~~

~~B-1 Overview of Waste Screening and Verification Process~~

~~B-2 Example of Explosive Waste Disposal Request Form~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~DOE~~	~~U.S. Department of Energy~~
~~DOT~~	~~U.S. Department of Transportation~~
~~HWMF~~	~~Hazardous Mixed Management Facility~~
~~in.~~	~~inches~~
~~KOP~~	~~knowledge of process~~
~~QA~~	~~quality assurance~~
~~QC~~	~~quality control~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~Sandia~~	~~Sandia Corporation~~
~~SASN~~	~~silver acetylide/silver nitrate~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TTF~~	~~Thermal Treatment Facility~~
~~WAP~~	~~waste analysis plan~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE THERMAL TREATMENT FACILITY~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, incorporating by reference the Code of Federal Regulations, Title 40, Part 270, including Section 270.14(b)(2) (~~40 CFR 270.14[b][2]; 20 NMAC 4.1.500/ 40 CFR 264.13, "General Waste Analysis"; and 20 NMAC 4.1.800/ 40 CFR 268.7, "Waste Analysis and Record-Keeping," ~~revised June 14, 2000~~ [6-14-00], waste analysis requirements applicable to all units, including the TTF, are addressed in Appendix B ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b). ~~for Resource Conservation and Recovery Act (RCRA)-regulated wastes managed at the Sandia National Laboratories/New Mexico (SNL/NM) Thermal Treatment Facility (TTF) are addressed in this section.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE THERMAL TREATMENT FACILITY~~

4.0 INSPECTION PLAN ~~FOR THE THERMAL TREATMENT FACILITY~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14 [b] [5]), and 20 NMAC 4.1.500/CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act (RCRA) regulated waste management units, including the Thermal Treatment Facility (TTF), are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the SNL/NM General Part B.~~
20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

~~Miscellaneous Unit Inspection~~

20 NMAC 4.1.500/40 CFR 264.15(b)(4) [6-14-00], requires inspections of specific portions of a facility, rather than the general facility. RCRA-regulated waste at the TTF is managed in a miscellaneous unit requiring inspection as a "specific portion" of the SNL/NM facility.

20 NMAC 4.1.500/40 CFR 264.602 [6-14-00], requires that inspections required in 20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00], as well as any additional requirements needed to protect human health and the environment, be met. The requirements of 20 NMAC 4.1.500/ 40 CFR 264.15 and 264.33 [6-14-00], are discussed in this section, Section 6, ~~C.1 of Appendix C (SNL/NM, 2002), and Appendix E~~ Appendices C and E of the SNL/NM General Part B (SNL/NM, 2003b). ~~, along with how the TTF complies with those requirements for standard types of inspections.~~

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2002~~c~~3a). TTF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, ~~together~~ with the inspection criteria and frequency.

Table 2
Thermal Treatment Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash and safety shower	Operational, accessible, in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
First-aid kit	Present and stocked	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Personal protective equipment	Present, quantities per inventory, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Spill control equipment	Present, accessible, quantities per inventory, in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Fire alarm pull station(s)	Present, accessible, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Public address system	Operational	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Telephone(s)	Present and operational	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
OPERATING AND STRUCTURAL EQUIPMENT		
Waste transfer pump	Present, operational, and in good condition	Prior to use. Monthly otherwise.
Waste transfer tubes	Free of apparent leaks and in good condition	Prior to use. Monthly otherwise.
Burn pan	Present, free of apparent leaks, and in good condition	Prior to treatment event. Monthly otherwise.
Burn pan lid	Operational and in good condition	Prior to treatment event. Monthly otherwise.
Burn cage	Present and in good condition	Prior to treatment event. Monthly otherwise.
Burn cage door	Operational and in good condition	Prior to treatment event. Monthly otherwise.
Steel-lined concrete pad	Free of apparent cracks and in good condition	Monthly.
Filter element	Present, free of apparent tears or holes, and in good condition	After measurable precipitation event. Monthly otherwise.
Rain catch tank	Free of apparent leaks and in good condition	After measurable precipitation event. Monthly otherwise.

Table 2 (Concluded)
Thermal Treatment Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Area condition	Free of combustible materials and weeds and in good condition	Prior to treatment event. Monthly otherwise.
Red warning beacons	Present and operational	Prior to treatment event. Monthly otherwise.
Water spigot and hose	Present, operational, and in good condition	Prior to treatment event. Monthly otherwise.
Burner control warning bell	Operational	Prior to treatment event. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present legible, and in good condition	Monthly
Gates	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

The inspection results (including any remedial actions taken) are recorded on a form similar to those in Appendix C. The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms similar to the ones presented in Appendix C. The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained in Building 6715. Inspection records for previous calendar years are maintained in Building 6715 or the SNL/NM Records Center.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE THERMAL TREATMENT FACILITY~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE THERMAL TREATMENT FACILITY~~

Training requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)/ , adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) (~~40 CFR 270.14[b][12]~~)~~, and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training.~~,~~" ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the Thermal Treatment Facility (TTF) are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~ The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the TTF.

TTF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003a).

Only the following job descriptions identified in Appendix D, Table D-2 are applicable at the TTF: Training Director, Project Leader, Emergency Coordinator, Field Technician, and Inspector.

Additional training designed to specifically teach TTF personnel (i.e., TTF Project Leader, TTF Field Technician, TTF Inspector) to perform their duties safely and in conformance with regulatory requirements is presented in this section. TTF training course content includes, at a minimum, the topics shown in Table 3~~D-1~~.

Training records for TTF personnel are maintained in Building 6715.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

Table 3~~D-1~~
Thermal Treatment Facility
Resource Conservation and Recovery Act-Regulated Waste Management Unit
Training Content

Explosives Personnel Safety Course

Duration: Variable (Typically 16 hours)
Frequency: Initial
Method: Classroom instruction

Minimum content may include:

- Basic explosives definitions
- Overview of explosives and explosive device categories and characteristics
- Initiation stimuli and safety guidelines for avoiding accidental ignition
- Standards for explosives operations, including compatibility, storage, and standard operating procedures

Operating Procedures of the Thermal Treatment Facility

Duration: Variable (Typically 4 hours)
Frequency: Annual
Method: Classroom instruction, on-the-job training, and/or document review

Minimum content may include:

- Overview of written operating procedures
- Overview of the waste analysis plan
- Safety practices
- Security, site entry, and site control
- Facility operations
- Facility equipment and structures
- Procedures to prevent the reaction of reactive waste
- Permit requirements for the Thermal Treatment Facility

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE THERMAL TREATMENT FACILITY~~

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE~~FOR THE THERMAL TREATMENT FACILITY~~

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide Contingency Plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA]-Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental TTF-specific information is included in this section, in Figure 9, and in Tables 4 and 5 of this module.

The ~~Thermal Treatment Facility (~~TTF~~)~~ is located in the north-central portion of Technical Area III at SNL/NM, just south of Building 6715. The TTF consists of a square, steel burn pan, 30 inches (in.) on each side and 6 in. deep. A remotely-operated metal lid can be raised to open, or lowered to cover, the burn pan. The burn pan is enclosed by an expanded metal screen (i.e., open to the air) cage, approximately 4 feet (ft) on each side and 8 ft tall. Access to the burn pan is provided by a door on the north side of the burn cage, which is operated remotely from controls inside Building 6715. The burn cage sits in the center of a steel-lined concrete pad. The concrete pad is surrounded on the west, south, and east sides by a earthen berm, approximately 8 ft tall. An 8-ft-high chain-link security fence surrounds the entire TTF.

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 explosive substances, waste liquids (e.g., water, volatile organics, ~~solvents~~) contaminated with explosive substances, and waste items (e.g. rags, wipes, swabs) contaminated with explosive substances. Wastes bearing U.S. EPA ~~Environmental Protection Agency~~ Hazardous Waste Numbers D001, D003, D011, and F003~~, and F005~~ may be treated at the TTF.

RCRA-regulated waste is not stored at the TTF and is only present during a planned treatment event. However, if for some reason a treatment event is aborted and it is deemed unsafe to remove the waste, the burn pan lid will be lowered remotely to cover ~~will be covered with~~ the burn pan ~~lid (remotely)~~ and the waste will remain there until it is possible to perform the treatment or safely remove the waste.

Figure 9~~E-1~~ presents the evacuation route, emergency response, and access ~~and~~ information ~~necessary to access~~ for the TTF. Table 4~~E-1~~ lists the emergency equipment typically available at the TTF. Table 5~~E-2~~ lists the emergency coordinators for the TTF.

Current copies of the Site-Wide Contingency Plan and this supplemental information ~~Unit-specific Contingency Plan and the Site-wide Contingency Plan (SNL/NM, 2002)~~ are maintained in Building 6715 and at the SNL/NM Emergency Operations Center.

Table 4~~E-1~~
Thermal Treatment Facility, Emergency Response Equipment

Building 6715 Complex

Category	Description/Capabilities	Location
Safety and Decontamination Equipment	~~First aid kit~~ Permanent eyewash/hand-held deluge showers First aid kit Absorbent Miscellaneous PPE (protective suits, goggles, gloves)	~~Building 6715I~~ Building 6715 Building 6715I Building 6715I Building 6715I
Internal Communication and Alarm System	Fire alarm pull ~~boxes~~)station (pulling handle sends signal to KAFB fire department) ~~Public address system~~ Public address system	One on east wall inside Building 6715 ~~at or~~ near ~~each Building 6715~~ personnel door ~~(east wall inside Building 6715)~~ Microphone in Building 6715
External Communication System	Telephones Fire alarm pull station (pulling handle sends signal to KAFB fire department)	Building 6715 ~~Signal sent to KAFB fire station~~ Near personnel doors in Building 6715.
Fire Extinguishers	Portable (A-B-C)	One at or near each personnel door in Buildings 6715 and 6715I
Fire Suppression	Water supplied by f~~F~~ire hydrant ~~water~~	One hydrant, location shown in Figure 10~~Outside the Building 6715 Complex fence (northwest corner)~~

KAFB = Kirtland Air Force Base.

Table 5~~E-2~~
Thermal Treatment Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	David Castillo Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-4192 (office) (505) 540-9375 (pager)	(505) 899-1956
First Alternate	Maryann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-2688 (pager)	(505) 299-0793
Second Alternate	Bill Suderman Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-4218 (office) (505) 540-4019 (pager)	(505) 265-1786

One or more of these personnel are routinely available during operating hours (7:00 am to 5:00 pm on days when activities are conducted in Building 6715).

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE THERMAL TREATMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... TTF-F-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... TTF-F-iii~~
~~F.1 UNIT DESCRIPTION ..... TTF-F-1~~
~~F.2 ESTIMATE OF MAXIMUM WASTE INVENTORY ..... TTF-F-1~~
~~F.3 CLOSURE CONDITIONS ..... TTF-F-1~~
~~REFERENCE ..... TTF-F-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1 Thermal Treatment Facility, Resource Conservation and Recovery Act Regulated Waste Management Area~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~in.~~	~~inch(es)~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TTF~~	~~Thermal Treatment Facility~~
~~Unit~~	~~RCRA-regulated waste management unit~~

7.0 CLOSURE PLAN ~~FOR THE THERMAL TREATMENT FACILITY~~

~~The information provided in this Closure Plan is submitted to address the a~~Applicable closure requirements are specified in ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~)~~, and 20 NMAC 4.1.500/ 40 CFR 264, Subparts G and X, ~~revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the treatment area at the Sandia National Laboratories/New Mexico (SNL/NM) Thermal Treatment Facility (TTF).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated ~~waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002)~~ of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b). The general closure information ~~referenced~~ includes closure performance standards; amendment of the Closure Plan; ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

~~F.1 Unit Description~~

~~The TTF is located in the north-central area of Technical Area-III, south of Building 6715. The TTF is enclosed within an 8-foot (ft)-high, single chain-link fence with locking gates. The TTF fenced area is adjacent to the fenced Building 6715 Complex. The RCRA-regulated waste treatment area within the TTF is shown on Figure F-1.~~

~~The TTF consists of a square burn pan, 30 inches (in.) on each side and 6 in. deep, constructed of 0.375 in. steel. The burn pan is enclosed by an expanded metal screen (i.e., open to the air) cage, approximately 4 ft on each side and 8 ft tall. Access to the burn pan is provided through an expanded metal screen door on the north side of the burn cage which is operated remotely from inside Building 6715. The cage and burn pan rest on a square metal base and curbed concrete pad approximately 14 ft on each side. The TTF is surrounded by a dirt berm. A remote-controlled propane gas-fired burner system is used to burn waste.~~

7.1 ~~F.2~~ Estimate of Maximum Waste Inventory

The maximum total inventory of RCRA-regulated waste in treatment at any time at the TTF was no more than 20.8 gallons of explosive-contaminated material.

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b), partial closure activities specified in this plan assume the following conditions were met during the operational life of the TTF:

- RCRA-regulated waste handling activities at the TTF were confined to the burn pan and immediate surrounding area. If contamination occurred, it would have been confined to those areas; and

- The burn pan was maintained to retain its integrity by following established maintenance and inspection procedures.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure F-1 Thermal Treatment Facility, RCRA-Regulated Waste Management Area~~

~~ATTACHMENT G~~

~~TREATMENT PLAN FOR THE THERMAL TREATMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF TABLES ..... G-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... G-iii~~
~~G.1 Treatment Operations ..... G-1~~
~~G.2 Treatment Effectiveness ..... G-2~~
~~G.3 ENVIRONMENTAL PERFORMANCE STANDARDS FOR THE MISCELLANEOUS UNIT ..... G-2~~
~~G.3.1 Protection of Groundwater/Vadose Zone ..... G-3~~
~~G.3.2 Protection of Surface Water, Wetlands, and Soil Surface ..... G-4~~
~~G.3.3 Monitoring ..... G-4~~

~~LIST OF TABLES~~

~~Table No.~~ ~~Title~~

~~G-1 Regulatory References and Corresponding Permit Module Location~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ºF~~	~~degrees Fahrenheit~~
~~HWMF~~	~~Hazardous Waste Management Facility~~
~~mi~~	~~mile(s)~~
~~mph~~	~~mile(s) per hour~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SASN~~	~~silver acetylide/silver nitrate~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TTF~~	~~Thermal Treatment Facility~~

8.0 TREATMENT PLAN ~~FOR THE THERMAL TREATMENT FACILITY~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900/~~), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.23~~ (40 CFR 270.23~~), revised June 14, 2000~~ [6-14-00], treatment operations for ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated wastes treated at the ~~Thermal Treatment Facility (~~TTF~~)~~ are described in this ~~attachment~~section.

8.1 ~~G.1~~ Treatment Operations

A description of the TTF burn pan design, construction, and materials is provided in Section 1.1 of this permit renewal request to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.23(a) [6-14-00]; and 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00].

All waste to be treated is manually placed, ~~or~~ poured, or pumped into ~~inside~~ the burn pan by qualified explosive waste handlers.~~, except for silver acetylide/silver nitrate (SASN) contaminated liquid, which may also be pumped into the burn pan from inside Building 6715~~. All other treatment operations are performed remotely from inside Building 6715 by qualified TTF personnel. The door to the burn cage is remotely closed and the treatment process started from the control console in Building 6715. Three remotely operated propane gas jets, one positioned to heat the inside of the burn pan and two positioned to heat the bottom of the burn pan, are ignited. The gas jet located over the burn pan ignites materials in the pan. Upon heating, the waste burns and decomposes (i.e., oxidizes to nonhazardous gases and carbon). The burn may be repeated several times to assure complete destruction of the explosive waste.

The treated contents of the burn pan are managed in accordance with applicable requirements (determined by the composition and types of RCRA-regulated wastes that were treated).

A ~~peristaltic~~ waste transfer pump will ~~may~~ be used to transfer waste liquid contaminated with SASN from Building 6715 into the TTF burn pan and is the only non-manual waste-handling equipment used at the TTF.

To minimize air emissions or exposure of people to toxic or hazardous air emissions, the TTF will be operated only:

~~□Between the hours of 7 a.m. and 5 p.m.~~

- When the wind speed is less than or equal to 20~~15~~ miles per hour (mph).
- When threatening weather is more than 10 miles (mi) from the TTF. Threatening weather is defined as winds in excess of 35 mph; tornadoes; electrical storms with or without precipitation of any type; snow storms with a visibility of less than 3/8 of a mi; rain with accumulations greater than 0.3 inch per hour; or any hail, sleet, or ice storms.

The TTF is limited to the treatment of the following annual quantities of reactive wastes:

- 7,300 pounds maximum net weight of explosive-contaminated substances (D001, D003, D011, F003, F005) combined as long as the individual "Boundary Condition" quantities specified in the Waste Analysis Plan (Section ~~B.1.3.1~~3 ~~in Attachment B~~ of this module) are not exceeded. ~~This quantity is arrived at by multiplying the "Boundary Condition" per burn event at the TTF.~~

If more restrictive conditions are imposed by the Open Burn Permit issued by the ~~City of Albuquerque~~A/BCAQCB, those conditions will be followed.

8.2 ~~G.2~~ Treatment Effectiveness (20 NMAC 4.1.900/40 CFR 270.23[d])

The thermal treatment of RCRA-regulated waste at the TTF is completely effective in deactivating explosives. Waste explosives have autoignition temperatures of less than 662 degrees Fahrenheit (°F). Propane, used to ignite the waste, has a flame temperature of 3500°F. The TTF burners are operated for a minimum of 30 minutes after there is no visual (sparks) or audible evidence of untreated explosive waste remaining in the burn pan. ~~No waste explosives have been observed in the treated TTF ash since the beginning of TTF operations in 1970. Also, there is no evidence of ejection of explosives from the burn pan during the burns.~~

Given the extremely high vapor pressure and low flash points of volatile organics~~solvents~~ (e.g., ~~isopropyl alcohol~~, acetone) that may be treated at the TTF (~~the flash point of isopropyl alcohol is 53°F, and~~ the flash point of acetone is 15°F), it can be concluded that the materials are completely burned and decompose to gaseous by-products and ash. Treated residues are managed in accordance with applicable RCRA requirements.

9.0 ~~G.3~~ ENVIRONMENTAL PERFORMANCE STANDARDS FOR THE MISCELLANEOUS UNIT (20 NMAC 4.1.500/40 CFR 264, SUBPART X)

The TTF will be operated, maintained, and closed in a manner that will ensure protection of human health and the environment, in accordance with 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00]. The TTF is located in a sparsely populated area. The TTF has been designed to facilitate safe handling and treatment of RCRA-regulated wastes in order to prevent adverse human health and the environmental impacts. The small quantities treated, open burning restrictions, and operating requirements minimize the potential for a release. Hazard prevention programs are described in Section 1.2 of this module. Contingency and emergency response actions to minimize impacts of unanticipated events, such as spills, are referenced in ~~Attachment E~~ Section 6.0 of this module. The closure plan for the TTF is provided ~~as Attachment F~~ in Section 7.0 of this module.

In conformance with 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00], a miscellaneous RCRA-regulated waste storage, treatment, or disposal facility must be shown to prevent any releases to groundwater, surface water, soil, or air that may have adverse effects on human health and the environment. The TTF has been designed and is operated in such a manner as to meet these requirements.

9.1 ~~G.3.1~~ Protection of Groundwater/Vadose Zone (20 NMAC 4.1.500/40 CFR 264.601[a])

Four situations present the potential for the release of RCRA-regulated waste to the TTF's hydrogeologic environment. They are:

- Transfer of liquid waste to the TTF burn pan
- Transfer of solid waste to the TTF burn pan
- Runoff of potentially contaminated precipitation
- Discharge of potentially contaminated precipitation from the catch tank.

If a spill of liquid waste occurs, the maximum amount of material that could be released is 20.8 gallons. Spillage would be removed immediately and placed in the TTF.

Solid waste, such as explosive-contaminated paper, filters, and solid explosives, are contained and carried to the TTF burn pan by hand.

Spills on the ground or on the TTF will be wetted with water using spray hoses. When saturated with water, explosive waste is stable. The spilled, wet waste can then be wiped or scooped up and deposited in the burn pan for destruction. Similarly, contaminated soils will be wetted, excavated, and placed in the TTF burn pan for treatment.

Once waste is transferred to the burn pan, treatment takes place immediately. In the unlikely event of spillage from the burn pan, waste material will be contained on the steel-lined concrete pad. Any precipitation or spillage in the steel-lined concrete pad is drained through a filter and settling basin into the 157-gallon catch tank. In addition, no waste material is allowed to remain

for extended periods of time in the burn pan, and waste may be burned repeatedly to ensure the complete destruction of explosive materials. 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.

Water collected in the catch tank will be containerized if it is suspected to be the result of a release or contaminated with RCRA-regulated constituents, according to ~~Attachment B (~~the Waste Analysis Plan~~)~~, Section 3 of this module. If the catch tank is nearing maximum capacity (157 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.

Exposure of humans or environmental receptors to RCRA-regulated waste or constituents via groundwater is unlikely. This conclusion is supported by the following considerations:

- The maximum volume of waste to be treated during any burn event is limited.
- The burn pan is situated on a steel-lined concrete pad with a four-inch curb that drains into a catch tank that serves as secondary containment.
- Depth to groundwater in the vicinity of the TTF is approximately 500 feet below the ground surface.
- The nearest location of groundwater withdrawal is greater than 2 mi away from the TTF, and the nearest major body of surface water (the Rio Grande) is situated approximately 6 mi to the west of the TTF.
- The mean annual moisture deficit or net recharge (evapotranspiration minus precipitation) is approximately 14 ~~inches~~in., limiting the potential for contaminants in solid material to leach to the water table.

9.2 ~~G.3.2~~ Protection of Surface Water, Wetlands, and Soil Surface (20 NMAC 4.1.500/40 CFR 264.601[b])

Exposure of humans or environmental receptors to RCRA-regulated waste or constituents via surface water, wetlands, or the soil surface is unlikely. This conclusion is supported by the following considerations:

- The maximum volume of waste to be treated during any burn event is limited.
- The TTF is approximately 6 mi from the Rio Grande.
- The burn pan is situated on a steel-lined concrete pad with a four-inch curb that drains into a catch tank that serves as secondary containment.

This supports the conclusion that the potential for adverse effects to human health or the environment via surface water, wetlands, or soil surface pathways is implausible.

9.3 ~~G.3.3~~ Monitoring (20 NMAC 4.1.500/40 CFR 264.601 and 264.602)

This section is provided to satisfy the requirements of 20 NMAC 4.1.500/40 CFR 264.601 and 264.602 [6-14-00]. There are no monitoring stations at the TTF. Data from the stations closest to the TTF will be used to demonstrate compliance with environmental monitoring requirements. The SNL/NM Environmental Monitoring Program collects data from routine environmental surveillance activities on an ongoing basis. The results of the activities are provided in annual environmental monitoring reports. Contamination attributable to the TTF has not been detected during environmental monitoring activities at SNL/NM.

~~5.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SWMU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The TTF is not a SWMU listed in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

~~6.0~~ 10.0 REFERENCES

EPA, see U.S. Environmental Protection Agency.

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM 58190110518-1," effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

New Mexico Environment Department (NMED), 1994, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-2," effective November 4, 1994, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.

NMED, see New Mexico Environment Department.

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~b~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 200~~2a~~3a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A–F in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

U.S. Environmental Protection Agency (EPA), 1986, Industrial Source Complex Short-Term Dispersion Model, Washington, D.C.

~~U.S. Environmental Protection Agency (EPA), 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*, U.S. Environmental Protection Agency, Office of Solid waste and emergency Response, U.S. Government printing Office, Washington, D.C.~~

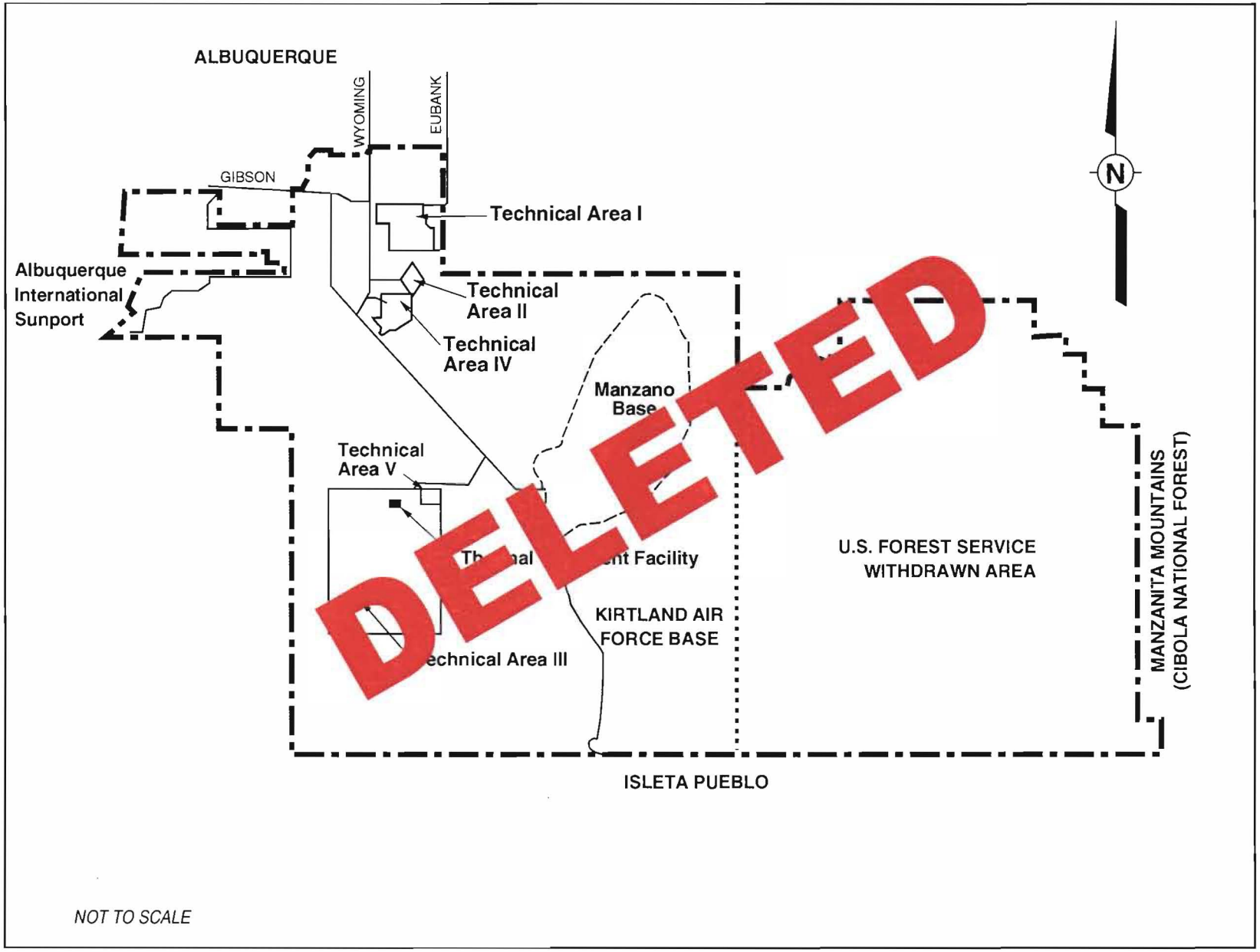


Figure A-1
Location of the Thermal Treatment Facility at Sandia National Laboratories/New Mexico

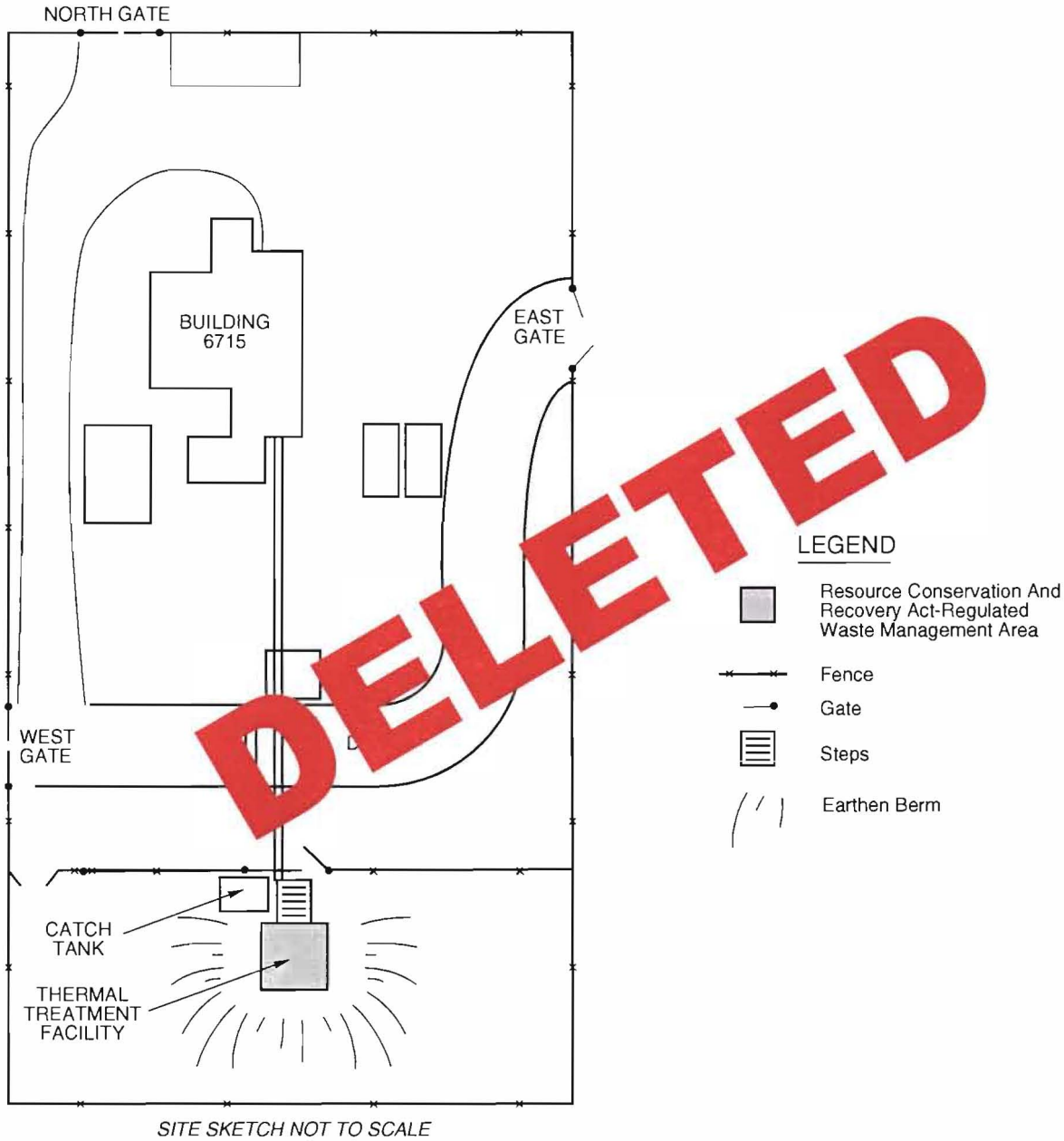


Figure A-2
Thermal Treatment Facility/Building 6715 Complex, Layout

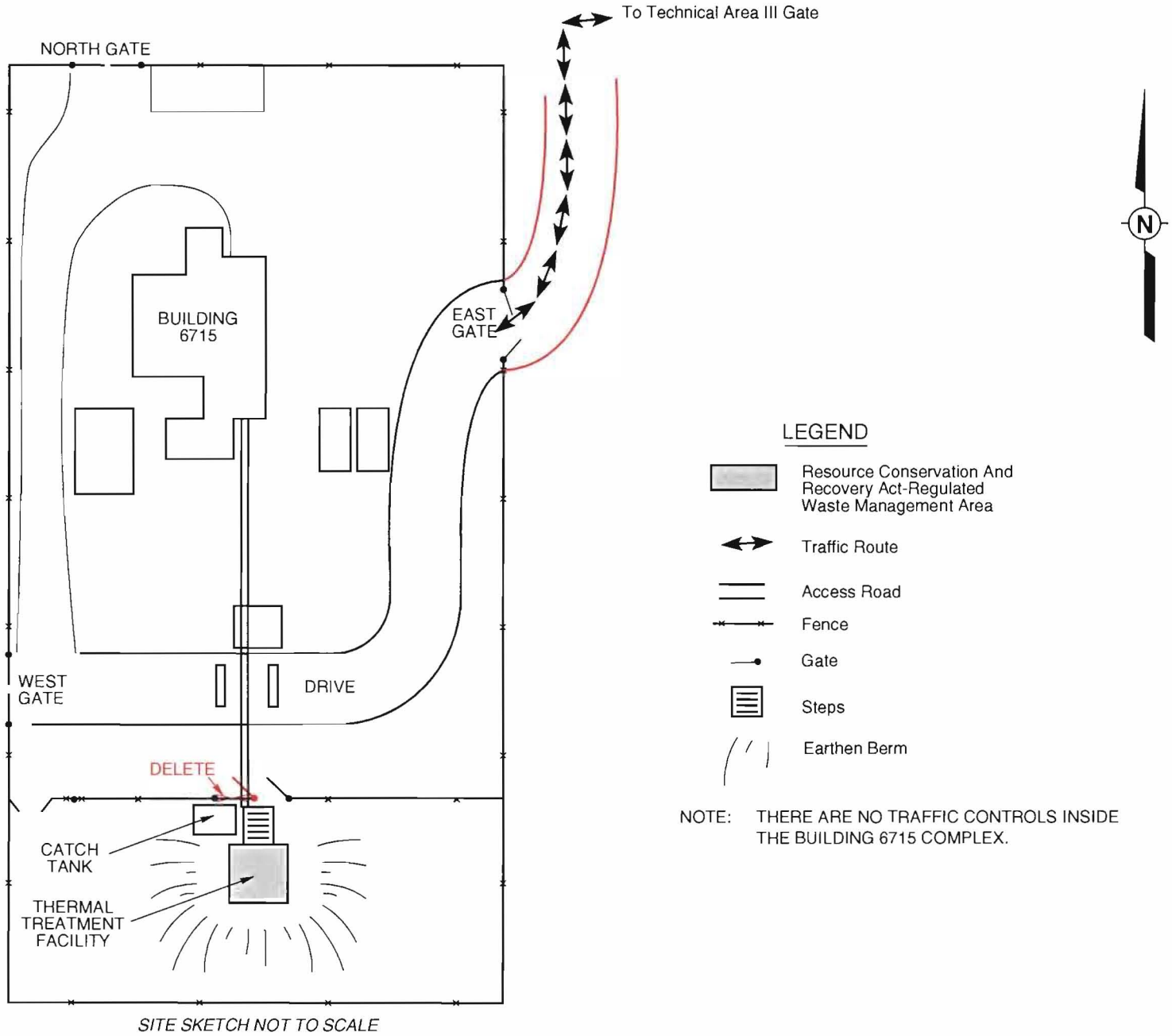
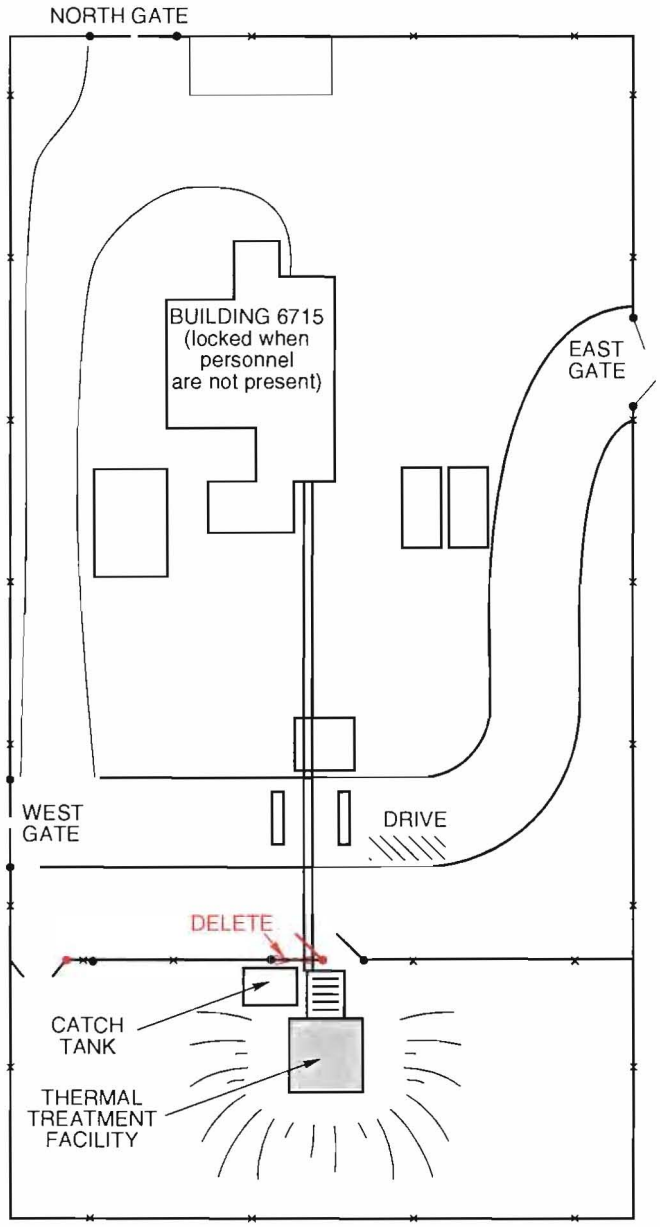
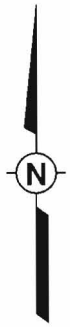


Figure ~~A-3~~ 5
Thermal Treatment Facility, Traffic Routes and Controls



SITE SKETCH NOT TO SCALE



LEGEND

- Resource Conservation And Recovery Act-Regulated Waste Management Area
- Loading/Unloading Area
- Access Road
- Fence
- Gate
- Steps
- Earthen Berm

Document: SNL/NM TTF Renewal Request, ~~Attachment A~~
Revision No.: ~~1.0~~ 2.0
Date: February ~~2002~~ 2003

Figure ~~A-5~~ 7
Thermal Treatment Facility, Access Control Features

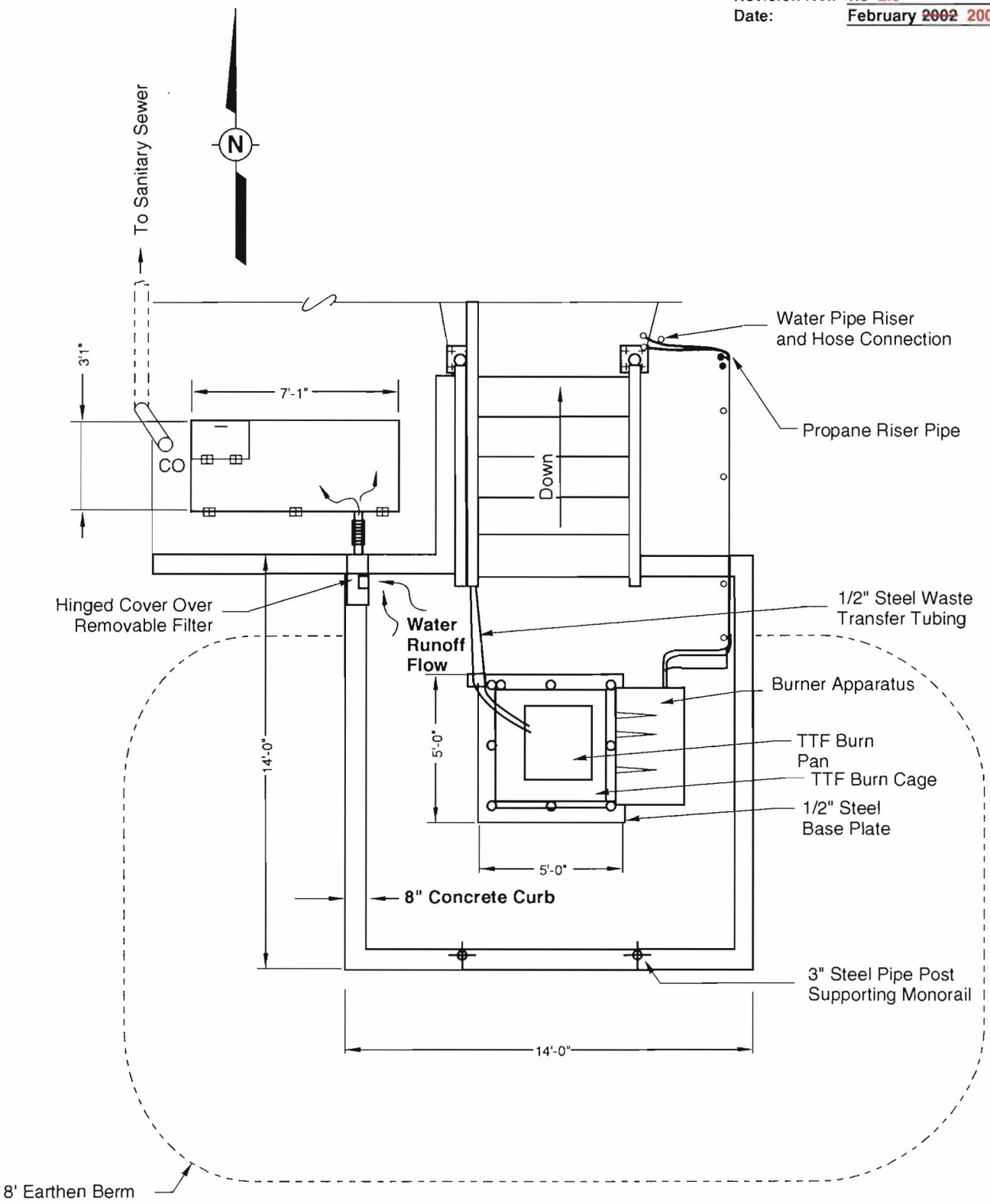


Figure ~~A-6~~ 8

Thermal Treatment Facility (TTF), Drainage Control Features

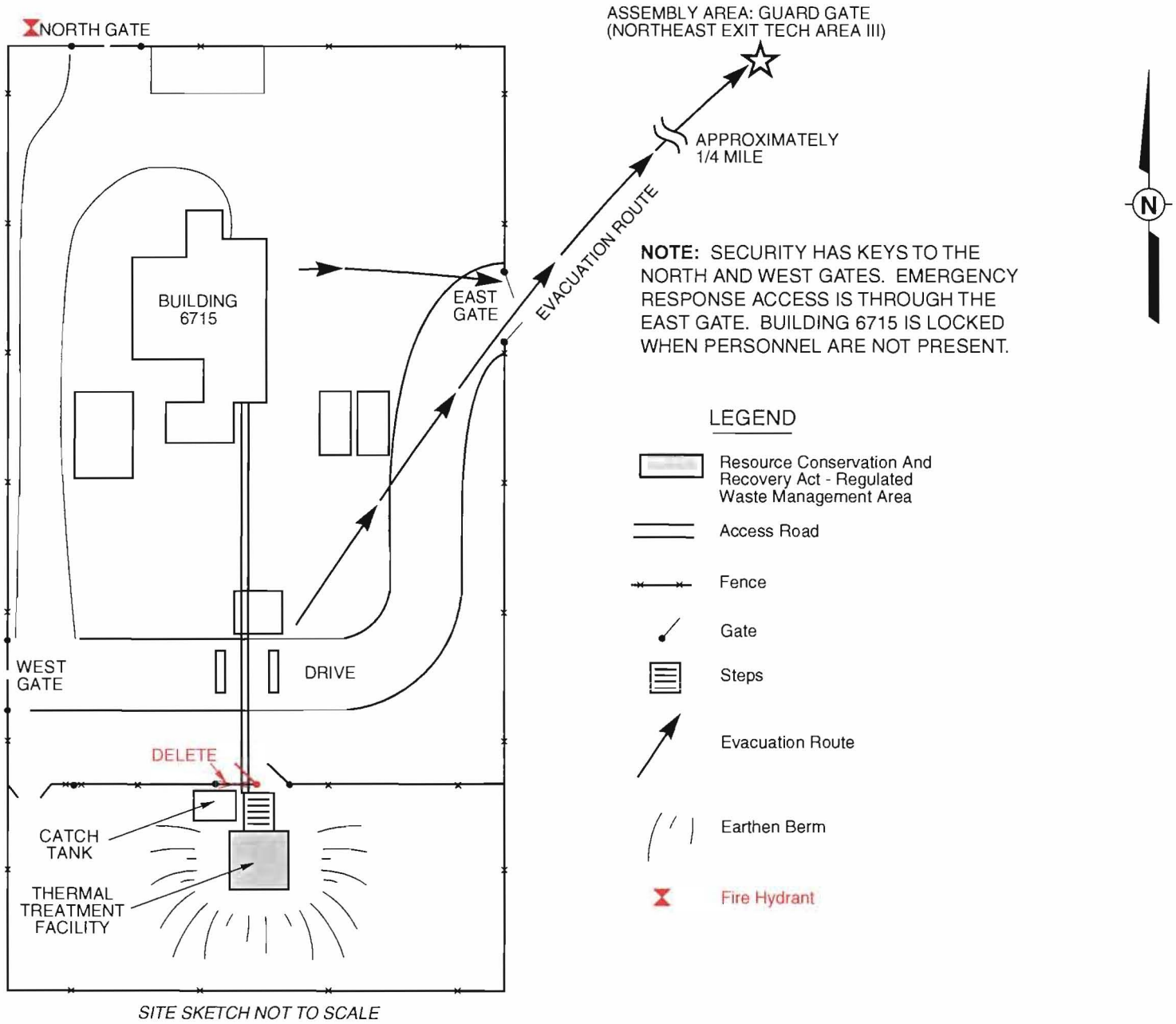


Figure ~~E-1~~ 9
Thermal Treatment Facility, Evacuation Route and Emergency Response and Access Information

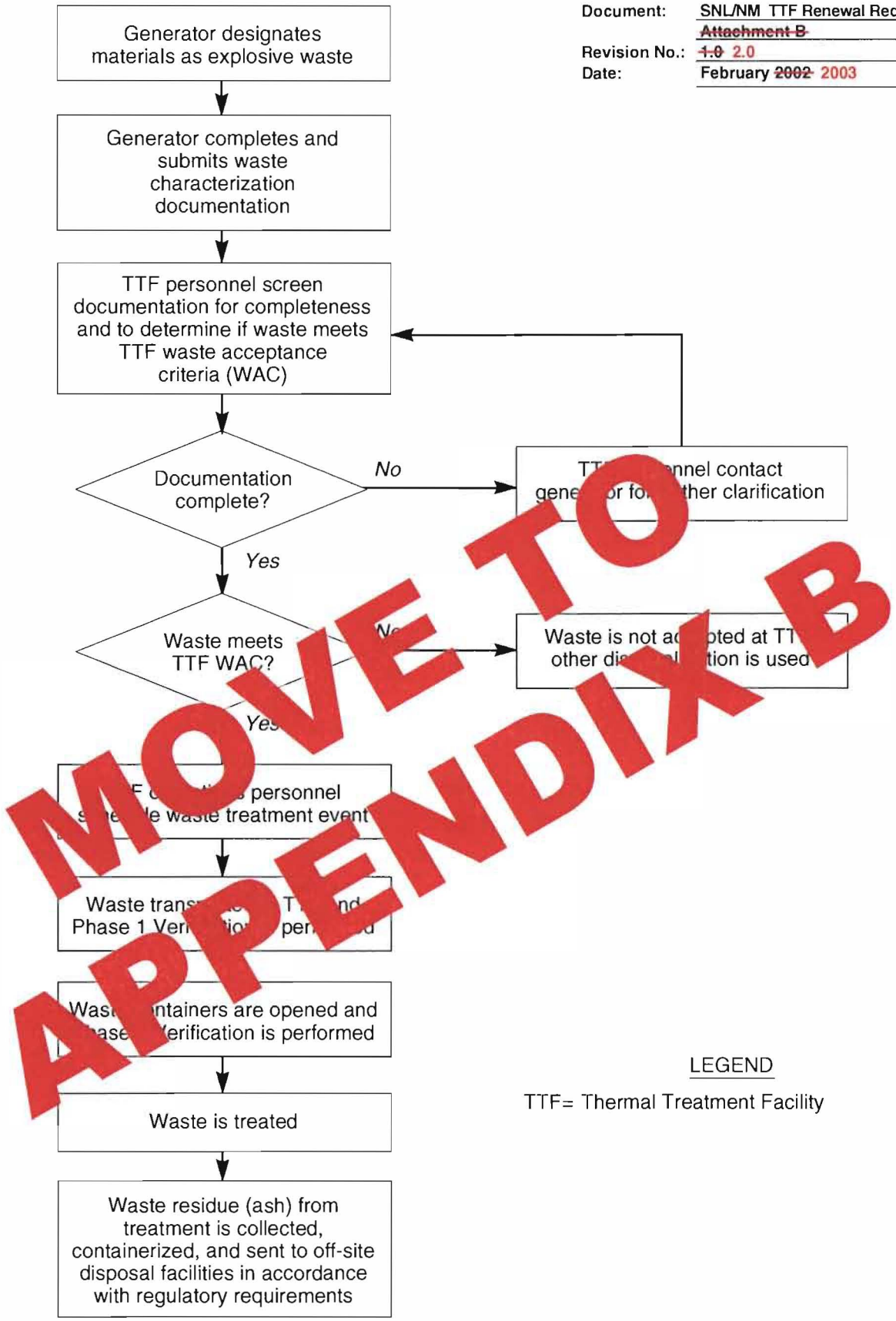


Figure B-1
Overview of Waste Screening and Verification Process

Explosive Waste Disposal Request

TUDR 0000052216

TO: Hazardous Waste Management Facility, MS 1117
Sandia National Laboratories
Albuquerque, New Mexico 87185-1117

A: Generator Information

	Name	Org #	Phone	Mailstop
Owner	OWNER, OWNER	3122	(505)845-2222	1037
Generator	OWNER, OWNER	3122	(505)845-2222	1037

C. RMMA Disclaimer
Was any material on this form generated or stored within a Radioactive Materials Management Area (RMMA)?
☐ Yes ☒ No

B: Location SNL/NM ECF 905 1100D

D: Waste Characterization Information Bulk explosive substance
TNT

Tot Qty 30.0000

Classification UNCLASSIFIED Type BULK POWDER Manf

UOM GRAMS

Physical/Chemical Constituents of Waste

☐ Wetted with

Constituents In Waste	N.E.W.	No[illegible]ive Wt
TNT	30.0000	

Total NEW per UOM 1.0000g [illegible]al w[illegible]ht, less NEW, per article [illegible]N/A
Total NEW for waste 30.000[illegible] [illegible]eight of non-explosive consti[illegible]uen 0.0000 g
Total weight of waste [illegible].000[illegible]

E: Shipping Info
Shipping Name Trinitrotolue[illegible] D[illegible]x
FSN/NSN

F: Contain[illegible]
Transportati[illegible]er [illegible]N Can
Inner Contain[illegible]el[illegible] Bag

[illegible]ifi[illegible] Code
[illegible]rd Class Bare 1.1 Packaged 1.1
[illegible]mpatibility Code Bare D Packaged D
[illegible]L" Reason:
Self Determination

H: Generator Certifica[illegible]
I certify that the [illegible]informa[illegible]rue and correct to the best of my knowledge. The waste is properly packaged and labeled for safe handling. Based upon pr[illegible]ledge [illegible]perational procedures, or radiological analysis. this waste meets all release criteria established by the DOE for certifying (s[illegible] B&[illegible]ual, [illegible]A) the waste does not contain any DOE added radioactivity.

Signature of [illegible]erator _____ Date _____
OWNER, OWNER Proj # Task #

I: Disposition Information

Container Type		Manifest No.	Line TSDF
Container No		Ship Date / /	EPA Waste Code:
Container Quantity	0.0000	DOT Shipping Description	
Shipped Weight	0.00 kg		
Source			

MOVE TO APPENDIX B

Figure B-2
Example of Explosive Waste Disposal Request Form

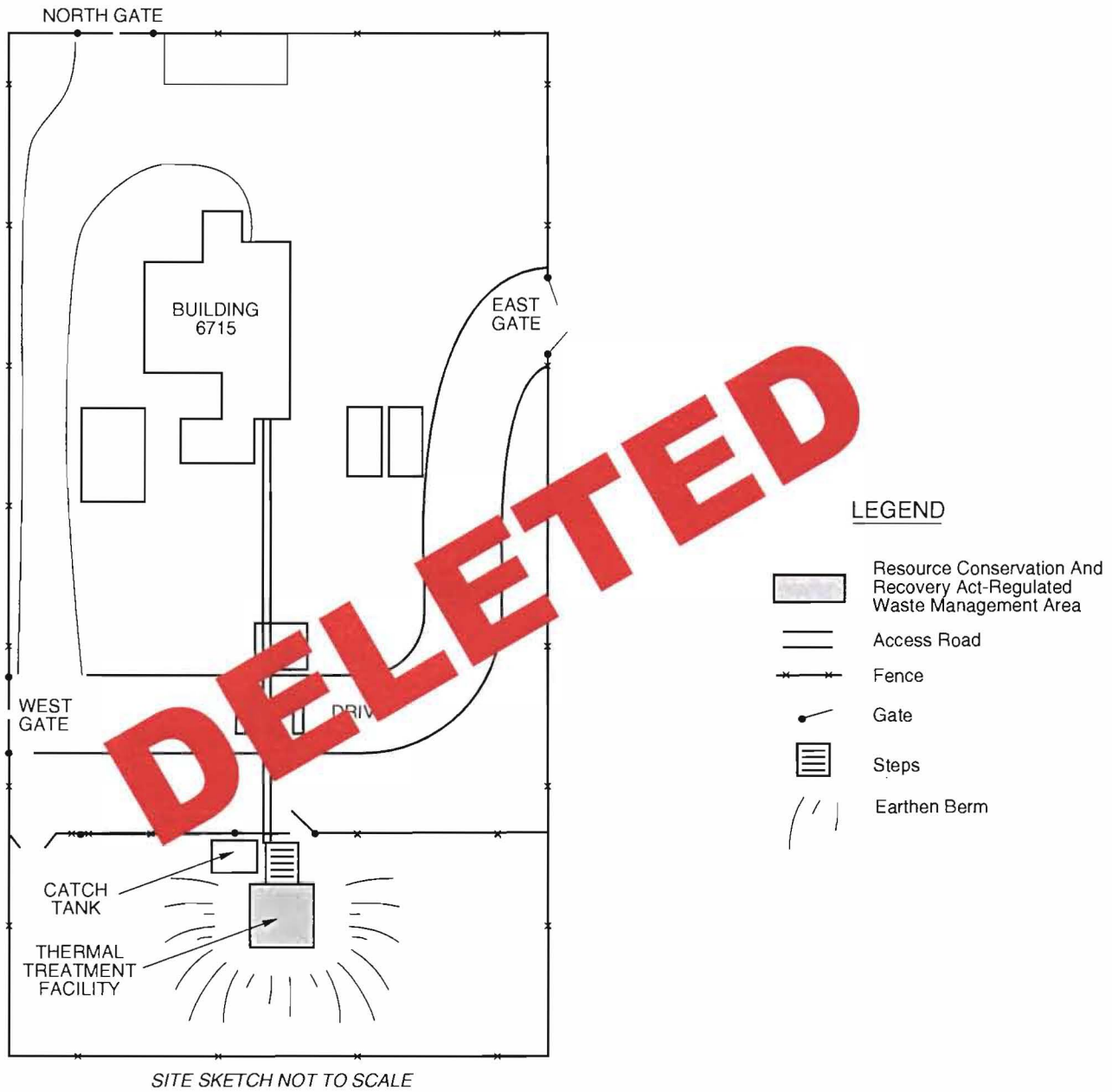


Figure F-1
Thermal Treatment Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Area

Sandia National Laboratories/New Mexico Radioactive and Mixed Waste Management Facility Part B Permit Application

Module III

Revision ~~1~~2.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES~~ATTACHMENTS~~ ..... RMWMF-iii
LIST OF FIGURES ..... RMWMF-~~iii~~iv
ACRONYMS AND ABBREVIATIONS ..... RMWMF-~~iv~~vi
1.0 GENERAL UNIT OPERATIONS RMWMF-2
1.1 Designated Waste Management Areas RMWMF-2
1.1.1 Building 6920 ..... RMWMF-3
1.1.2 Building 6921 ..... RMWMF-4
1.1.3 Buildings 6925 and 6926 ..... RMWMF-4
1.1.4 Modular Storage Buildings (TP150 and TP153) RMWMF-4
1.1.5 Outdoor Waste Storage Area RMWMF-5
1.2 Unit Operations RMWMF-5
1.2.1 Operation of Containment Systems RMWMF-5
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes RMWMF-6
1.2.3 Preparedness and Prevention RMWMF-7
1.2.3.1 Required Equipment RMWMF-7
1.2.3.2 Testing and Maintenance of Equipment RMWMF-8
1.2.3.3 Access to Communications or Alarm Systems RMWMF-8
1.2.4 Hazards Prevention RMWMF-8
1.2.4.1 Preventing Hazards in Unloading RMWMF-8
1.2.4.2 Preventing Runoff or Flooding RMWMF-9
1.2.4.3 Preventing Contamination of Water Supplies RMWMF-9
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages RMWMF-9
1.2.4.5 Preventing Undue Exposure RMWMF-10
1.2.4.6 Preventing Releases to the Atmosphere RMWMF-10
1.3 Container Storage RMWMF-11
1.3.1 Container Types and Labeling RMWMF-11
1.3.2 Container Handling RMWMF-11
1.3.2.1 Condition of Containers RMWMF-11
1.3.2.2 Aisle Space and Storage Configuration RMWMF-11
1.3.2.3 Compatibility of Waste with Containers RMWMF-12
1.4 Treatment Operations RMWMF-12
2.0 UNIT DESCRIPTION AND INFORMATION RMWMF-18
2.1 Security Procedures And Equipment RMWMF-19
2.1.1 Barriers and Means to Control Entry RMWMF-19
2.1.2 Warning Signs RMWMF-20
2.2 Traffic Pattern, Volume, and Controls RMWMF-20
2.2.1 Traffic Patterns RMWMF-20
2.2.2 Traffic Volumes RMWMF-20
2.2.3 Traffic Control Signals RMWMF-21
2.3 Unit Location Information RMWMF-21
2.3.1 Seismic Standard RMWMF-21
2.3.2 Floodplain Standard RMWMF-21
2.4 Topographic Maps RMWMF-21
2.5 Groundwater Monitoring RMWMF-23

TABLE OF CONTENTS (Concluded)

3.0 WASTE ANALYSIS PLAN RMWMF-26
4.0 INSPECTION PLAN RMWMF-28
5.0 PERSONNEL TRAINING RMWMF-32
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE RMWMF-34
7.0 CLOSURE PLAN RMWMF-50
7.1 Estimate of Maximum Waste in Storage RMWMF-50
7.2 Closure Conditions RMWMF-50
7.3 Closure Schedule RMWMF-51
8.0 TREATMENT PLAN RMWMF-53
9.0 REFERENCES RMWMF-54
~~1.0 GENERAL UNIT OPERATIONS ..... RMWMF-1~~
~~1.1 Designated Waste Management Areas ..... RMWMF-2~~
~~1.1.1 Building 6920 ..... RMWMF-2~~
~~1.1.2 Building 6921 ..... RMWMF-3~~
~~1.1.3 Buildings 6925 and 6926 ..... RMWMF-3~~
~~1.1.4 Modular Storage Buildings ..... RMWMF-4~~
~~1.1.5 Outdoor Waste Storage Area ..... RMWMF-4~~
~~1.2 Unit Operations ..... RMWMF-4~~
~~1.2.1 Inspections ..... RMWMF-4~~
~~1.2.2 Containment Systems ..... RMWMF-5~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... RMWMF-5~~
~~1.2.4 Closure ..... RMWMF-5~~
~~1.2.5 Preparedness and Prevention ..... RMWMF-5~~
~~1.2.5.1 Required Equipment ..... RMWMF-5~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... RMWMF-5~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... RMWMF-6~~
~~1.2.6 Hazards Prevention ..... RMWMF-6~~
~~1.2.6.1 Preventing Hazards in Unloading ..... RMWMF-6~~
~~1.2.6.2 Preventing Runoff or Flooding ..... RMWMF-6~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... RMWMF-6~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... RMWMF-6~~
~~1.2.6.5 Preventing Undue Exposure ..... RMWMF-7~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... RMWMF-7~~
~~1.3 Container Storage ..... RMWMF-8~~
~~1.3.1 Container Types and Labeling ..... RMWMF-8~~
~~1.3.2 Container Handling ..... RMWMF-8~~
~~1.3.2.1 Condition of Containers ..... RMWMF-8~~
~~1.3.2.2 Aisle Space and Storage Configuration ..... RMWMF-8~~
~~1.3.2.3 Compatibility of Waste with Containers ..... RMWMF-8~~
~~1.4 Treatment Operations ..... RMWMF-8~~
~~2.0 OTHER FEDERAL LAWS ..... RMWMF-9~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... RMWMF-10~~
~~4.0 REFERENCES ..... RMWMF-11~~

LIST OF TABLES

1 Fire Suppression Systems at the Radioactive and Mixed Waste Management Facility

2 Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency

~~E-1~~3 Radioactive and Mixed Waste Management Facility Emergency Equipment and Locations

~~E-2~~4 Radioactive and Mixed Waste Management Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/ New Mexico
2	Location of the Radioactive and Mixed Waste Management Facility (RMWMF) in Technical Area III
3	Radioactive and Mixed Waste Management Facility, Unit Layout
4	Radioactive and Mixed Waste Management Facility, Building 6920, Resource Conservation and Recovery Act-Regulated Waste Management Areas
5	Radioactive and Mixed Waste Management Facility, Building 6921, Resource Conservation and Recovery Act-Regulated Waste Management Areas
6	Radioactive and Mixed Waste Management Facility, Buildings 6925 and 6926, Resource Conservation and Recovery Act-Regulated Waste Management Areas
~~A-1~~	~~Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/ New Mexico~~
~~A-2~~	~~Radioactive and Mixed Waste Management Facility, Layout~~
7~~A-3~~	Radioactive and Mixed Waste Management Facility, Traffic Route and Controls
8~~A-4~~	Radioactive and Mixed Waste Management Facility, Topographic Map
9~~A-5~~	Radioactive and Mixed Waste Management Facility, Access Control Features
10~~A-6~~	Radioactive and Mixed Waste Management Facility, Drainage Control Features
11~~E-1~~	Radioactive and Mixed Waste Management Facility, Evacuation Routes
12~~E-2~~	Radioactive and Mixed Waste Management Facility, Emergency Response and Access Information
~~F-1~~	Radioactive and Mixed Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

~~LIST OF ATTACHMENTS~~

~~**Attachments**~~

~~A Unit Description for the Radioactive and Mixed Waste Management Facility~~

~~B Waste Analysis Plan for the Radioactive and Mixed Waste Management Facility~~

~~C Inspection Plan for the Radioactive and Mixed Waste Management Facility~~

~~D Personnel Training Plan for the Radioactive and Mixed Waste Management Facility~~

~~E Contingency Plan for the Radioactive and Mixed Waste Management Facility~~

~~F Closure Plan for the Radioactive and Mixed Waste Management Facility~~

~~G Treatment Plan for the Radioactive and Mixed Waste Management Facility~~

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2XX, Section 2*XX.XX*
CMU	concrete masonry unit
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	foot/feet
ft^2	square foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
lb/ft^2	pound(s) per square foot/feet
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Radioactive and Mixed Waste Management Facility (RMWMF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~–IX (20 NMAC 4.1.5~~1~~00 and –.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage and treatment operations at the RMWMF. 20 NMAC 4.1.5~~1~~00 and –.900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 ~~0 through 266, Part 268,~~ and ~~Part~~ 270 (40 CFR 264~~0–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002~~a~~3a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002~~b~~), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2002~~a~~3a) and Unit-specific Part B modules, including this RMWMF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, 2002~~b~~) and SNL/NM General Part B (SNL/NM, 2002~~a~~3a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Radioactive and Mixed Waste Management Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The RMWMF occupies 3.11 acres in the southeast corner of Technical Area (TA)-III. It is a fenced compound with several buildings and waste management areas (WMAs). Operations include storage of RCRA-regulated wastes in containers and treating the wastes as needed to render them more suitable for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the RMWMF. Sandia/DOE currently operate the RMWMF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart I [6-14-00].~~ This section provides descriptions of the RMWMF waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

Specific information in this section includes:~~applicable to the RMWMF addressed in this permit application is provided for the following subject areas:~~

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes;~~ closure;~~ preparedness and prevention; hazards prevention;
- Container storage of RCRA-regulated wastes ~~practices~~; and
- Treatment of RCRA-regulated wastes in containers and through mechanical processing. practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

~~The RMWMF at SNL/NM is used for storage and/or treatment of RCRA-regulated wastes.~~ The location of the RMWMF at SNL/NM is shown on Figure 1. The location of the RMWMF within ~~Technical Area (TA)~~ -III is shown on Figure 2. The RMWMF has six designated WMAs (Figure 3): Buildings 6920, 6921, 6925, and 6926; two modular storage buildings; and the outdoor waste storage area (i.e., paved areas within the RMWMF fence to the north, east, and west of Building 6920).

In each RMWMF WMA (except where noted), containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. ~~covered with grating.~~These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives, solvents, and other liquids. The containers of liquids ~~are~~ (typically 5- to 55-gallon capacity) are stored on the grating. Any liquids released from the containers drain through the grating into the tub. The pallets come in ~~pallets are of various appropriate~~ various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(~~1~~1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

RCRA-regulated wastes are typically stored inside one of the buildings or inside transportainers in the outdoor storage area. The containers are protected from precipitation by the buildings and transportainers, and by the slope of the asphalt pavement and concrete pads outside the buildings that direct storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(4).

The following sections provide descriptions of the storage structure, location, and capacity of each WMA.

1.1.1 Building 6920

The principal structure at the RMWMF is Building 6920. The floor plan for Building 6920 is presented on Figure 4. The WMAs in Building 6920 include waste staging and storage areas and waste treatment areas. Building 6920 is a single-story concrete and steel structure with a total RCRA-regulated waste management area of approximately 5,000 square feet (ft^2) with a maximum capacity of approximately 13,420 gallons. The floors are 6-inch (in.) reinforced, sealed concrete on compacted subgrade sloped to catch basins with no outlets. Walls are 8-in. load-bearing concrete masonry unit (CMU) with prefinished metal building panels in some areas. Nongrouted cells of the 8-in. CMU exterior walls are filled with vermiculite insulation. The shielded staging area at the east end of the building has 14-foot (ft) high reinforced concrete walls. The exterior walls are 2-ft thick, interior walls are 1-ft thick, and the shared wall is 1.5-ft thick. Inner partitions are 8-in. reinforced CMU.

The roof consists of 24-in. deep steel joists with a 1.5 in. metal deck with 3-in. rigid insulation and a single-ply roof membrane. The roof system is a single-ply fully adhered elastomeric system, installed over rigid insulation with factory-laminated fiberglass-coated skin on both sides, attached to the deck with metal fasteners. Ceilings are exposed and painted. The interior airlock has a painted concrete ceiling.

Building 6920 consists of two bays (north and south) isolated from each other by an interior airlock at the west end of the building. Waste treatment is performed in certain portions of Building 6920 (Figure 4). There are six exterior personnel doors and four cargo entrances to the building, as well as separate entrances to the exterior mechanical and electrical rooms. The seven personnel doors include: three at the eastern side of the building, one on the northern side, and three at the western side. There is a cargo entrance (i.e., roll-up door) at each end of each bay. Rollup doors enclose the airlocks on the south bay. Both bays in Building 6920 are equipped with secondary containment. The floor in each bay slopes from the doorways toward one or more shallow (6-in.-deep) blind sumps covered with grating. Containers of liquid RCRA-regulated wastes are typically stored over or near the sumps in the south bay. In the north bay and other areas of Building 6920, containers of liquid RCRA-regulated wastes are stored on portable spill pallets and pans covered with grating. Floors, (including the sumps), walls, and ceilings in the WMAs of Building 6920 are sealed with a chemical-resistant epoxy, which withstands degradation by chemical substances and resists

wear from forklift traffic. The sumps and pallets meet the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(1-4).

1.1.2 Building 6921

The Waste Assay Facility (Building 6921) is located east of Building 6920 (Figure 3). The Building 6921 floor plan is presented on Figure 5. Building 6921 is a single-story structure constructed with interior walls of 8-in. CMU and metal studs. The roof is comprised of steel bar joists with metal decking, rigid insulation, and single-ply membrane roofing. The floors are 6-in.-thick concrete slab-on-grade. The floors in the assay area on the south side of the building are sealed with a chemical-resistant epoxy that extends up the walls for 6 in. The total RCRA-regulated waste management area is approximately 1,450 ft^2 with a maximum capacity of approximately 7,810 gallons. The assay area is used for treatment and storage of RCRA-regulated wastes.

1.1.3 Buildings 6925 and 6926

Buildings 6925 and 6926 are used for storage and some treatment of RCRA-regulated waste at the RMWMF. The floor plans for Buildings 6925 and 6926 are presented on Figure 6. Building 6925 has a total storage area of approximately 4,000 ft^2 with a maximum capacity of approximately 83,160 gallons. Building 6926 also has a total storage area of approximately 4,000 ft^2 with a maximum capacity of approximately 83,160 gallons. Each building is prefabricated steel erected on a concrete slab floor and foundation. The concrete floors are covered with chemical-resistant ~~expoxy~~epoxy coating. Steel rollup doors are located on the southern wall of each building, on the eastern wall of Building 6925, and on the western wall of Building 6926. Personnel doors are located on the east, south, and west sides of each building.

1.1.4 Modular Storage Buildings (TP150 and TP153)

There are two modular storage buildings located west of Building 6920 that are used for storage of RCRA-regulated reactive and ignitable/flammable wastes (Figure 3).

The exterior dimensions of each modular storage building are 23~~2.6~~-ft long, 9-ft wide, and 8.6-ft high. ~~The maximum storage capacity at each building is approximately 1,100 gallons.~~ The structures are constructed for a snow loading of 40 pounds per square foot (lb/ft^2), Uniform Building Code seismic Zone 3, and a wind loading with exposure C open area at 110 miles per hour. The walls and roof of each structure are rated for a 2-hour fire. Each building has two 5-ft wide doors, and each door has a single-point locking mechanism with inside safety release. Each building is vented. The inside walls and ceiling of each building are covered with an epoxy coating which is resistant to reactive wastes.

Each modular storage building has a 5.5-inch-deep integral spill containment reservoir under the entire building; the capacity is 650 gallons. The secondary containment capacity is 10% of the stored volume of the contents of the largest container; thus the storage capacity based on secondary containment is 6500 gallons. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4). ~~that can contain more than 10 percent of the~~

~~storage capacity of the structure.~~ The reservoirs are constructed of 10-gauge American Society for Testing and Materials A36 steel and are coated with a chemical-resistant epoxy. The building floors are epoxy-coated steel grating. Each building rests on structural supports that elevate it and allow visual inspections of the underside of the spill containment reservoir. The maximum storage capacity at each building is not based on secondary containment. It is approximately 1,100 gallons.

1.1.5 Outdoor Waste Storage Area

The outdoor waste storage area consists of the asphalt paved areas to the north, east, and west of Building 6920 and within the RMWMF fence (Figure 3). The outdoor waste storage area may be used for containerized RCRA-regulated waste storage. It has an area of approximately 48,500 ft^2 with a total storage capacity of approximately 19,800 gallons. The area is curbed and paved~~,~~ with berms on the east end of the site, and ~~it~~ slopes toward the water retention pond. In the event of any releases of liquids in the outdoor storage area, the curbing and berms and the retention pond would capture released liquids, including stormwater run-on so that any contaminants would not exit the site.

Containers of RCRA-regulated wastes are typically stored inside enclosed steel transportainers, which are large 10- to 40-cubic-yard transportable containers. A transportainer typically has doors at one end and can be lifted onto a large flatbed truck for transportation.

1.2 Unit Operations

The RMWMF WMAs are used to store and/or treat any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002~~b~~).

General information regarding: ~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes; ~~closure~~; preparedness and prevention; and, hazards prevention requirements applicable to the RMWMF WMAs are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5]; 20 NMAC 4.1.500/40 CFR 264.15 and 264.174)~~

~~RMWMF inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14 [b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175[b][5])

~~Liquids that might accumulate at the RMWMF WMAs are contained within spill pallets and sumps that are sufficiently impervious to contain leaks, spills, or accumulated precipitation until~~

~~the liquid is removed, as described in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002a), in accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00].~~

Liquid wastes released from individual containers will accumulate in the spill pallets. Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets and sumps (in Building 6920) upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[d]; and 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the RMWMF. Unit~~RMWMF~~ personnel employ the practices described in Section 1.1.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). ~~to manage ignitable, reactive, and incompatible wastes.~~Additional RMWMF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes and typically stored in the modular storage buildings. They may also be stored in Building 6925. Water-reactive wastes are not stored in areas equipped with water sprinklers for fire suppression.

- Forklifts are not used for waste movement near treatment operations involving ignitable or reactive wastes in Building 6920 to minimize potential sources of ignition while containers are or may be open.

- The modular storage buildings are grounded by a 10-ft-long grounding rod and cable and equipped with a dry chemical fire suppression system to assure that water-reactive wastes will not be exposed to water during fire emergencies.

- Wastes are mixed together on a very limited basis during the treatment and repackaging operations at the Unit. Ignitable and reactive wastes are treated or mixed on a case-by-case basis. Unit personnel plan each such operation carefully to identify the hazards and potential consequences as described in Section B.5. Personnel use waste characterization data and/or published chemical information (e.g., NIOSH Pocket Guide to Chemical Hazards or other chemical or engineering handbook) for each waste in the planning process. Personnel then conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. Treatment operations are described in Appendix G of the General Part B (SNL/NM, 2003b).

- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~RMWMF closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20 NMAC 4.1.5.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the RMWMF.

~~1.2.5.1~~1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

General information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrants at the RMWMF are shown in Figure 12.

The modular storage buildings are grounded by a 10-ft-long grounding rod and cable. All buildings at the RMWMF are equipped with automatic fire suppression systems; summarized below:

Table 1
Fire Suppression Systems at the
Radioactive and Mixed Waste Management Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6920 (general area)	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS
			Automatic sprinkler, wet pipe	GB/FS
6920 (small rooms)	13	Extra/Group 1	Deluge, dry/open	Detection
HEPA filters	15	N/A		
6921	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS
6925	13	Storage	Automatic sprinkler, dry pipe	GB/FS
6926	13	Storage	Automatic sprinkler, dry pipe	GB/FS
TP150	17	N/A	Dry chemical	
TP153	17	N/A	Dry chemical	

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on ~~the~~ other required equipment located at the RMWMF is provided in Section 6 ~~Attachment E~~ and Table 2 of this module.

~~1.2.5.2~~1.2.3.2 *Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)*

Information on equipment testing and maintenance at the RMWMF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 ~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 *Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)*

Information about ~~on~~ the types and locations of communications or alarm systems at the RMWMF is provided in Section 1.1.3.2 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 ~~Attachment E~~ of this module.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the RMWMF to prevent hazards. Additional information applicable to the RMWMF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

~~1.2.6.1~~1.2.4.1 *Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])*

RMWMF personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent hazards in unloading. Loading and unloading activities take place on the paved areas, typically immediately outside the buildings. The surface is sloped gently toward the shallow concrete drainage ditches, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Drums and other larger containers are typically strapped together on a pallet before being loaded onto vehicles. Containers are typically transported within the Unit with drum dollies or pallet jacks.

Unit personnel typically use the loading dock for loading and unloading wastes from trucks. The ramp on the west side of Building 6926 slopes gently up to the dock, allowing forklift operators to drive onto trailers of trucks parked at the dock. The dock and ramp are in good condition and is covered with a corrugated metal roof to provide protection from weather.

~~1.2.6.2~~1.2.4.2 *Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])*

The area around the Unit slopes gently toward the west. Sheet-flow run-on of surface water from surrounding areas outside the Unit ~~and runoff from the RMWMF are~~ is prevented from entering ~~/leaving~~ the WMAs by several features. T~~t~~he elevated gravel road located outside the ~~on the~~ east fence ~~side~~ of the Unit serves to divert water flowing from areas farther to the east.~~,~~ A~~a~~n 8-in. curb at the east edge of the asphalt pavement~~,~~ and an asphalt-lined drainage swale along the eastern edge of the Unit (inside the fence) divert run-on from the gravel road toward the south away from the Unit. On the south and west sides, the Unit is higher than the surrounding land. On the north side, the Unit and a narrow ledge of land outside the fence are higher than the surrounding land. Thus run-on from all directions is prevented from entering the Unit.

~~.~~ The asphalt-paved areas w~~W~~ithin the Unit~~,~~ are surrounded by an 8-inch curb, further preventing run-on and run-off. The outside storage area slopes toward the south and west. The concrete ~~and asphalt~~ pads outside the doors and the asphalt pavement surrounding Buildings 6920, 6921, 6925, and 6926 all slope away from the doors and toward ~~to the center of the Unit away from buildings to prevent water from entering buildings and direct water to~~ shallow concrete drainage channels that run between buildings 6920, 6925, and 6926. The channels lead to the synthetic-lined water retention pond at the southwest corner of the Unit.~~. The property within the Unit fence is graded and designed to~~ provide~~d~~ing controlled drainage of storm water from roof downspouts and the paved areas in the RMWMF ~~using drainage channels leading~~ into the water retention pond. During normal operations, the water retention pond collects only storm water. The water retention pond does not provide secondary containment for RCRA-regulated waste.

~~1.2.6.3~~1.2.4.3 *Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])*

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the RMWMF will affect water supplies, as ~~personnel employ the practices~~ described in Section 1.1.~~4~~6.3 of the SNL/NM General Part B (SNL/NM, 2002~~3a~~a). ~~to prevent contamination of water supplies.~~

~~1.2.6.4~~1.2.4.4 *Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). RCRA-regulated waste management activities at the RMWMF will be suspended in response to equipment failures of power outages affecting those WMAs.

The RMWMF is equipped with an auxiliary diesel generator that can provide backup power to Building 6920. The generator maintains containment ventilation, alarm systems, heating equipment, and controls necessary to keep water in pipes from freezing should the main power supply fail.

Equipment and/or power failures at Buildings 6921, 6925, 6926; the outdoor waste storage area; or the two modular storage buildings will not result in a loss of RCRA-regulated waste containment.

~~1.2.6.5~~1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

RMWMF personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

RMWMF personnel employ the practices described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) to prevent releases to the atmosphere.

Sandia/DOE do not routinely manage hazardous wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service at the RMWMF will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f) [6-14-00]. The equipment use will be noted in the RMWMF operating log.

The WMAs at the RMWMF are typically used solely for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the RMWMF will be managed in separate WMAs, if possible. If these wastes cannot be segregated into separate WMAs, they will be segregated from other containers within the WMA.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/ 40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

In addition, a negative pressure ventilation system in Building 6920 is provided for the RCRA-regulated waste storage, staging/packaging, and treatment areas. The ventilation air flow from these areas passes through high-efficiency particulate air filters before being released to the environment through a 30-ft stack above the building roofline. The filters effectively remove particulates entrained in the air flow.

1.3 Container Storage (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR 264, Subpart I)

Container storage practices applicable to the RMWMF are presented in the following sections.

1.3.1 Container Types and Labeling

RMWMF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a~~a~~).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

RMWMF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the RMWMF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

RMWMF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

In Buildings 6920, 6921, 6925 and 6926, drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

Containers of liquids are not stacked when stored in the modular buildings.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

RMWMF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.4 Treatment Operations

Treatment practices applicable to the RMWMF are presented in Section 8.0 ~~Attachment G~~ of this module.

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... RMWMF-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... RMWMF-A-iii~~
~~A.1 RMWMF General Unit Description ..... RMWMF-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... RMWMF-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... RMWMF-A-2~~
~~A.2.2 Warning Signs ..... RMWMF-A-3~~
~~A.3 Traffic Pattern, Volume, and Controls ..... RMWMF-A-3~~
~~A.3.1 Traffic Patterns ..... RMWMF-A-3~~
~~A.3.2 Traffic Volumes ..... RMWMF-A-3~~
~~A.3.3 Traffic Control Signals ..... RMWMF-A-3~~
~~A.4 Unit Location Information ..... RMWMF-A-4~~
~~A.4.1 Seismic Standard ..... RMWMF-A-4~~
~~A.4.2 Floodplain Standard ..... RMWMF-A-4~~
~~A.5 Topographic Maps ..... RMWMF-A-4~~
~~A.6 Groundwater Monitoring ..... RMWMF-A-5~~
~~REFERENCE ..... RMWMF-A-5~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~A-1 Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/New Mexico~~

~~A-2 Radioactive and Mixed Waste Management Facility, Layout~~

~~A-3 Radioactive and Mixed Waste Management Facility, Traffic Route and Controls~~

~~A-4 Topographic Map, Radioactive and Mixed Waste Management Facility (RMWMF)~~

~~A-5 Radioactive and Mixed Waste Management Facility, Access Control Features~~

~~A-6 Radioactive and Mixed Waste Management Facility, Drainage Control Features~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~RMWMF~~	~~Radioactive and Mixed Waste Management Facility~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION AND INFORMATION~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX~~ (20 NMAC 4.1.100–.900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~).~~ The following subject areas are addressed in this section ~~attachment~~:

- ~~A general description of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/ 40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA) regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of ~~the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2002~~c~~3b).

~~A.1 RMWMF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The RMWMF is located in the southeastern portion of Technical Area (TA)-III (Figure 1A-1). The RMWMF is enclosed within an 8-foot (ft.)-high, single chain-link fence with locking gates. A Unit layout for the RMWMF is provided on Figure A-2.~~

~~The RMWMF RCRA-regulated waste management areas (WMAs) addressed in this permit renewal request application are (Figure 3):~~

2.0 UNIT DESCRIPTION~~-~~ AND INFORMATION~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX~~ (20 NMAC 4.1.100–.900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~).~~ The following subject areas are addressed in this section ~~attachment~~:

- ~~A general description of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/ 40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of ~~the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 200~~2c~~3b).

~~A.1 RMWMF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The RMWMF is located in the southeastern portion of Technical Area (TA)-III (Figure 1A-1). The RMWMF is enclosed within an 8-foot (ft.)-high, single chain-link fence with locking gates. A Unit layout for the RMWMF is provided on Figure A-2.~~

~~The RMWMF RCRA-regulated waste management areas (WMAs) addressed in this permit renewal request application are (Figure 3):~~

~~□The Radioactive and Mixed Waste Management Facility (Building 6920),~~
~~□The Waste Assay Facility (Building 6921),~~
~~□The Waste Storage Facilities (Buildings 6925 and 6926),~~
~~□Two modular storage buildings, and~~
~~□The Outdoor Waste Storage Area.~~

~~The RMWMF RCRA-regulated waste management practices addressed in this module are:~~

~~□Container storage of RCRA-regulated waste, and~~
~~□Treatment of RCRA-regulated waste.~~

~~Descriptions of the RMWMF WMAs and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures And Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the RMWMF.

2.1.1 ~~A.2.1~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the RMWMF fully meets the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~

The RMWMF is completely surrounded by an 8-ft-high chain-link and barbed-wire fence. A single personnel entrance door adjacent to the main vehicle entrance gate is located on the south side of the RMWMF. Another personnel entrance door and vehicle gate are located on the north side of the RMWMF. The ~~RMWMF~~ gates and doors in the RMWMF fence are maintained in closed and locked positions. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the RMWMF gates during non-operational hours.

During work hours, RMWMF employees may enter the area through the locked personnel doors by entering the appropriate code into a keypad on the RMWMF fence near the personnel doors. Emergency and service vehicles may enter the RMWMF through the electronically-controlled main vehicle gate if RMWMF personnel enter the appropriate code into a keypad inside the office trailer or on the keypads located near the personnel doors on the RMWMF fence. Signs instruct personnel and visitors to report to the office trailer for site entry privileges and instructions. Resident personnel have Sandia-issued badges. Individuals who do not have a Sandia-issued badge are escorted. ~~-~~These procedures limit access to the RMWMF RCRA-regulated WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The RMWMF is located inside TA-III (Figures 1 and 2). TA-III is surrounded by a barbed wire fence with designated access gates. TA-III access control procedures assure that only properly

identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-III.

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fence surrounding the RMWMF and the entrance to the RMWMF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish, are legible from a distance of 25 ft, and can be seen from any approach to the RMWMF.

2.2 ~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated waste to the RMWMF include Wyoming Boulevard, Hardin Boulevard ~~,~~(formerly "O" Street), and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-III turns southwestward off of Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Boulevard entrance gate as shown on Figure A-4 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

Within TA-III, traffic access to and from the RMWMF is along ~~the~~ 2-lane asphalt-paved roads shown on Figure A-6 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles entering the RMWMF travel on a asphalt-paved 2-lane drive from the road through the south vehicle gate, as shown on Figure 7~~A-3~~. Within the RMWMF, waste is transported on asphalt-paved surfaces (Figure 7~~A-3~~).

2.2.2 ~~A.3.2~~ Traffic Volumes

Traffic volumes on Wyoming Boulevard~~,~~ and Hardin Boulevard~~, and O Street~~ are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Traffic volumes within TA-III are light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Approximately 10 to 30 vehicles per week travel into and out of the RMWMF. These include flatbed trucks and trailers carrying supplies, waste from generators, and waste to disposal facilities.

2.2.3 ~~A.3.3~~ Traffic Control Signals

Vehicles must stop at a gate prior to entering or leaving TA-III. Only authorized personnel are permitted into TA-III. Speed limit signs (i.e., "30 mph Unless Otherwise Posted") are located at several locations in TA-III.

There are no traffic control signals or signs within the RMWMF fenced area. A speed limit sign (i.e., "Max. Speed 5 mph On Site") is posted on the fence adjacent to the RMWMF entrance gate (Figure 7~~A-3~~). Vehicle presence within the RMWMF fenced area is limited to official and waste transport vehicles. Therefore, signals or signs are not necessary to control traffic within the RMWMF fenced area.

2.3 ~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the RMWMF are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A ~~[SNL/NM, 2002c]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the RMWMF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002c]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 ~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).~~;~~
- Surface waters, including intermittent streams, near the RMWMF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).~~;~~

- Surrounding land uses are shown on Figures A-2~~9~~ and A-8~~10~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]).~~;~~ The area surrounding the RMWMF is occupied by test areas and Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2~~8~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).~~;~~

- Legal boundaries of SNL/NM (including the RMWMF) are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).~~;~~

- Access control features at the RMWMF (e.g., fences, gates) are shown on Figure 8 and 9~~A-5~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).~~;~~

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the RMWMF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).~~;~~

- The location of the RMWMF and associated WMA structures, ~~and~~ loading and unloading areas, roads, and sanitary sewers are shown on Figures 8 and 9~~A-5~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).~~;~~

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 10~~A-6~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).~~; and~~

- Locations of the RMWMF and the RMWMF WMAs are shown on Figure~~s A-1, A-2, and~~ 8~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the RMWMF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the ~~New Mexico Environment Department~~ (NMED) at these scales and contour intervals due to the size of the RMWMF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 ~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The RMWMF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the RMWMF likely to affect groundwater quality during normal operations or during unusual events.

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico~~.

~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SMWU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The RMWMF is not a SWMU identified in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Management Facility Operating Permit Number NM5890110518-1" (NMED, 1992). However, the RMWMF is located on a portion of Environmental Restoration Site 107 (Explosive Test Area). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1," (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

Waste analysis requirements applicable to all Units, including the RMWMF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 200~~2c~~3b) as required by ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900/~~), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(2) (~~40 CFR 270.14[b][2],~~);~~ 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis," ~~; and,~~ and 20 NMAC 4.1.800/40 CFR 268.7 [6-14-00], "Waste Analysis and Record-Keeping," ~~revised June 14, 2000 [6-14-00], waste analysis requirements applicable to all Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management units, including the Radioactive and Mixed Waste Management Facility, are addressed in Appendix B (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

4.0 INSPECTION PLAN ~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management units, including the Radioactive and Mixed Waste Management Facility (RMWMF), are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). RMWMF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, with the inspection criteria and frequency. The items listed in the table are inspected in each RMWMF WMA.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

Table 2
Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, accessible, quantities per inventory, in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Treatment area	Good condition, clean, uncluttered, no spills	Daily when wastes are managed. Monthly otherwise.
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Daily when wastes are managed. Monthly otherwise.
Monitoring equipment	Instruments in good condition, operational, calibrated	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present and in good condition	Monthly
Gates and doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.

Table 2 (Concluded)
Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained at the RMWMF. Inspection records for previous calendar years are maintained at the RMWMF or the SNL/NM Records Center.

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

Training Requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900/~~), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) (~~40 CFR 270.14[b][12]~~),~~ and 20 NMAC 4.1.500/40 CFR 264.16 [6-14-00], "Personnel Training.~~,~~" ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the Radioactive and Mixed Waste Management Facility (RMWMF), are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

The Sandia/DOE training program is designed and implemented to prepare personnel to safely operate and maintain those areas used for managing RCRA-regulated wastes. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the RMWMF.

RMWMF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b).

All job descriptions identified in Appendix D, Table D-2 of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b) are applicable at the RMWMF. Unit personnel perform periodic inspections to identify any malfunctions, signs of deterioration, operator errors, and discharges or spills that may cause or lead to a release of RCRA-regulated waste constituents that may threaten or harm human health or the environment.

Training records for RMWMF personnel are maintained at the RMWMF.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002 Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE ~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide Contingency Plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA]-Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002a) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia/DOE Site-Wide Contingency Plan is included in as Appendix E of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). Supplemental RMWMF-specific information is included in this section, in Figures 11 and 12, and in Tables 3 and 4 of this module.

The ~~Radioactive and Mixed Waste Management Facility (~~RMWMF~~)~~ is located in the southeastern portion of ~~Technical Area~~ TA-III at SNL/NM. It is used ~~The RMWMF is designed as a centralized area~~ for treatment and storage of RCRA–regulated wastes. The RCRA-regulated ~~waste management areas (~~WMAs~~)~~ at the RMWMF include –Buildings 6920, 6921, 6925, and 6926; two modular storage buildings; and the outdoor waste storage area (i.e., paved areas within the RMWMF fence and north, east, and west of Building 6920). All are surrounded by a fence.

- Building 6920 is a single-story concrete masonry unit (CMU) and steel building with approximately 5,000 square feet of space used for RCRA-regulated storage and treatment activities. Inside the building are two bays (north and south), separated by an interior airlock. The south bay includes four small rooms used for treatment and storage. The building also includes a control room, restrooms, and electrical and mechanical rooms. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored over a sump in the south bay or on portable spill containment pallets. Containers of incompatible wastes are not stored together. The containers may be repackaged into larger containers for shipment to off-site facilities. Contents may also be treated by chemical deactivation, macroencapsulation, stabilization, thermal deactivation, or mechanical processing. Up to 13, 420 gallons of waste may be stored in this building. Eave height????

- Building 6921 is a single-story CMU building with approximately 1450 square feet of space used for RCRA-regulated storage and treatment activities. The building also includes office space and restrooms. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored on portable spill containment pallets. Containers of incompatible wastes are not stored together. The containers may be repackaged into larger containers for shipment to off-site facilities. Contents may also be treated by chemical deactivation, macroencapsulation, or stabilization. Up to 7,810 gallons of waste may be stored in this building.

- Buildings 6925 and 6926 are each 4000-square-foot prefabricated steel buildings on concrete foundations. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored on portable spill containment pallets. Containers of incompatible wastes are segregated into different areas. The containers may be repackaged into larger containers for shipment to off-site facilities. Up to 83,160 gallons of waste may be stored in each building.

- Two modular, prefabricated safety storage structures located west of Building 6920 are used for the storage of reactive and ignitable wastes. Each structure is constructed of 10- and 12-gauge welded steel with supporting structural steel sections, and includes a welded steel containment pan covered by grating. Each structure may contain up to 1,100 gallons of waste.

- The outdoor waste storage area consists of 48,500 square feet of asphalt-paved areas to the north, east, and west of Building 6920 within the RMWMF fence that may be used for storage of containers of RCRA-regulated wastes. Containers of RCRA-regulated wastes are typically stored inside enclosed transportainers. Containers with liquids are stored on portable spill containment pallets inside the transportainers. Up to 19, 800 gallons of wastes may be stored in these areas.

RCRA-regulated wastes bearing the U.S. EPA ~~Environmental Protection Agency~~ Hazardous Waste Numbers listed in the ~~"Sandia National Laboratories/New Mexico~~ SNL/NM General Part A Permit ~~Renewal Request/Application"~~ (SNL/NM, 2002~~b~~) may be stored and/or treated at the RMWMF WMAs, which~~. RMWMF WMAs~~ may be used for RCRA-regulated waste storage and treatment.

Figure 11~~E-1~~ presents evacuation routes for the RMWMF. Figure 12~~E-2~~ presents emergency response and access information ~~necessary to access~~ for the RMWMF. Table 3~~E-1~~ lists the emergency equipment typically available at the RMWMF. Table 4~~E-2~~ lists the emergency coordinators for the RMWMF.

Current copies of ~~this Unit-specific Contingency Plan and~~ the Site-wide Contingency Plan (SNL/NM, 2002b~~a~~) and this supplemental information are maintained at the RMWMF and at the SNL/NM Emergency Operations Center.

Table 3 ~~E-1~~
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6920

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~ Eyewash Stations/ Showers Absorbent Miscellaneous PPE (protective suits, goggles, gloves)	~~In hallway between north and south bays~~ • On north wall in south bay • Near office in north bay In hallway between north and south bays In hallway between north and south bays
Internal Communication and Alarm System	Voice c~~C~~ommand Portable 2-way radio~~Intercoms~~ ~~Pull Stations~~ ~~Fire Alarms~~ Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers) Audible fire alarms	Operating personnel typically carry radios~~Intercom stations located throughout the building~~ ~~Pull stations located:~~ ~~- By personnel door in northeast corner of building~~ ~~- By personnel door in southeast corner of south bay~~ ~~- In southwest corner of southwest airlock~~ ~~- By personnel door in west mechanical room~~ ~~- By personnel door on north wall of north bay~~ ~~- By personnel door in entryway west of office~~ ~~Fire alarms located throughout the building~~ • By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • In southwest corner of southwest airlock • By personnel door in west mechanical room • By personnel door on north wall of north bay • By personnel door in entryway west of office Located throughout the building

Table 3 ~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6920

Category	Description/Capabilities	Location
External Communication System	Telephones	~~Located throughout the building~~ Control room, south and north bays
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • In southwest corner of southwest airlock • By personnel door in west mechanical room • By personnel door on north wall of north bay • By personnel door in entryway west of office
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • By personnel door in southwest corner of south bay • In hallway between north and south bays • By personnel door in west mechanical room
	~~Portable (D)~~	
	~~Portable (A-B-C)(D)~~	~~In northwest corner of north bay~~ • ~~By personnel door on north wall of north bay~~
	Portable (D)	In northwest corner of north bay
	Portable (A-B-C)(D)	By personnel door on north wall of north bay
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers~~Water to Extinguish Fires~~	~~Three fire hydrants located at the RMWMF~~ ~~Sprinklers located~~ Coverage throughout the building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6921

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~	~~By north wall of assay area~~
	Eyewash Station/Shower	On north wall of assay area
	Absorbent	By north wall of assay area
	Miscellaneous PPE (protective suits, goggles, gloves)	By north wall of assay area
Internal Communication and Alarm System	Voice c~~C~~ommand	
	Portable 2-way radio	Operating personnel typically carry radios
	~~Pull Stations~~	~~Pull stations located:~~ ~~- By personnel door in electrical/mechanical room~~ ~~- In central hallway outside restrooms~~ ~~- In northwest corner of assay area~~ ~~- By east personnel door in southeast counting room~~ ~~- By east personnel door in middle east office area~~
	~~Fire Alarms~~	~~Fire alarms located throughout the building~~
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in electrical/mechanical room • In central hallway outside restrooms • In northwest corner of assay area • By east personnel door in southeast counting room • By east personnel door in middle east office area
	Audible fire alarms	Located throughout the building

Table 3~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6921

Category	Description/Capabilities	Location
External Communication System	Telephones Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	~~Located throughout the building~~ Office and lab areas • By personnel door in electrical/mechanical room • In central hallway outside restrooms • In northwest corner of assay area • By east personnel door in southeast counting room • By east personnel door in middle east office area
Fire Extinguishers	Portable (A-B-C)	• By north personnel door in electrical/mechanical room • In hallway between assay area and north office area • By northwest personnel door of assay area • By east personnel door in southeast counting room
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers~~Water to Extinguish Fires~~ Water supplied by fire hydrants	~~Three fire hydrants located at the RMWMF~~ ~~Sprinklers located~~ Coverage throughout the building Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6925

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~	~~By personnel door near center of south wall~~
	Portable Eyewash	By personnel door near center of south wall
	Absorbent	By personnel door near center of south wall
	Miscellaneous PPE (protective suits, goggles, gloves)	By personnel door near center of south wall
Internal Communication and Alarm System	Voice c~~C~~ommand	
	Portable 2-way radio~~s~~	Operating personnel typically carry radios
	~~Pull Stations~~	~~Pull stations located:~~ ~~- By personnel door in northeast corner of building~~ ~~- By personnel door in southwest corner of building~~ ~~- By personnel door near center of south wall~~
	~~Fire Alarms~~	~~Fire alarms located on east wall and west wall~~
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building • By personnel door near center of south wall
	Audible fire alarms	Located on east and west wall
External Communication System	Telephone	By personnel door in southwest corner of building
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building • By personnel door near center of south wall
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building
	~~Portable (A-B-C)(D)~~	~~By personnel door near center of south wall~~
	Portable (A-B-C)(D)	By personnel door near center of south wall

Table 3~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6925

Category	Description/Capabilities	Location
Fire Suppression	Automatic dry-pipe sprinkler system with heat-actuated sprinklers~~Water to Extinguish Fires~~ Water supplied by fire hydrants	~~Three fire hydrants located at the RMWMF~~ Sprinklers located throughout building Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3~~E-1~~ (Continued)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6926

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~	~~In southeast area of building~~
	Eyewash Station/Shower	In southeast area of building
	Absorbent	In southeast area of building
	Miscellaneous PPE (protective suits, goggles, gloves)	In southeast area of building
Internal Communication and Alarm System	Voice c~~C~~ommand	
	Portable 2-way radio~~s~~	Operating personnel typically carry radios
	~~Pull Stations~~	~~Pull stations located:~~ ~~- By personnel door in northeast corner of building~~ ~~- By personnel door on west wall of building~~ ~~- By personnel door on south wall of building~~
	~~Fire Alarms~~	~~Fire alarms located on east wall and west wall~~
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door on west wall of building • By personnel door on south wall of building
	Audible fire alarms	Located on east wall and west wall
External Communication System	Telephone	In southeast area of building
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door on west wall of building • By personnel door on south wall of building
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building
	~~Portable (A-B-C)(D)~~	• By personnel door on west wall of building~~By personnel door on south wall of building~~
	Portable (A-B-C)(D)	By personnel door on south wall of building

Table 3~~E-1~~ (Continued~~cluded~~)
Radioactive and Mixed Waste Management Facility ~~(RMWMF)~~, Emergency Equipment and Locations

Building 6926

Category	Description/Capabilities	Location
Fire Suppression	Automatic dry-pipe sprinkler system with heat-actuated sprinklers~~Water to Extinguish Fires~~	~~Three fire hydrants located at the RMWMF~~ Sprinklers located throughout building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3 (Concluded)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Modular Storage Buildings

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Absorbent	Buildings 6920 and 6926
	Miscellaneous PPE (protective suits, goggles, gloves)	Buildings 6920 and 6926
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system)	Buildings 6920, 6921, 6925, and 6926
	Audible fire alarms	
External Communication System	Telephones	Buildings 6920 and 6926
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system)	Buildings 6920, 6921, 6925, and 6926
Fire Suppression	Automatic dry chemical system	Coverage throughout the building

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 4~~E-2~~
Radioactive and Mixed Waste Management Facility,
Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Jeff Jarry Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
~~Second Alternate~~	~~Gloria Chavez~~ ~~Sandia National Laboratories~~ ~~P.O. Box 5800~~ ~~Albuquerque, NM 87185~~	~~(505) 845-8737 (office)~~ ~~(505) 540-4038 (pager)~~	~~(505) 281-4074~~
Second ~~Third~~ Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of these personnel are routinely available during operating hours (7:00 am to 5:30 pm, Monday through Thursday).

~~REFERENCES~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... RMWMF-F-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... RMWMF-F-III~~
~~F.1 Unit Description ..... RMWMF-F-1~~
~~F.2 Estimate of Maximum Waste in Storage ..... RMWMF-F-1~~
~~F.3 Closure Conditions ..... RMWMF-F-1~~
~~Reference ..... RMWMF-F-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1 Radioactive and Mixed Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~RMWMF~~	~~Radioactive and Mixed Waste Management Facility~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

7.0 CLOSURE PLAN ~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

~~The information provided in this Closure Plan is submitted to address the a~~Applicable closure requirements are specified in ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900/~~), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~),~~ and 20 NMAC 4.1.500/ 40 CFR 264, Subparts G and I~~, revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the Sandia National Laboratories/New Mexico (SNL/NM) Radioactive and Mixed Waste Management Facility (RMWMF).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated ~~waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as~~ of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). The general closure information ~~referenced~~ includes closure performance standards, ~~;~~ an SNL/NM facility description, ~~;~~ amendment of the Closure Plan, ~~;~~ ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report, ~~;~~ ~~and~~ survey plat, and post-closure requirements. Unit-specific information is included in this section.

~~F.1 Unit Description~~

~~The RMWMF is located in the southeast corner of Technical Area (TA)-III. The area is bounded by an inactive landfill to the east, the TA-III boundary fence to the south, and the Environmental Restoration Project corrective action management unit to the north and west. The RMWMF RCRA-regulated waste storage and/or treatment areas include Buildings 6920, 6921, 6925 and 6926, two modular storage buildings and an outdoor waste storage area. The RCRA-regulated waste storage structures and locations within the RMWMF are shown on Figure F-1.~~

7.1 ~~F.2~~ Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage and/or treatment at any time at the RMWMF is estimated at approximately 209,550 gallons of liquids and/or solids.

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the RMWMF:

- RCRA-regulated waste handling and treatment activities involving the opening of waste containers were confined to the RMWMF RCRA-regulated ~~waste management areas (~~WMAs~~)~~. If contamination occurred, it would have been confined to those areas; and

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT G~~

~~TREATMENT PLAN FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

8.0 TREATMENT PLAN ~~FOR THE RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY~~

The information provided in this section is submitted to address the applicable requirements of ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Section 900~~ (20 NMAC 4.1.900/~~ and~~ 40 CFR Part 270, [6-14-00]~~), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.23, revised June 14, 2000,~~. ~~t~~Treatment operations for the RMWMF ~~Resource Conservation and Recovery Act (RCRA)-~~regulated wastes ~~treated at the Radioactive and Mixed Waste Management Facility (RMWMF)~~ are described in Appendix G of the ~~"Sandia National Laboratories/New Mexico~~ SNL/NM General Part B Permit ~~Renewal Request/Application, " Revision 1.0~~ (SNL/NM, ~~2002c~~2003b). The treatment technologies listed below and described in Appendix G may be used to treat RCRA-regulated wastes at the RMWMF~~, co-operated by Sandia Corporation and the U.S. Department of Energy~~:

- Chemical deactivation,
- Macroencapsulation,
- Mechanical processing,
- Stabilization, and
- Thermal deactivation.

Each type of treatment listed above will be performed on batches of 500 pounds of waste or less. Liquid wastes will be treated in batches of 60 gallons or less.

Treatment may be performed in Buildings 6920, 6921, 6925, and 6926. Each treatment process and the associated equipment meets the environmental performance standards described in Appendix G ~~(SNL/NM, 2002ca)~~ of the SNL/NM General Part B (SNL/NM, 2003b). Treatment effectiveness for each waste stream will be determined through analysis and verification as described in Appendix B ~~(SNL/NM, 2002cb)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Section 3 ~~Attachment B~~ of this ~~M~~module.

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix G (Site-Wide Treatment Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

9.0 ~~4.0~~ REFERENCES

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1," effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

National Fire Protection Association (NFPA), 2001, "Standard for Water Spray Fixed Systems for Fire Protection", NFPA 15, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, " Standard for Dry Chemical Extinguishing Systems," NFPA 17, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health.

~~NMED, see New Mexico Environment Department.~~

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~b~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 200~~2a~~3a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002c~~2003b, Appendices~~x~~ A - F~~B~~ (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

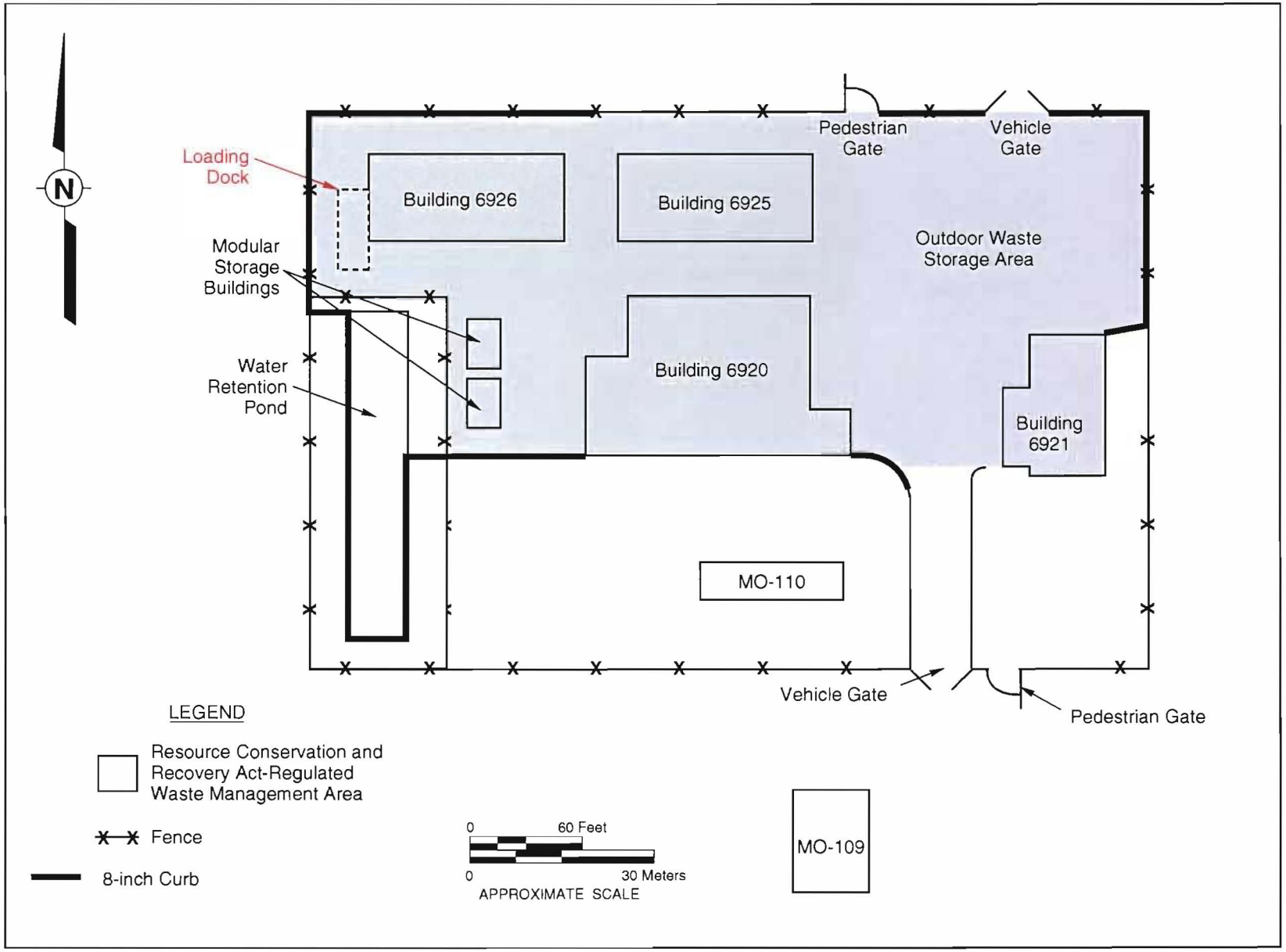


Figure 3
Radioactive and Mixed Waste Management Facility (RMWMF), Unit Layout

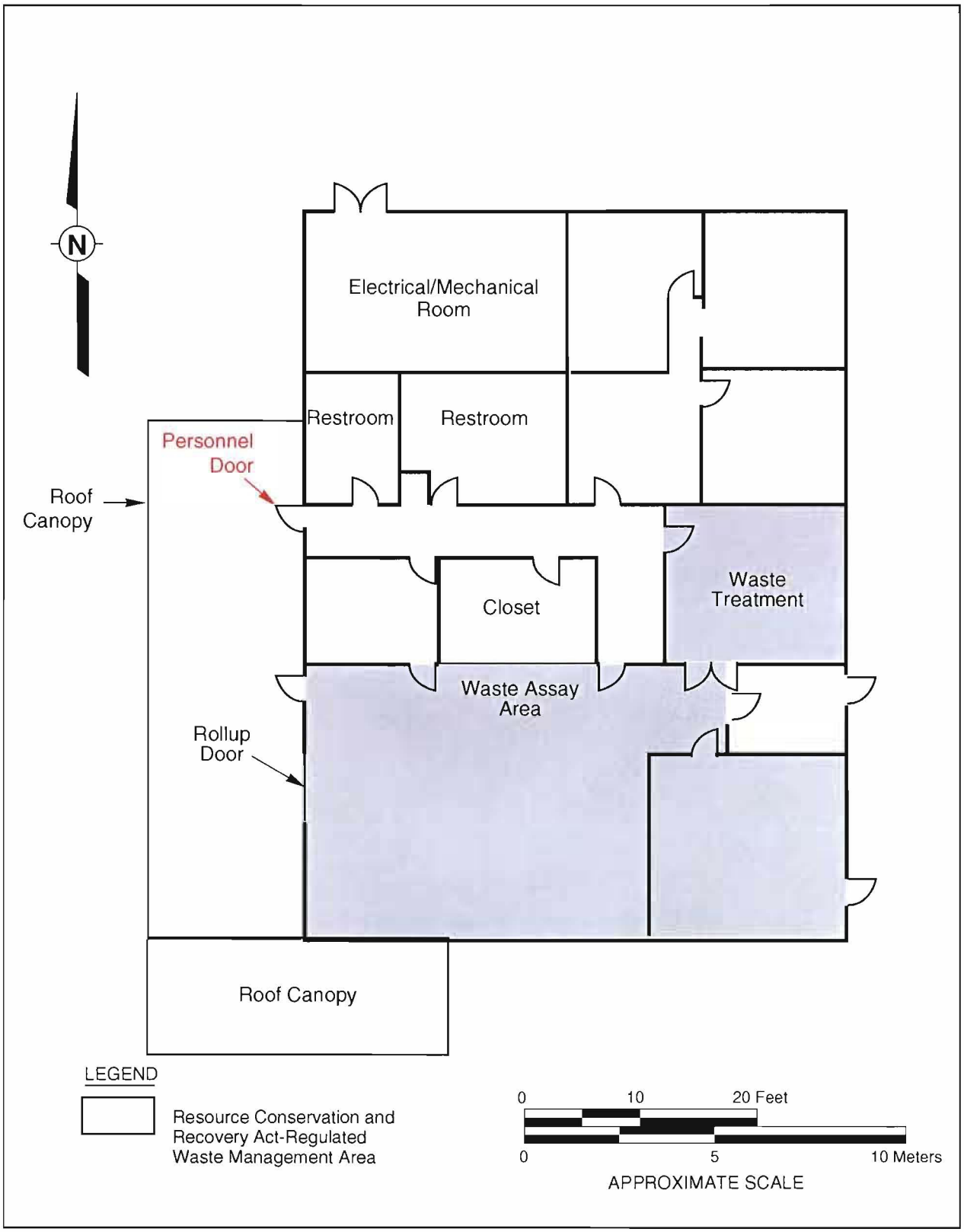


Figure 5
Radioactive and Mixed Waste Management Facility, Building 6921, Resource Conservation and Recovery Act-Regulated Waste Management Areas

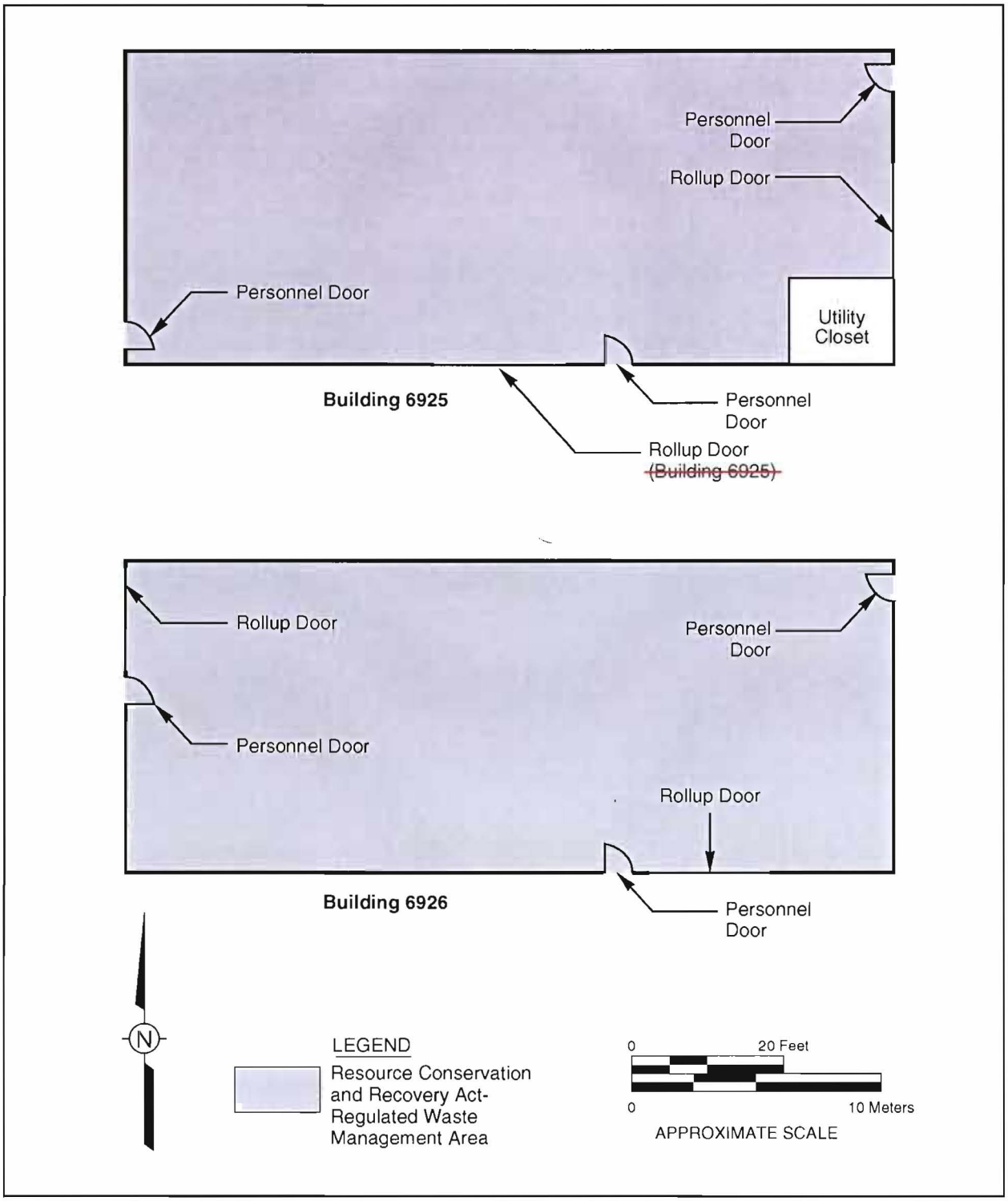


Figure 6

Radioactive and Mixed Waste Management Facility Compound, Buildings 6925 and 6926, Resource Conservation and Recovery Act-Regulated Waste Management Areas

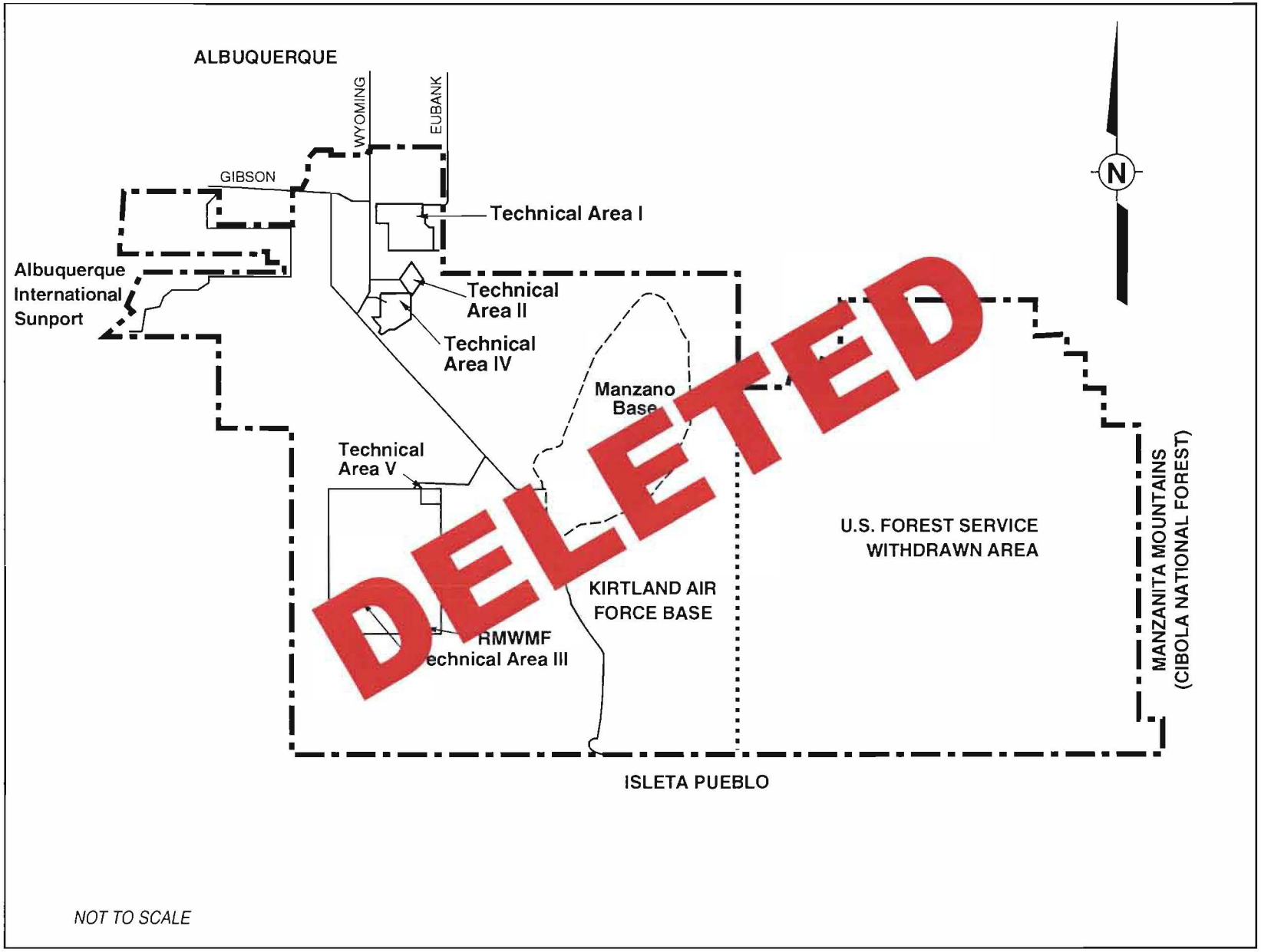


Figure A-1
Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/New Mexico

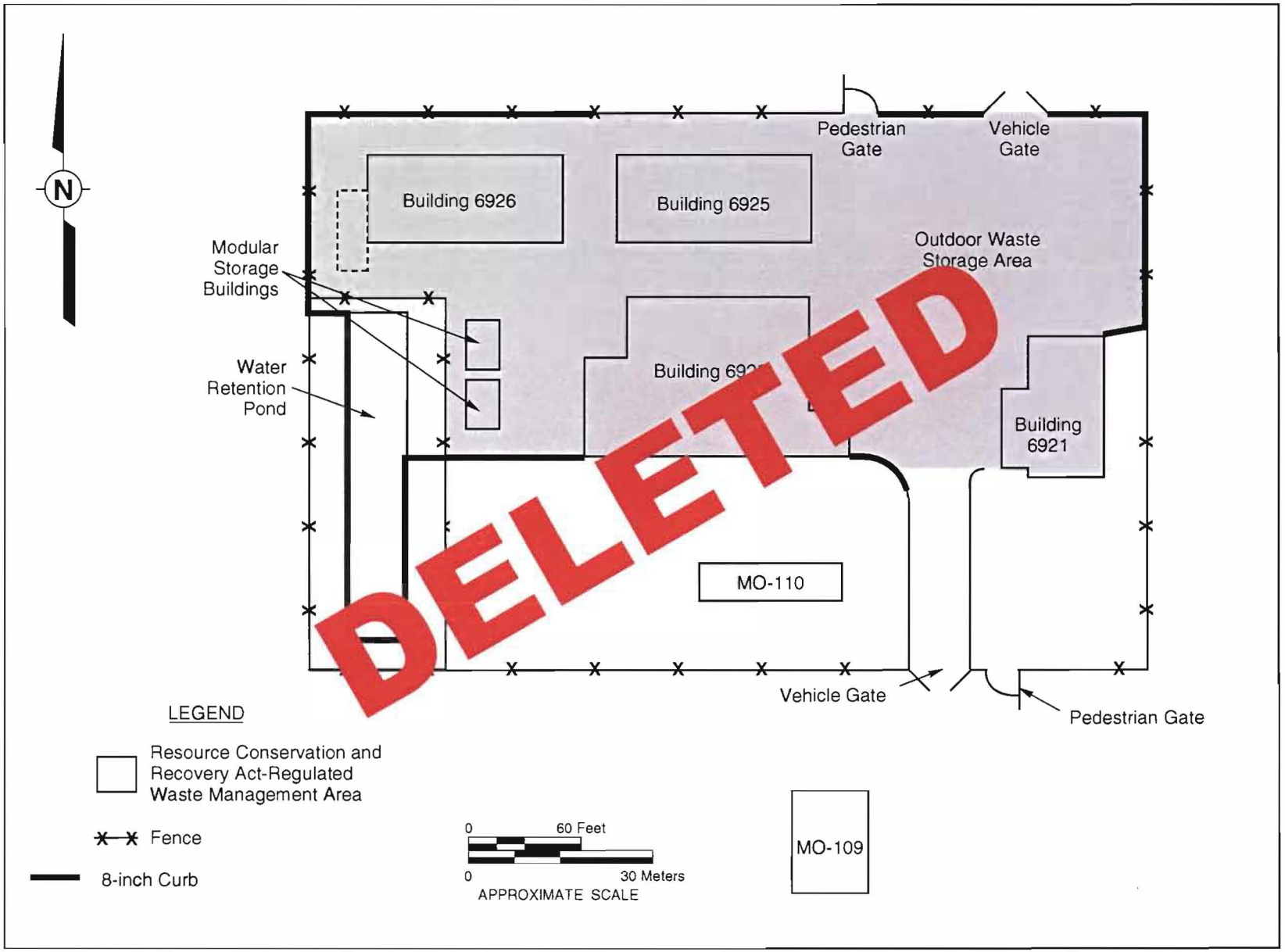


Figure A-2
Radioactive and Mixed Waste Management Facility, Layout

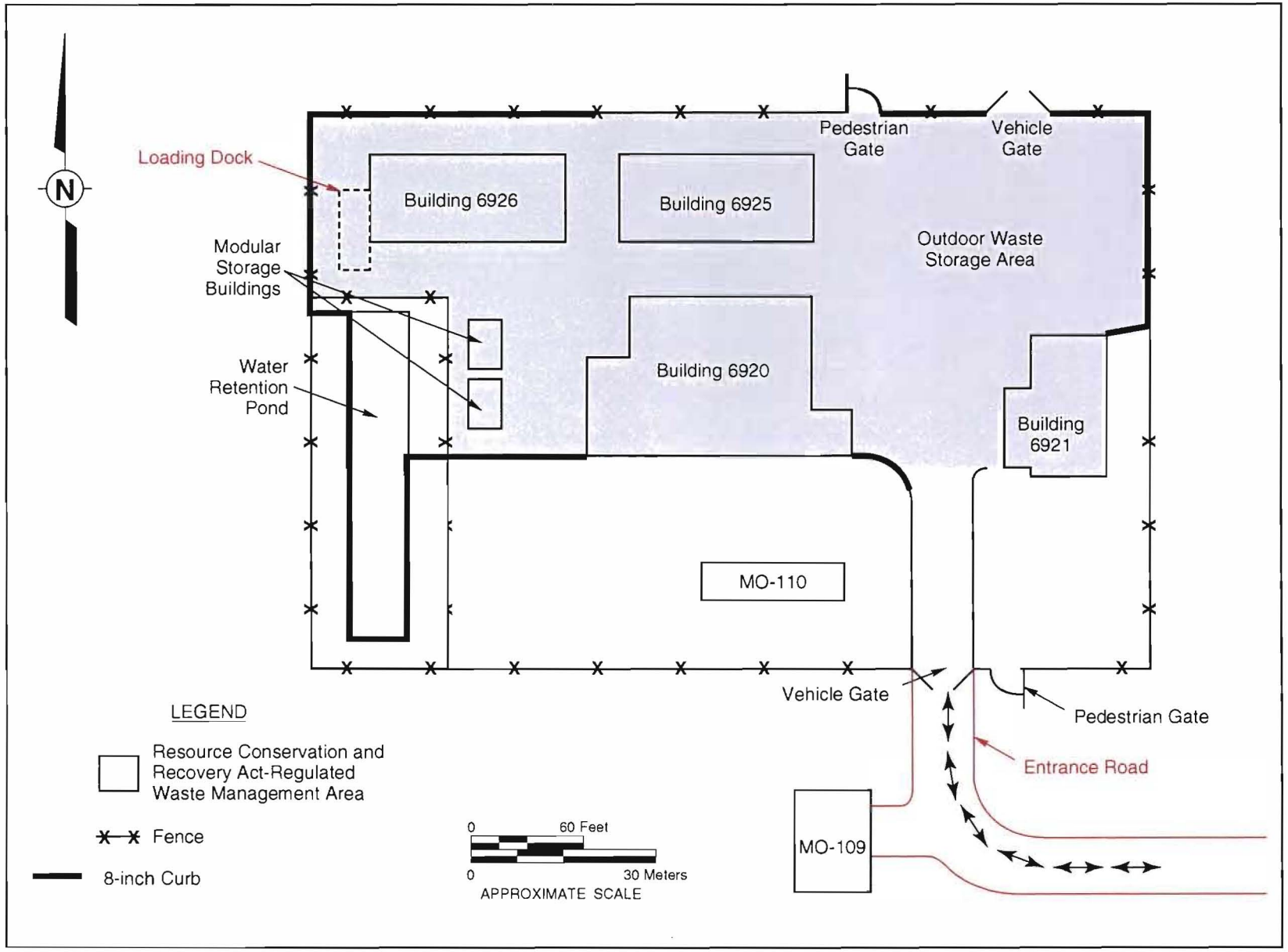


Figure ~~A-3~~ 7

Radioactive and Mixed Waste Management Facility, Traffic Route and Controls

774470.14000000 A40

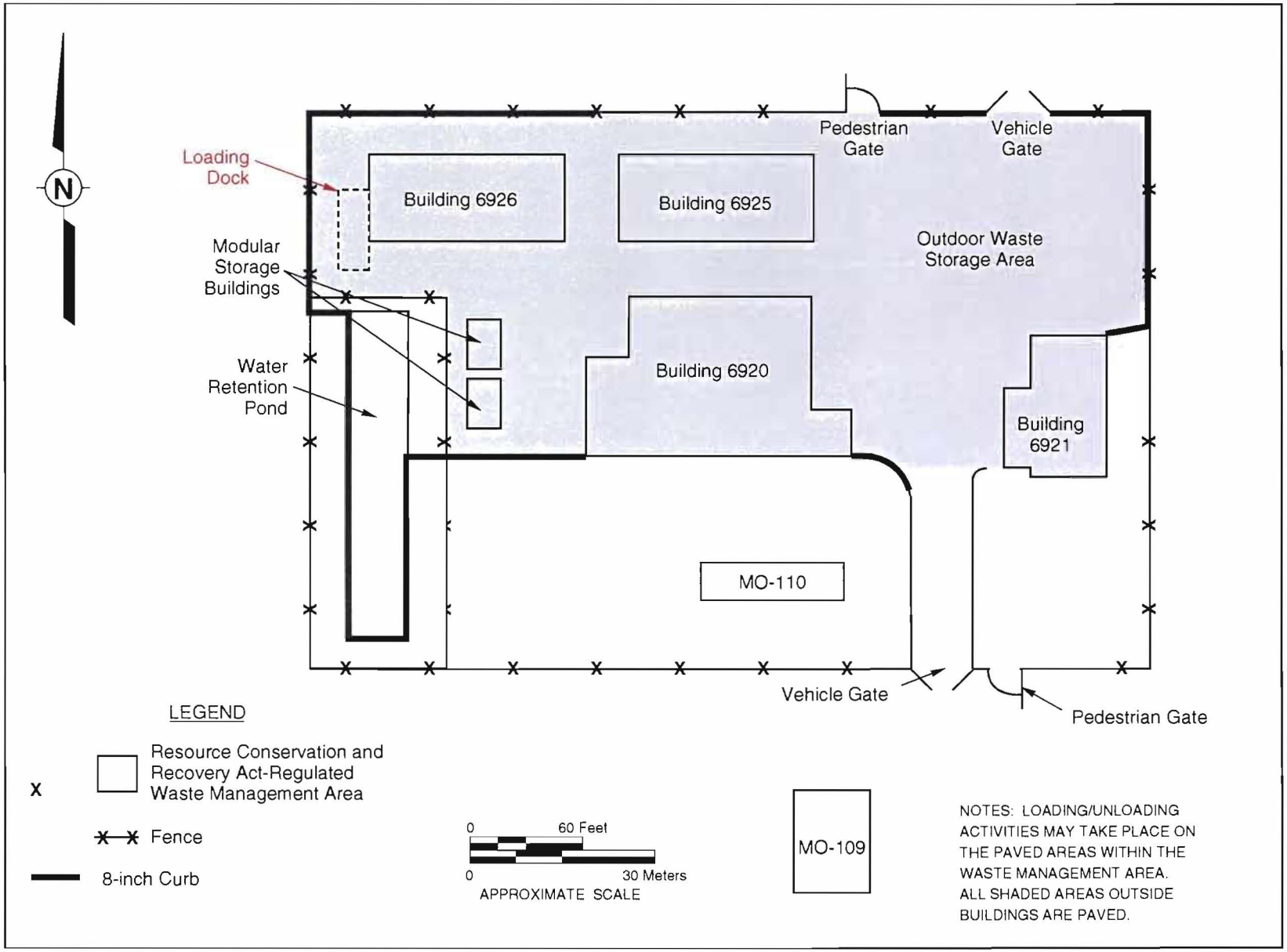


Figure ~~A-5~~ 9

Radioactive and Mixed Waste Management Facility, Access Control Features

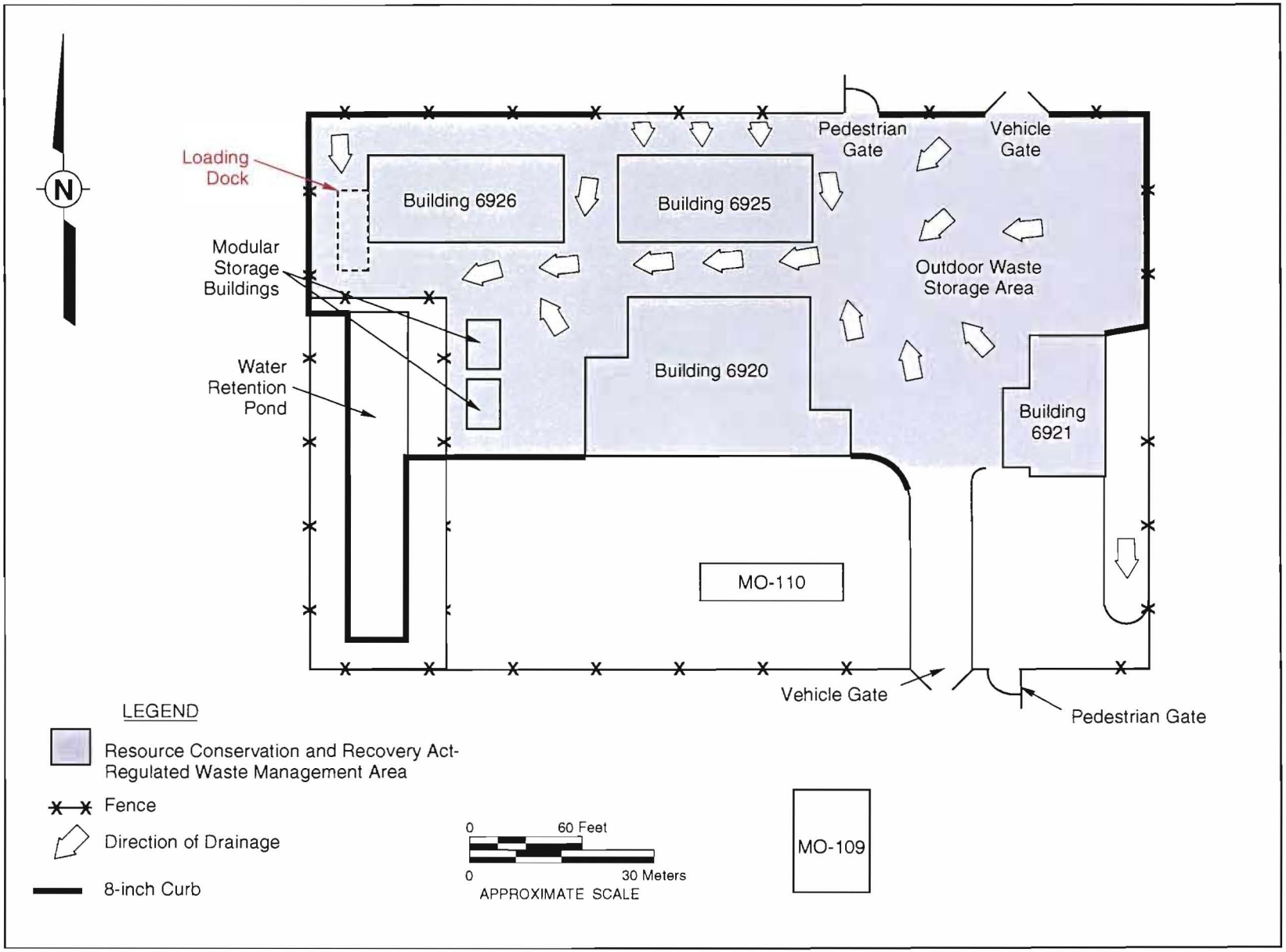


Figure ~~A-6~~ 10

Radioactive and Mixed Waste Management Facility, Drainage Control Features

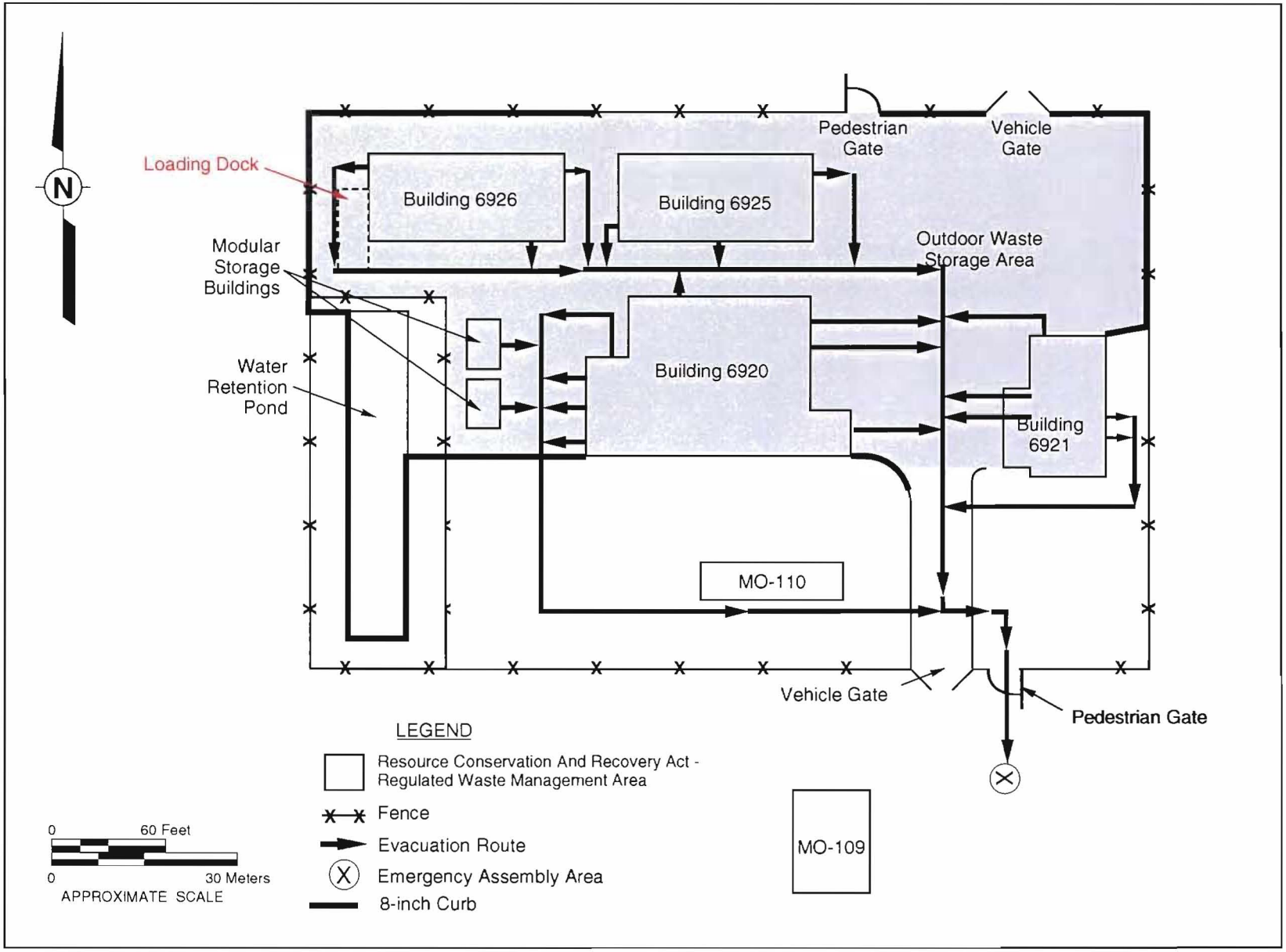


Figure ~~E-1~~ 11

Radioactive and Mixed Waste Management Facility, Evacuation Routes

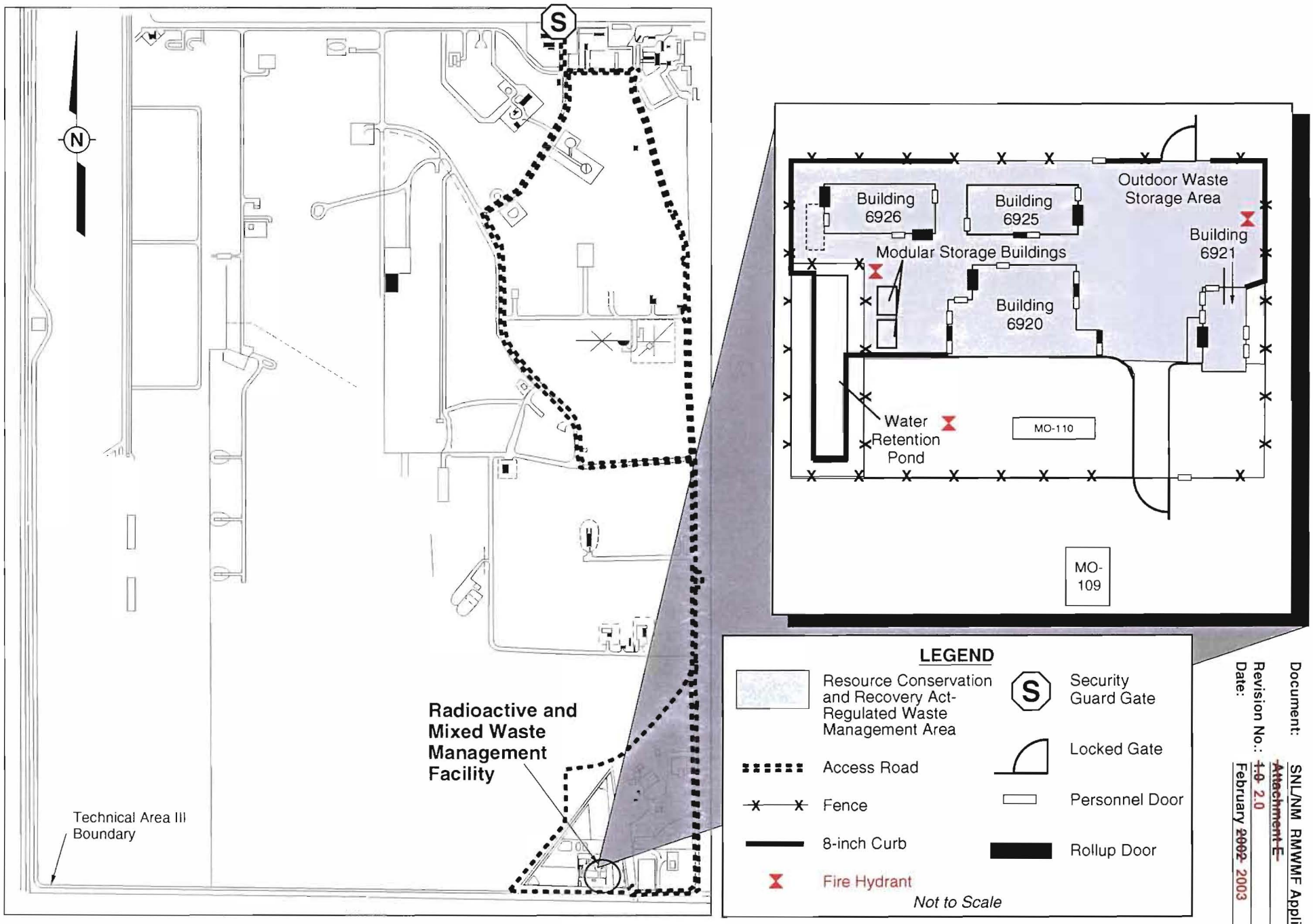


Figure ~~E-2~~ 12

Radioactive and Mixed Waste Management Facility, Emergency Response and Access Information

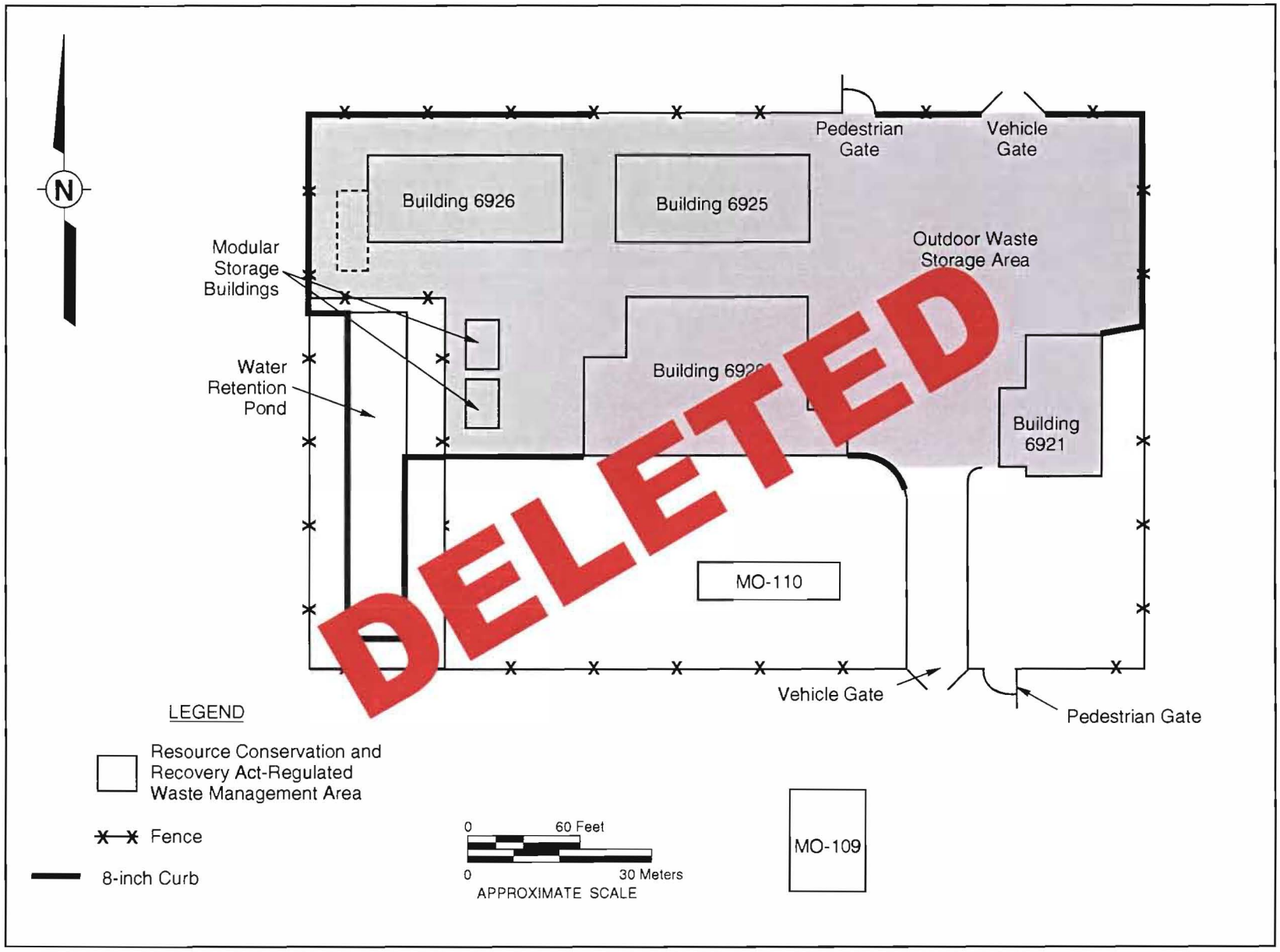


Figure F-1
Radioactive and Mixed Waste Management Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Areas

Sandia National Laboratories/New Mexico
High Bay Waste Storage Facility
Part B Permit Application

Module IV

Revision 2~~1~~.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... HBWSF-iii
LIST OF FIGURES ..... HBWSF-iv~~ii~~
~~LIST OF ATTACHMENTS ..... HBWSF-iii~~
ACRONYMS AND ABBREVIATIONS ..... HBWSF-v~~iiv~~
1.0 GENERAL UNIT OPERATIONS HBWSF-2
1.1 Designated Waste Management Areas HBWSF-2
1.2 Unit Operations HBWSF-3
1.2.1 Operation of Containment Systems HBWSF-4
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes HBWSF-4
1.2.3 Preparedness and Prevention HBWSF-5
1.2.3.1 Required Equipment HBWSF-5
1.2.3.2 Testing and Maintenance of Equipment HBWSF-5
1.2.3.3 Access to Communications or Alarm Systems HBWSF-5
1.2.4 Hazards Prevention HBWSF-6
1.2.4.1 Preventing Hazards in Unloading HBWSF-6
1.2.4.2 Preventing Runoff or Flooding HBWSF-6
1.2.4.3 Preventing Contamination of Water Supplies HBWSF-7
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages HBWSF-7
1.2.4.5 Preventing Undue Exposure HBWSF-7
1.2.4.6 Preventing Releases to the Atmosphere HBWSF-7
1.3 Container Storage Practices HBWSF-8
1.3.1 Container Types and Labeling HBWSF-8
1.3.2 Container Handling HBWSF-8
1.3.2.1 Condition of Containers HBWSF-8
1.3.2.2 Aisle Space and Storage Configuration HBWSF-8
1.3.2.3 Compatibility of Waste with Containers HBWSF-9
2.0 UNIT DESCRIPTION AND INFORMATION HBWSF-15
2.1 Security Procedures and Equipment HBWSF-16
2.1.1 Barriers and Means to Control Entry HBWSF-16
2.1.2 Warning Signs HBWSF-16
2.2 Traffic Pattern, Volume, and Controls HBWSF-17
2.2.1 Traffic Patterns HBWSF-17
2.2.2 Traffic Volumes HBWSF-17
2.2.3 Traffic Control Signals HBWSF-17
2.3 Unit Location Information HBWSF-17
2.3.1 Seismic Standard HBWSF-18
2.3.2 Floodplain Standard HBWSF-18
2.4 Topographic Maps HBWSF-18
2.5 Groundwater Monitoring HBWSF-19
3.0 WASTE ANALYSIS PLAN HBWSF-22
4.0 INSPECTION PLAN HBWSF-24
5.0 PERSONNEL TRAINING HBWSF-28
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE FOR THE HIGH BAY WASTE STORAGE FACILITY HBWSF-30

TABLE OF CONTENTS (Concluded)

7.0 CLOSURE PLAN HBWSF-38
7.1 Estimate of Maximum Waste in Storage HBWSF-38
7.2 Closure Conditions HBWSF-38
7.3 Closure Schedule HBWSF-39
8.0 TREATMENT PLAN HBWSF-42
9.0 REFERENCES HBWSF-44
~~1.0 GENERAL UNIT OPERATIONS ..... HBWSF-1~~
~~1.1 Designated Waste Management Areas ..... HBWSF-2~~
~~1.2 Unit Operations ..... HBWSF-3~~
~~1.2.1 Inspections ..... HBWSF-3~~
~~1.2.2 Containment Systems ..... HBWSF-3~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... HBWSF-3~~
~~1.2.4 Closure ..... HBWSF-3~~
~~1.2.5 Preparedness and Prevention ..... HBWSF-4~~
~~1.2.5.1 Required Equipment ..... HBWSF-4~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... HBWSF-4~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... HBWSF-4~~
~~1.2.6 Hazards Prevention ..... HBWSF-4~~
~~1.2.6.1 Preventing Hazards in Unloading ..... HBWSF-4~~
~~1.2.6.2 Preventing Runoff or Flooding ..... HBWSF-4~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... HBWSF-5~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... HBWSF-5~~
~~1.2.6.5 Preventing Undue Exposure ..... HBWSF-5~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... HBWSF-5~~
~~1.3 Container Storage Practices ..... HBWSF-6~~
~~1.3.1 Container Types and Labeling ..... HBWSF-6~~
~~1.3.2 Container Handling ..... HBWSF-6~~
~~1.4 Treatment Operations ..... HBWSF-7~~
~~2.0 OTHER FEDERAL LAWS ..... HBWSF-8~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... HBWSF-39~~
~~4.0 REFERENCES ..... HBWSF-40~~

LIST OF TABLES

Table No.	Title
1	High Bay Waste Storage Facility Fire Suppression System
2	High Bay Waste Storage Facility Inspection Criteria and Frequency
3	High Bay Waste Storage Facility Emergency Equipment and Locations
4	High Bay Waste Storage Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the High Bay Waste Storage Facility at Sandia National Laboratories/New Mexico
2	Location of the High Bay Waste Storage Facility (HBWSF) in Technical Area (TA) V
3	High Bay Waste Storage Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area
4	High Bay Waste Storage Facility, Traffic Routes and Controls
5	Topographic Map, High Bay Waste Storage Facility
6	High Bay Waste Storage Facility, Access Control Features
7	High Bay Waste Storage Facility, Drainge Control Features
8	High Bay Waste Storage Facility, Evacuation Routes
9	High Bay Waste Storage Facility, Emergency Response and Access Information

~~LIST OF ATTACHMENTS~~

~~Attachment~~	~~Title~~
~~A~~	~~Unit Description for the High Bay Waste Storage Facility~~
~~B~~	~~Waste Analysis Plan for the High Bay Waste Storage Facility~~
~~C~~	~~Inspection Plan for the High Bay Waste Storage Facility~~
~~D~~	~~Personnel Training Plan for the High Bay Waste Storage Facility~~
~~E~~	~~Contingency Plan for the High Bay Waste Storage Facility~~
~~F~~	~~Closure Plan for the High Bay Waste Storage Facility~~
~~G~~	~~Treatment Plan for the High Bay Waste Storage Facility~~

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
ft	foot/feet
HBWSF	High Bay Waste Storage Facility
HSWA	Hazardous and Solid Waste Amendments
m^3	cubic meter
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO
HIGH BAY WASTE STORAGE FACILITY
PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) High Bay Waste Storage Facility (HBWSF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~II~~–X (20 NMAC 4.1.5~~1~~00 and –.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the HBWSF. 20 NMAC 4.1.5~~1~~00 and –.900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264~~0 through 266, 268,~~ and 270 (40 CFR 264~~0–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," (SNL/NM, ~~2002b~~2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002~~a~~), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a) and Unit-specific Part B modules, including this HBWSF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, ~~2001a~~2002) and SNL/NM General Part B (SNL/NM, ~~2002b~~2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., High Bay Waste Storage Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The HBWSF occupies 5670 square feet in Building 6596 in Technical Area (TA)-V and is used for storage of RCRA-regulated wastes in containers. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HBWSF. Sandia/DOE currently operate the HBWSF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart I [6-14-00].~~ This section provides descriptions of the HBWSF waste management area (WMA) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a).

Specific information in this section includes:~~applicable to the HBWSF addressed in this permit application is provided for the following subject areas:~~

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; hazards prevention; and

- Container storage of RCRA-regulated wastes~~practices~~.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

~~The HBWSF is used for storage of RCRA-regulated wastes.~~ The location of the HBWSF at SNL/NM is shown on Figure 1. The location of the HBWSF within ~~Technical Area (~~TA~~)~~-V is shown on Figure 2. The HBWSF has one designated WMA in the main wing of Building 6596 (Figure 3). The following paragraphs provide descriptions of the storage structure, location, and capacity of the WMA.

Building 6596 is a pre-engineered metal building with a sloped-steel corrugated roof constructed on a concrete slab. Access for equipment and cargo is provided by a 20-foot (ft) wide steel rollup door at the western end of the building and a 12-ft wide steel rollup door on the southern side. Personnel may also enter or leave the HBWSF by means of hinged steel personnel doors located on the western and southern sides of the HBWSF.

The building western, southern, and northern interior walls in the WMA are constructed of galvanized sheet metal with a baked enamel finish. The eastern wall is constructed of 8-inch filled concrete block and coated with a chemical-resistant epoxy. The WMA floor is sealed with a chemical-resistant epoxy, which withstands degradation by chemical substances and resists wear from forklift traffic.

The HBWSF WMA is 40 ft by 145 ft with an eave height of 30 ft. The total storage area is approximately 4,900 square ft with a maximum storage capacity of 100,320 gallons.

Containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. ~~covered with grating.~~ These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives, solvents, and other liquids. The containers of liquids ~~are~~ (typically 5- to 30-gallon capacity) are stored on the grating. Any liquids released from the containers drain through the grating into the tub. The ~~,~~ ~~and the~~ pallets come in ~~are of~~ various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the building, and by the slope of the asphalt pavement and gravel-covered soil surface outside the building that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(4).

Building 6956 is also equipped with a system of floor trenches covered with grating. These trenches are not used to provide secondary containment.

1.2 Unit Operations

The HBWSF WMA is used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, ~~2001b~~2002).

The HBWSF is not continuously occupied. All personnel sign in on a log upon entering the Unit and sign out when they leave. Waste handling personnel work in pairs and maintain contact with each other. All personnel are trained to check that everyone has signed out and left before turning off the lights and closing and locking the doors.

General information regarding: ~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; and, hazards prevention requirements applicable to the HBWSF WMA are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, ~~2001a~~2003a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5]; 20 NMAC 4.1.500/ 40 CFR 264.15 and 264.174)~~

~~HBWSF inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 264.175[b][5]; 20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15)[a] and [b]

~~Liquids that might accumulate at the HBWSF WMA are contained within a secondary containment system that is sufficiently impervious to contain leaks or spills until the liquid is removed, as described in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002a), in accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00].~~

Liquid wastes released from individual containers will ~~typically~~ accumulate in the spill pallets. Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

The floor trenches are not used for secondary containment, and Sandia/DOE do not anticipate that liquid RCRA-regulated wastes would enter the trenches. RCRA-regulated waste liquids would only be released from containers of stored liquid wastes, and the largest single container would contain 122 gallons. The liquid would be contained in the trench, and would be handled as described above upon discovery.

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HBWSF. Unit personnel employ the practices described in Section 1.1.~~3~~2 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a). Additional HBWSF-specific features, precautions, and practices include: ~~to manage ignitable, reactive, and incompatible wastes.~~

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the Unit.
- Containers are kept closed during storage at the Unit.
- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~HBWSF closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the HBWSF.

~~1.2.5.1~~1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32 and 264.34)

General information about fire hydrants at each Unit is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant closest to the HBWSF is shown in Figure 9.

The HBWSF is equipped with an automatic fire suppression system, which is summarized below in Table 1.

Table 1
Fire Suppression System at the High Bay Waste Storage Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6956	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on the required equipment located at the HBWSF is provided in Section 6 and Table 2 ~~Attachment E~~ of this module.

~~1.2.5.2~~1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the HBWSF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 ~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about ~~on~~ the types and locations of communications or alarm systems at the HBWSF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a~~b~~)

and in Section 6 ~~Attachment E~~ of this module. Personnel at the Unit typically maintain contact with the emergency coordinator and other Radioactive and Mixed Waste Management Facility (RMWMF) personnel through 2-way radios.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the HBWSF to prevent hazards. Additional information applicable to the HBWSF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a~~b~~).

~~1.2.6.1~~1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

HBWSF personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a) to prevent hazards in unloading. Unit personnel typically perform loading and unloading activities just inside the rollup door on the south side of the building (Figure 6). The floor is level and in good condition, and there is sufficient room for operating the vehicle and equipment.

Drums and other larger containers are typically strapped together on a pallet before being loaded onto vehicles. Containers are typically transported within the Unit with drum dollies or pallet jacks.

Waste handling personnel work in pairs at the Unit, and maintain contact with one another. Because the Unit is not routinely occupied, personnel are trained to be particularly aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts.

~~1.2.6.2~~1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The land surrounding the HBWSF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas outside the TA is prevented from entering the TA by a diversion berm east of TA-V that diverts storm water to the north and south.

The floor of Building 6596 is higher than the surrounding ground, serving to direct storm water away from the building and WMA. ~~and runoff from the HBWSF are prevented from entering/leaving the WMA by the existing topography which slopes from the east downward towards the west and a diversion berm east of TA-V that diverts storm water around the TA.~~ The pavement and gravel-covered soil around the HBWSF slopes toward a storm drain that directs stormwater toward the west.

~~1.2.6.3~~1.2.4.3 *Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])*

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the HBWSF ~~personnel employ~~ will affect water supplies, as ~~the practices~~ described in Section 1.1.4~~6~~.3 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a). ~~to prevent contamination of water supplies.~~

~~1.2.6.4~~1.2.4.4 *Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). Electrical power is not required for the safe operation of the HBWSF WMA. RCRA-regulated waste management activities at the HBWSF will be suspended in response to equipment failures or power outages.

~~1.2.6.5~~1.2.4.5 *Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])*

HBWSF personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 *Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)*

HBWSF personnel employ the practices described in Section 1.1.4~~6~~.6 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a) to prevent releases to the atmosphere.

The WMA~~s~~ at the HBWSF is ~~are~~ typically used solely for the storage of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the HBWSF will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.6.6 of the SNL/NM General Part B (SNL/NM, ~~2002b~~2003a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design

capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

In addition, a modular containment system may be used when RCRA-regulated wastes require overpacking or repackaging. A modular containment system can be equipped with an air filtration system to prevent the release of particulates.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

Container storage practices applicable to the HBWSF are presented in the following sections.

1.3.1 Container Types and Labeling

HBWSF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2 Container Handling (20 NMAC 4.1 400/40 CFR 264.173)

HBWSF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

The only time RCRA-regulated waste containers are opened are when the wastes are added, sampled, or transferred to another container. These activities are only done within Building 6596.

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the HBWSF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

HBWSF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, ~~2002~~2003a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets.

Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

HBWSF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, ~~2002~~2003a).

~~1.4Treatment Operations~~

~~Sandia/DOE do not perform treatment operations requiring a permit at the HBWSF.~~

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE HIGH BAY WASTE STORAGE FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... HBWSF-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... HBWSF-A-iii~~
~~A.1 HBWSF GENERAL UNIT DESCRIPTION ..... HBWSF-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... HBWSF-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... HBWSF-A-2~~
~~A.2.2 Warning Signs ..... HBWSF-A-2~~
~~A.3 TRAFFIC PATTERN, VOLUME, AND CONTROLS ..... HBWSF-A-2~~
~~A.3.1 Traffic Patterns ..... HBWSF-A-3~~
~~A.3.2 Traffic Volumes ..... HBWSF-A-3~~
~~A.3.3 Traffic Control Signals ..... HBWSF-A-3~~
~~A.4 UNIT LOCATION INFORMATION ..... HBWSF-A-3~~
~~A.4.1 Seismic Standard ..... HBWSF-A-3~~
~~A.4.2 Floodplain Standard ..... HBWSF-A-3~~
~~A.5 TOPOGRAPHIC MAPS ..... HBWSF-A-3~~
~~A.6 GROUNDWATER MONITORING ..... HBWSF-A-5~~
~~REFERENCE ..... HBWSF-A-5~~

~~LIST OF FIGURES~~

~~Figure No.~~	~~Title~~
~~A-1~~	~~Location Map of the High Bay Waste Storage Facility at Sandia National Laboratories/New Mexico~~
~~A-2~~	~~High Bay Waste Storage Facility, Building 6596, Layout~~
~~A-3~~	~~High Bay Waste Storage Facility, Traffic Routes and Controls~~
~~A-4~~	~~Topographic Map, High Bay Waste Storage Facility~~
~~A-5~~	~~High Bay Waste Storage Facility, Access Control Features~~
~~A-6~~	~~High Bay Waste Storage Facility, Drainge Control Features~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part *XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~HBWSF~~	~~High Bay Waste Storage Facility~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION~~-~~ AND INFORMATION ~~FOR THE HIGH BAY WASTE STORAGE FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (~~20 NMAC 4.1.100–.900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with a few limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~).~~ The following subject areas are addressed in this section~~attachment~~:

- ~~A general description of the High Bay Waste Storage Facility (HBWSF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]);

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b).

~~A.1 HBWSF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The HBWSF is located approximately 400 feet (ft) southeast of the entrance to Technical Area (TA)-V (Figure A-1). The HBWSF is enclosed inside Building 6596 located in TA-V. A Unit layout for the HBWSF is provided on Figure A-2.~~

~~The HBWSF RCRA-regulated waste management area (WMA) addressed in this permit application is the west side of the main wing of Building 6596.~~

~~The HBWSF waste management practice addressed in this module is container storage of RCRA-regulated waste.~~

~~Descriptions of the HBWSF WMA and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the HBWSF.

2.1.1 ~~A.2.1~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the HBWSF fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~

~~In addition,~~ ~~T~~the doors to the WMA in ~~of~~ Building 6596 are kept locked except when personnel are present. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the SNL/NM Technical Area gates during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the HBWSF ~~WMAs (Figure A-2)~~ in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The HBWSF is located inside TA-V (Figures 1 and 2). TA-V is enclosed by ~~two,~~ 8-ft-high standard security chain-link fences topped with barbed wire. Regular entries into and exits from TA-V are through Building 6577, the Perimeter Access Building, or through the adjoining vehicle gate. TA-V access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-V.

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1 .500/40 CFR 264.14[c])

The entrances to the HBWSF (on the western and southern sides of Building 6596) are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. Signs on the northern side are not necessary because employees or visitors do not approach nor is there access to the HBWSF from that direction. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to the HBWSF WMA.

2.2 ~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the HBWSF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P~~O~~ Street, and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-V turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming entrance gate.

Waste transport vehicles travel along a 2-lane asphalt-paved drive to enter TA-V from the two-lane paved road as shown on Figures A-4 and A-6 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Within TA-V, waste is transported on asphalt- or concrete-paved surfaces (Figure 4~~A-3~~).

2.2.2 ~~A.3.2~~ Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P~~O~~ Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically travel to the HBWSF per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the HBWSF.

2.2.3 ~~A.3.3~~ Traffic Control Signals

Within TA-V, there are no traffic control signals or signs. Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Vehicle presence within TA-V is limited to waste transport vehicles and other work vehicles. Therefore, signals or signs are not necessary to control traffic within TA-V.

2.3 ~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMA at the HBWSF is not located within 3,000 feet of any faults with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11] [iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMA at the HBWSF is not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 ~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi]) [6-14-00]. The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).~~;~~

- Surface waters, including intermittent streams, near the HBWSF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).~~;~~

- Surrounding land uses are shown on Figures A-2~~9~~ and A-8~~10~~ in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]).~~;~~ The area surrounding the HBWSF is occupied by other Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2~~8~~ in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).~~;~~

- Legal boundaries of SNL/NM (including the HBWSF) are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).~~;~~

- Access control features at the HBWSF (e.g., fences, gates) are shown on Figures 5 and 6~~A-5~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).~~;~~

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the HBWSF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).~~;~~

- The location of the HBWSF and associated WMA structures, ~~and~~ loading and unloading areas, roads, and sanitary sewers are shown on Figures 5 and 6~~A-5~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).~~;~~

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figures 5 and 7~~A-6~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).~~; and~~

- The location of the HBWSF WMA is shown on Figure~~s A-1,~~ 5~~A-2, and A-4~~ of this module ~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the HBWSF. As provided in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to ~~the New Mexico Environment Department~~ NMED at these scales and contour intervals due to the size of the HBWSF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 ~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The HBWSF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the HBWSF likely to affect groundwater quality during normal operations or during unusual events.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories, New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure A-4~~
~~[To Be Provided]~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE HIGH BAY WASTE STORAGE FACILITY~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)/ , adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(2) (~~40 CFR 270.14[b][2]~~)~~; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; ~~and,~~ and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," ~~revised June 14, 2000~~ [6-14-00], waste analysis requirements applicable to all ~~Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management~~ Uunits, including the HBWSF~~High Bay Waste Storage Facility~~, are addressed in Appendix B ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

4.0 INSPECTION PLAN~~FOR THE HIGH BAY WASTE STORAGE FACILITY~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management units, including the High Bay Waste Storage Facility (HBWSF), are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~
20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as" Appendix C of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). Unit personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, which includes the inspection criteria and frequency.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) is maintained at the RMWMF. ~~and i~~Inspection records for the current calendar year are maintained at the HBWSF. Inspection records for previous calendar years are maintained at the RMWMF~~adioactive and Mixed Waste Management Facility~~ or the SNL/NM Records Center.

Table 2
High Bay Waste Storage Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, accessible, quantities per inventory, and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

Training requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) {~~40 CFR 270.14[b][12]~~}~~, and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training.~~,~~" ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the High Bay Waste Storage Facility (HBWSF), are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~ The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the HBWSF.

HBWSF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

All job descriptions identified in Appendix D, Table D-2 are applicable at the HBWSF.

Training records for HBWSF personnel are maintained at the Radioactive and Mixed Waste Management Facility at SNL/NM.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE FOR THE HIGH BAY WASTE STORAGE FACILITY

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide contingency plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA] Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002a) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental HBWSF-specific information is included in this section, in Figures 8 and 9, and in Tables 3 and 4 of this module.

The ~~High Bay Waste Storage Facility (~~HBWSF~~)~~ is the western portion of the main wing of Building 6596 in ~~Technical Area (~~TA~~)~~ -V at SNL/NM and is used for storage of ~~to store~~ RCRA-regulated wastes. Building 6596 is a pre-engineered metal building with a 30-foot eave height, constructed on a concrete pad. It has approximately 4,900 square feet of space used for storage of RCRA-regulated wastes. The building western, southern, and northern interior walls in the WMA are constructed of galvanized sheet metal with a baked enamel finish. The eastern wall is constructed of 8-inch filled concrete masonry units.

~~The RCRA-regulated waste management area (WMA) at the HBWSF is the west side of the main wing of Building 6596.~~ RCRA-regulated wastes bearing the U.S. EPA ~~Environmental Protection Agency~~ Hazardous Waste Numbers listed in the ~~"Sandia National Laboratories/New Mexico~~ General Part A (SNL/NM, 2002) ~~Permit Renewal Request/Application" (SNL/NM, 2002b)~~ may be stored at the HBWSF. ~~WMA.~~ Within the HBWSF, waste is segregated based on compatibility groups.

During an emergency, Unit personnel will evacuate the Unit as described in Section E.5.2 of the Site-wide Contingency Plan. In addition, Unit personnel may choose to implement a coordinated evacuation of all of TA-V. To notify all TA-V personnel, Unit personnel would activate the TA-V alarm by activating any fire alarm pull station.

During an emergency, Sandia security officers provide unimpeded access to the facility for authorized personnel ~~is provided by SNL/NM Security officers~~ as directed by the IC. Security officers also provide additional emergency assistance as required by the IC. Personnel who are authorized to enter TA-V in case of emergencies are members of the SNL/NM Emergency Response Organization, including medical personnel, the KAFB fire department, and Air Force security police.

Figure 8~~E-1~~ presents evacuation routes for the HBWSF. Figure 9~~E-2~~ presents emergency response and access information ~~necessary to access~~ for the HBWSF. Table 3~~E-1~~ lists the emergency equipment typically available at the HBWSF. Table 4~~E-2~~ lists the emergency coordinators for the HBWSF.

Table 3~~E-1~~
High Bay Waste Storage Facility
Emergency Equipment and Locations

Building 6596 High Bay

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~	~~In storage area behind north wall of high bay~~ ~~By personnel door in center of south wall of high bay~~
	Eyewash Station/Shower	On ~~the~~ south wall of high bay near southwest corner
	Absorbents	• In storage area behind north wall of high bay • By personnel door in south wall of high bay
	Miscellaneous PPE (protective suits, goggles, gloves)	• In storage area behind north wall of high bay • By personnel door in south wall of high ~~n~~bay
Internal Communication and Alarm System	Voice c~~C~~ommand~~s~~	
	Portable 2-way radio	Operating personnel typically carry radios
	~~Pull Stations~~	~~Pull stations located:~~ ~~By personnel door in southwest corner of high bay~~
	~~Fire Alarms~~	~~By personnel door in center of south wall of high bay~~
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in southwest corner of high bay • By personnel door in south wall of high bay
	Audible fire alarm	By personnel door in south wall of high bay
External Communication System	Mobile telephone or portable radio	Taken to the High Bay Waste Storage Facility by personnel
Fire Extinguishers	Portable (A-B-C)	• By personnel door in southwest corner of high bay • In storage area behind north wall of high-bay • By personnel door in ~~center of~~ south wall of high bay
	~~Portable (A-B-C)(D)~~	~~By personnel door in southeast corner of high bay~~
	Portable (A-B-C)(D)	By personnel door in southeast corner of high bay
Fire Suppression	~~Water to Extinguish Fires~~ Automatic wet-pipe sprinkler system with heat-actuated sprinklers	Coverage ~~Sprinklers located~~ throughout the building.~~;~~ ~~hydrant~~
	Water supplied by fire hydrant	One hydrant, location shown in Figure X

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 4~~E-2~~
High Bay Waste Storage Facility,
Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary:	Jeff Jarry Sandia National Laboratories P. O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate:	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
~~Second Alternate~~	~~Gloria Chavez~~ ~~Sandia National Laboratories~~ ~~P.O. Box 5800~~ ~~Albuquerque, NM 87185~~	~~(505) 845-8737 (office)~~ ~~(505) 540-4038 (pager)~~	~~(505) 281-4074~~
~~Third~~ Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of these personnel are routinely available at the Radioactive and Mixed Waste Management Facility during operating hours (7:00 am to 5:30 pm, Monday through Thursday) and can be contacted by radio or telephone during those hours.

The emergency coordinators are informed of planned work activities at the beginning of each work day; this includes activities at Units that are not routinely staffed (such as the HBWSF).

Current copies of the Site-Wide Contingency Plan and this ~~Unit-specific~~ supplemental information ~~Contingency Plan and the Site-wide Contingency Plan (SNL/NM, 2002a)~~ are maintained at the Radioactive and Mixed Waste Management Facility, in the TA-V emergency control room, and at the SNL/NM Emergency Operations Center.

~~REFERENCES~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

TABLE OF CONTENTS

~~LIST OF FIGURES ..... HBWSF-F-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... HBWSF-F-iii~~
~~F.1 UNIT DESCRIPTION ..... HBWSF-F-1~~
~~F.2 ESTIMATE OF MAXIMUM WASTE IN STORAGE ..... HBWSF-F-1~~
~~F.3 CLOSURE CONDITIONS ..... HBWSF-F-1~~
~~REFERENCE ..... HBWSF-F-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1 High Bay Waste Storage Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~HBWSF~~	~~High Bay Waste Storage Facility~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

7.0 CLOSURE PLAN ~~FOR THE HIGH BAY WASTE STORAGE FACILITY~~

~~The information provided in this Closure Plan is submitted to address the a~~Applicable closure requirements are specified in ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900)~~/, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~)~~, and 20 NMAC 4.1.500/ 40 CFR 264, Subparts G and I, ~~revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the Sandia National Laboratories/New Mexico (SNL/NM) High Bay Waste Storage Facility (HBWSF).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated ~~waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002)~~ of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b). The general closure information ~~referenced~~ includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

~~F.1 Unit Description~~

~~The HBWSF is located approximately 400 feet southeast of the entrance to Technical Area V. The HBWSF is the western section of the main wing of Building 6596. The HBWSF is used for container storage of RCRA-regulated wastes. The HBWSF RCRA-regulated waste management area (WMA) is shown on Figure F-1.~~

7.1 ~~F.2~~ Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the HBWSF is estimated at 100,320 gallons of liquids and/or solids.

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the HBWSF:

- RCRA-regulated waste handling activities involving the opening of waste containers were confined to the interior of the HBWSF WMA. If contamination occurred, it would have been confined to that area; and

- The interior walls and floors of the WMA were maintained to retain their integrity by following established maintenance and inspection procedures, and breaches of protective coatings did not occur.

7.3 Closure Schedule

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure F-1. High Bay Waste Storage Facility, Waste Management Areas~~

~~ATTACHMENT G~~

~~TREATMENT PLAN FOR THE HIGH BAY WASTE STORAGE FACILITY~~

8.0 TREATMENT PLAN ~~FOR THE HIGH BAY WASTE STORAGE FACILITY~~

Sandia ~~Corporation and the~~ /DOE~~U.S. Department of Energy~~ do not perform treatment of ~~Resource Conservation and Recovery Act~~RCRA-regulated wastes requiring a permit at the ~~High Bay Waste Storage Facility~~HBWSF.

~~5.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SWMU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The HBWSF is not a SWMU identified in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1 (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

~~6.0~~ 9.0 REFERENCES

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/ New Mexico Hazardous Waste Management Facility Operating Permit Number 5890110518-1," effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

~~NMED, see New Mexico Environment Department.~~

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~a~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002b~~2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002c~~2003b, ~~Appendix B~~ Appendices A–F ~~(Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in~~ in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

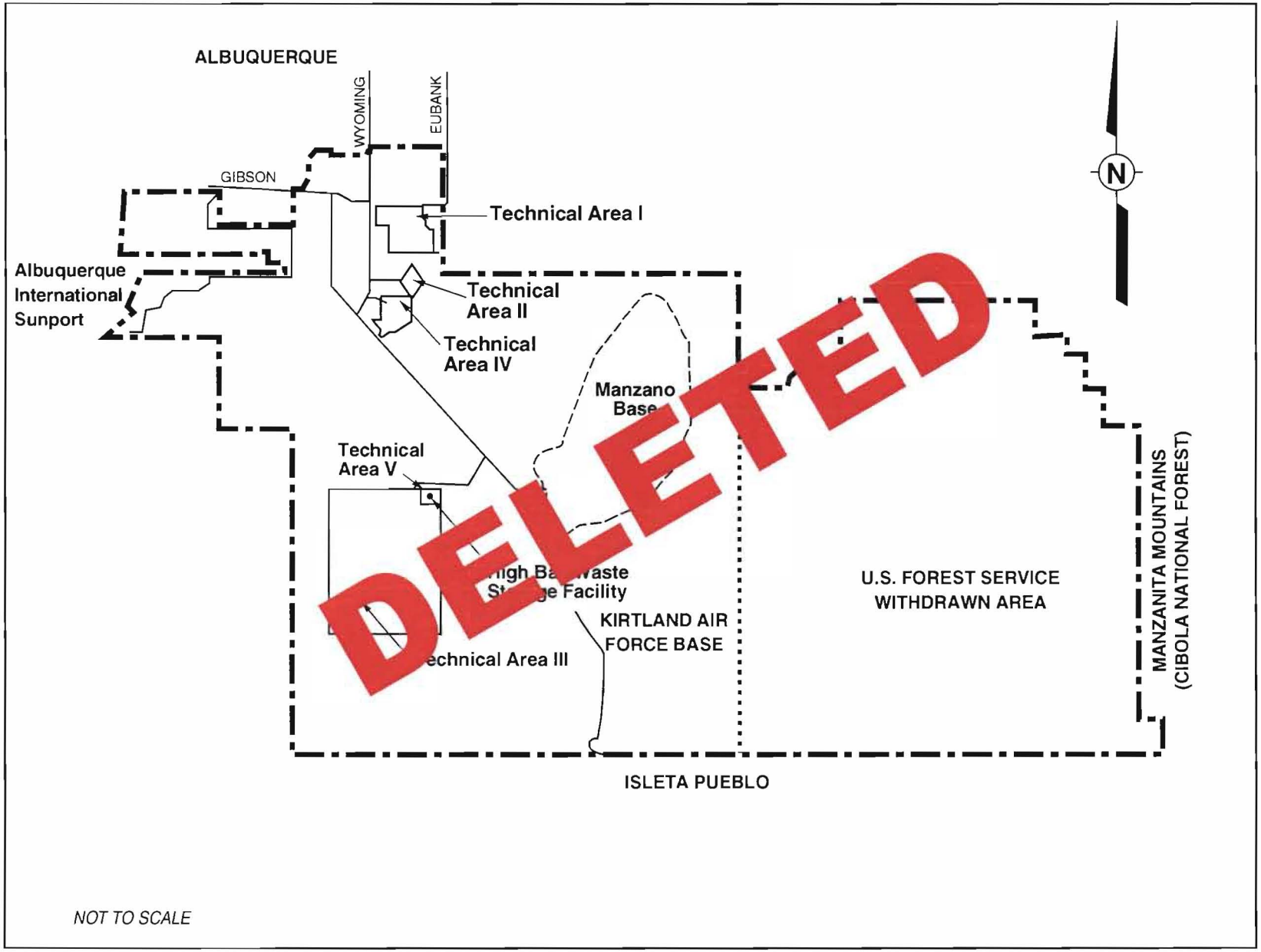


Figure A-1
Location Map of the High Bay Waste Storage Facility at Sandia National Laboratories/New Mexico

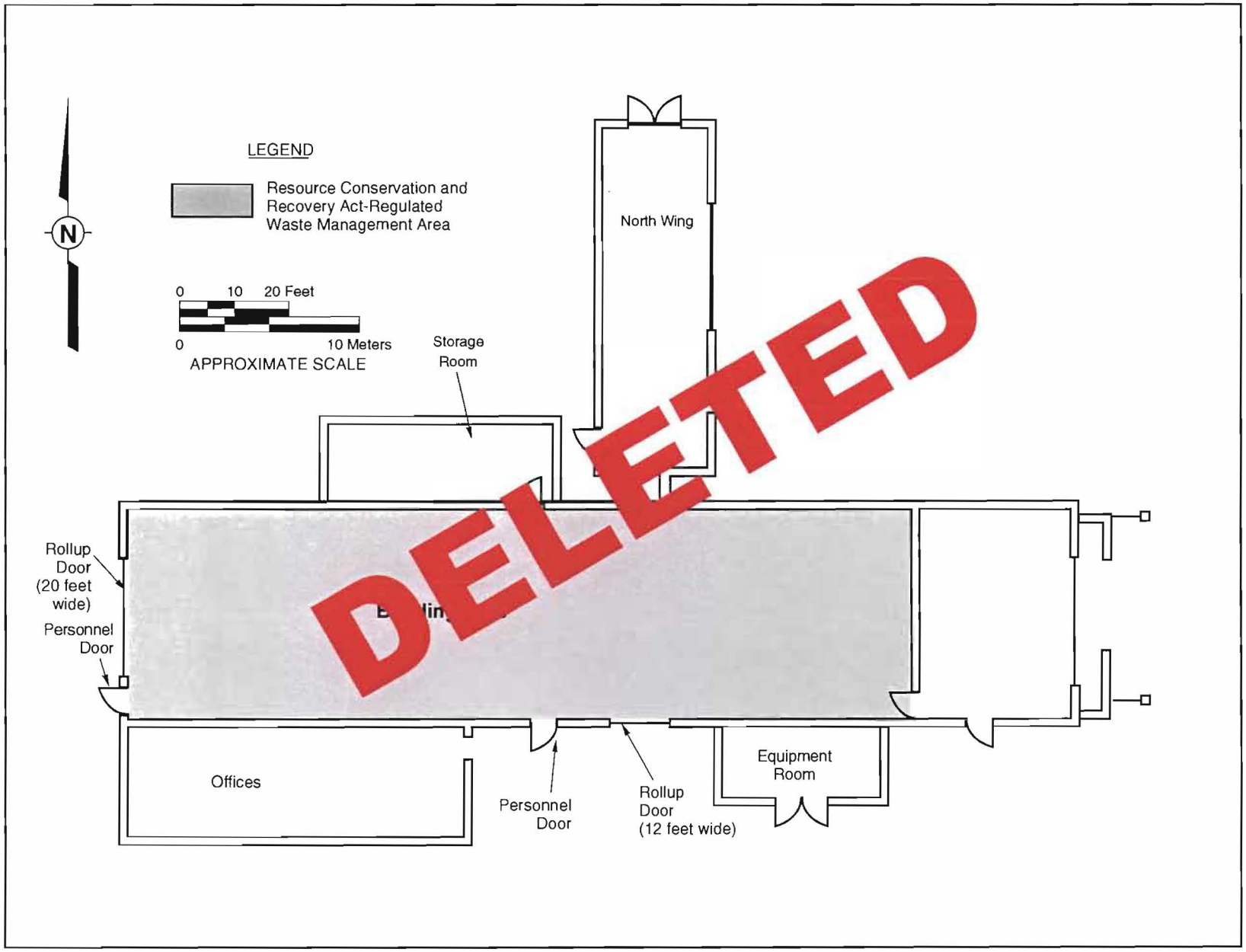


Figure A-2
High Bay Waste Storage Facility, Building 6596, Layout

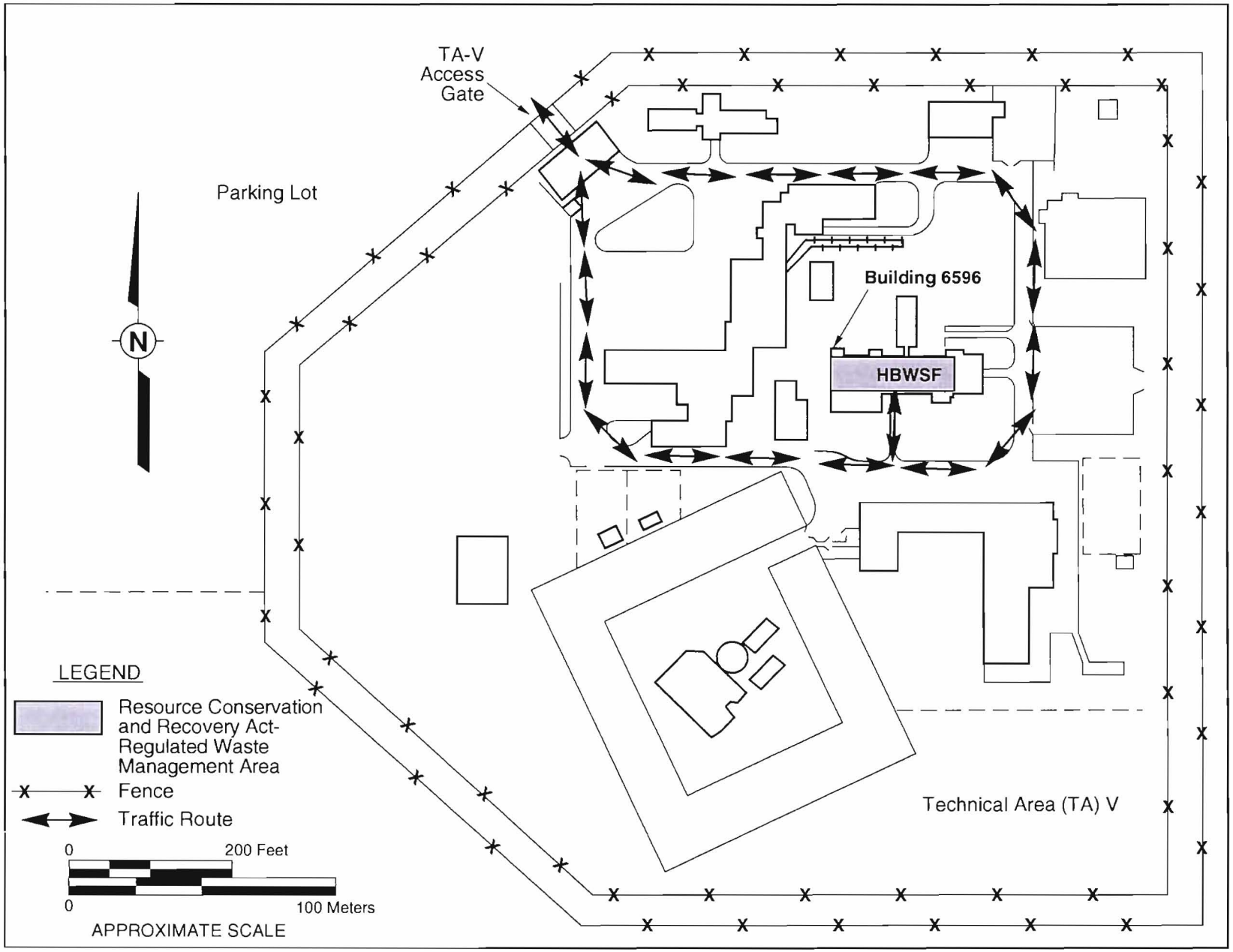


Figure ~~A-3~~ 4

High Bay Waste Storage Facility, Traffic Routes and Controls

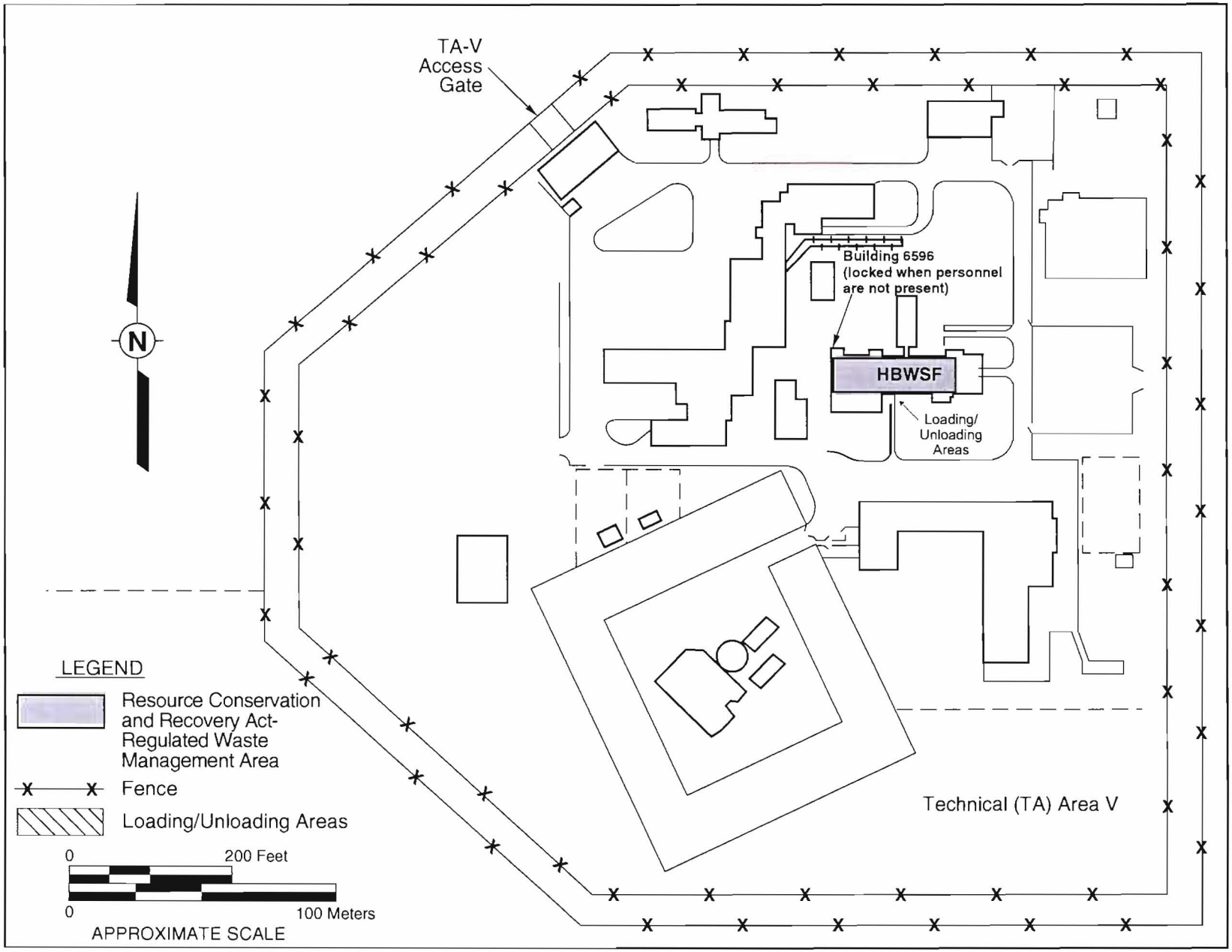


Figure ~~A-5~~ 6
High Bay Waste Storage Facility, Access Control Features

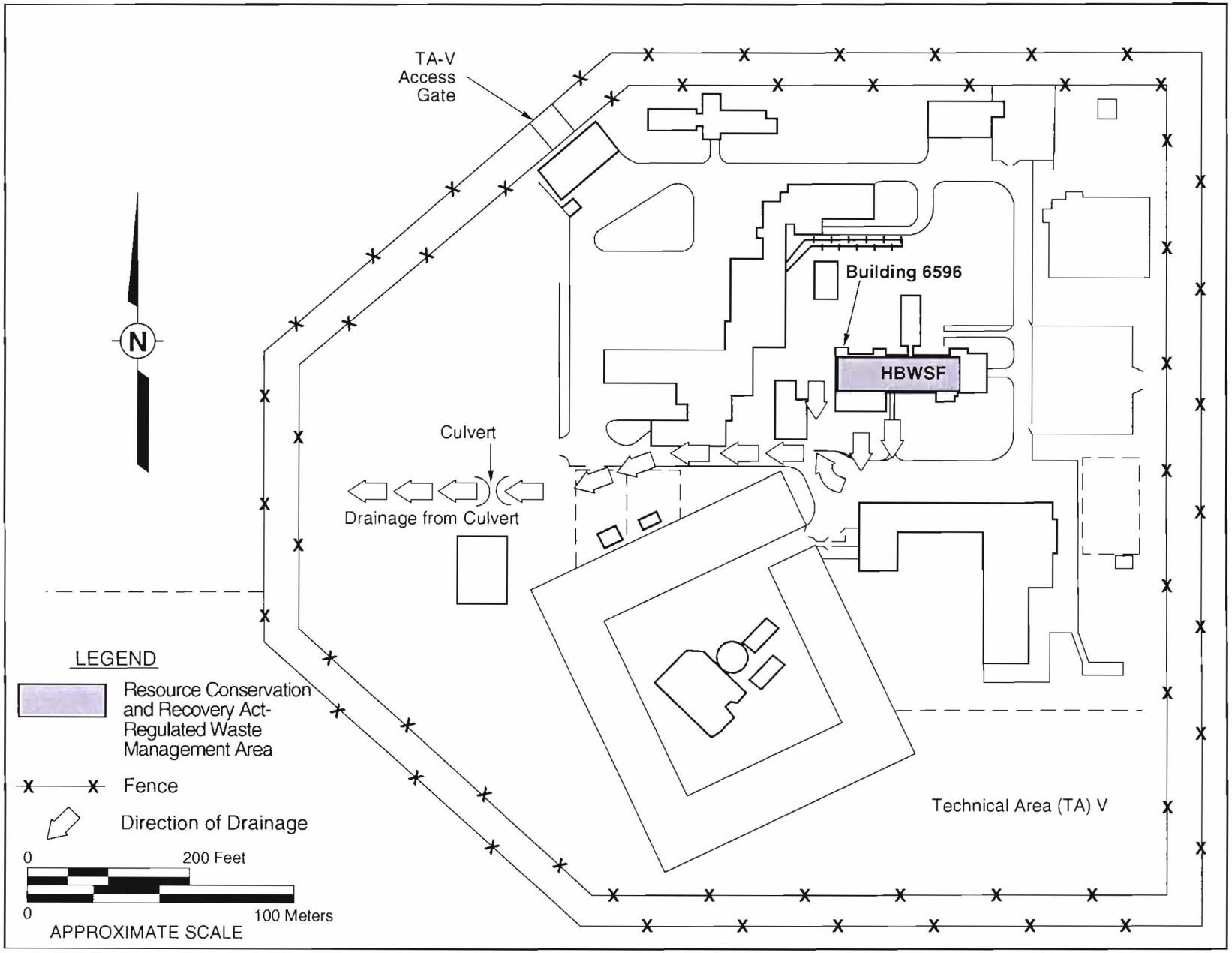


Figure ~~A-6~~ 7
High Bay Waste Storage Facility, Drainage Control Features

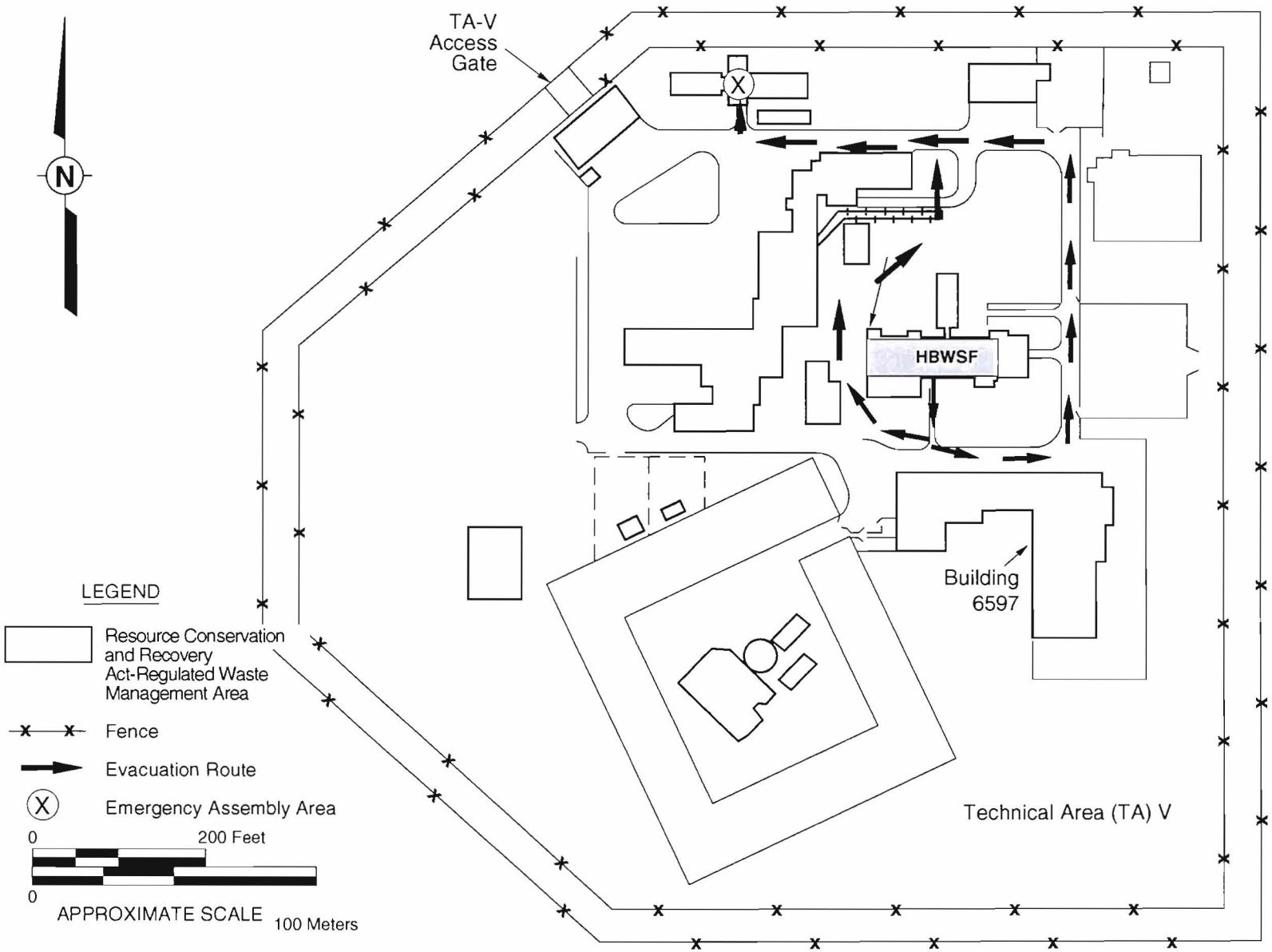


Figure ~~E-1~~ 8

High Bay Waste Storage Facility, Evacuation Routes

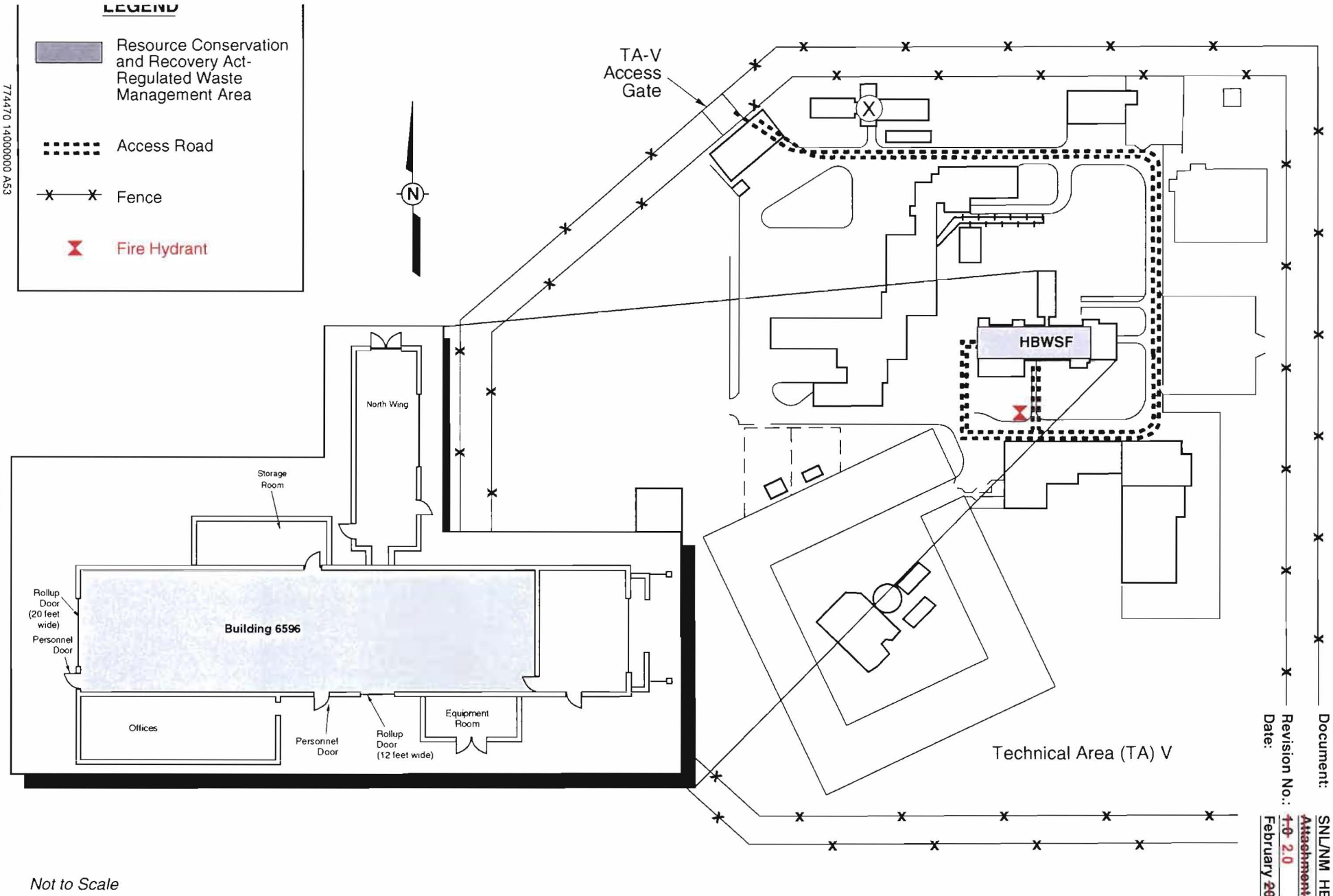


Figure ~~E-2~~ 9
High Bay Waste Storage Facility, Emergency Response and Access Information

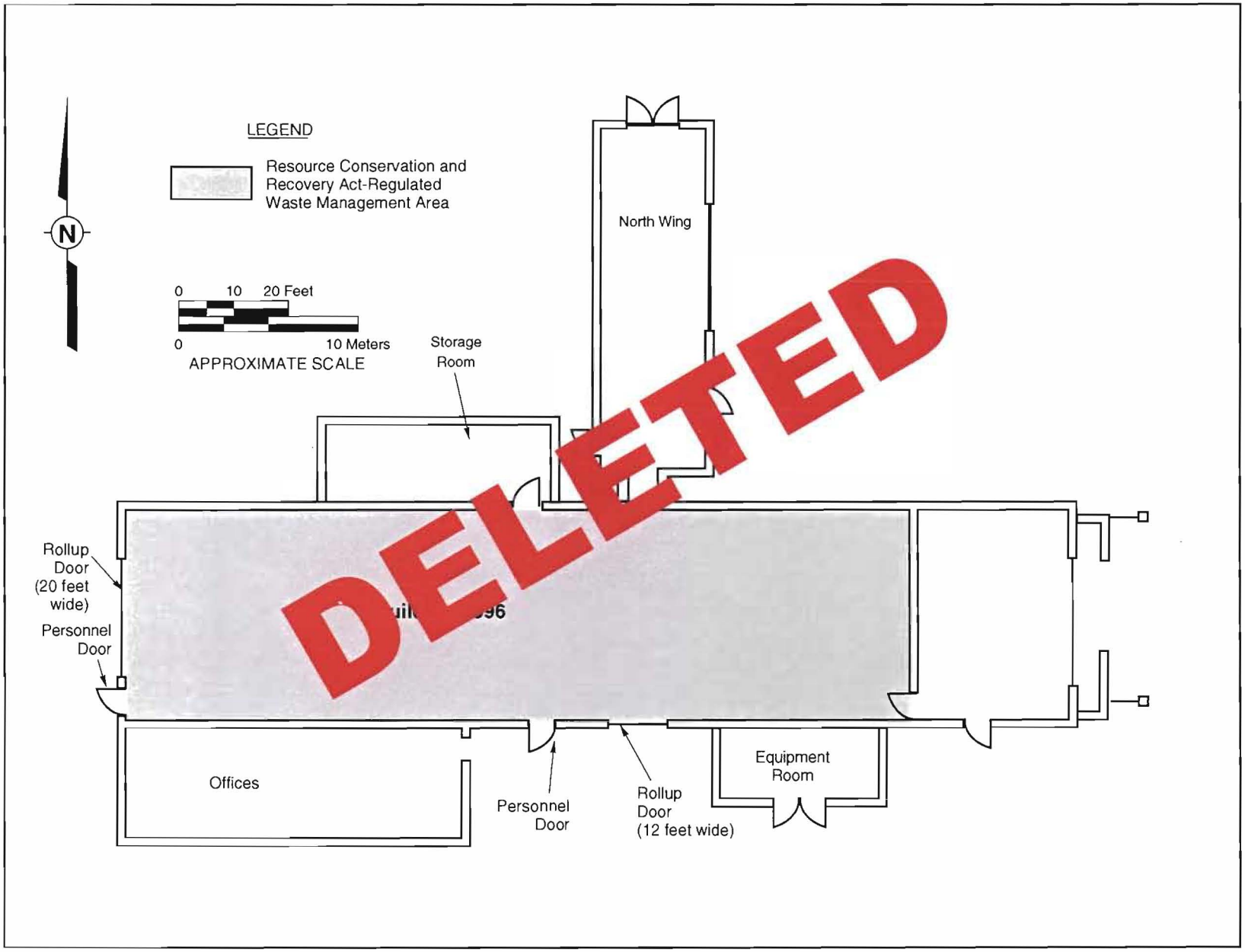


Figure F-1
High Bay Waste Storage Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area

Sandia National Laboratories/New Mexico
Auxiliary Hot Cell Facility
Part B Permit Application

Module V

Revision 2~~1~~.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... AHCF-iii
LIST OF FIGURES ..... AHCF-ivii
~~LIST OF ATTACHMENTS ..... AHCF-iii~~
ACRONYMS AND ABBREVIATIONS ..... AHCF-viiv
1.0 GENERAL UNIT OPERATIONS AHCF-1
1.1 Designated Waste Management Areas AHCF-2
1.1.1 Hot Cell AHCF-2
1.1.2 Work Area AHCF-3
1.1.3 Fume Hood AHCF-3
1.1.4 Storage Silos AHCF-3
1.1.5 Container Storage AHCF-3
1.2 Unit Operations AHCF-4
1.2.1 Operation of Containment Systems AHCF-4
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes AHCF-5
1.2.3 Preparedness and Prevention AHCF-6
1.2.3.1 Required Equipment AHCF-6
1.2.3.2 Testing and Maintenance of Equipment AHCF-6
1.2.3.3 Access to Communications or Alarm Systems AHCF-7
1.2.4 Hazards Prevention AHCF-7
1.2.4.1 Preventing Hazards in Unloading AHCF-7
1.2.4.2 Preventing Runoff or Flooding AHCF-7
1.2.4.3 Preventing Contamination of Water Supplies AHCF-8
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages AHCF-8
1.2.4.5 Preventing Undue Exposure AHCF-8
1.2.4.6 Preventing Releases to the Atmosphere AHCF-8
1.3 Container Storage Practices AHCF-9
1.3.1 Container Types and Labeling AHCF-9
1.3.2 Container Handling AHCF-9
1.3.2.1 Condition of Containers AHCF-10
1.3.2.3 Compatibility of Waste with Containers AHCF-10
1.4 Treatment Operations AHCF-10
2.0 UNIT DESCRIPTION AND INFORMATION AHCF-16
2.1 Security Procedures and Equipment AHCF-17
2.1.1 Barriers and Means to Control Entry AHCF-17
2.1.2 Warning Signs AHCF-17
2.2 Traffic Pattern, Volume, and Controls AHCF-18
2.2.1 Traffic Patterns AHCF-18
2.2.2 Traffic Volumes AHCF-18
2.2.3 Traffic Control Signals AHCF-18
2.3 Unit Location Information AHCF-18
2.3.1 Seismic Standard AHCF-19
2.3.2 Floodplain Standard AHCF-19
2.4 Topographic Maps AHCF-19
2.5 Groundwater Monitoring AHCF-20

TABLE OF CONTENTS (Concluded)

3.0 WASTE ANALYSIS PLAN AHCF-23
4.0 INSPECTION PLAN AHCF-25
5.0 PERSONNEL TRAINING AHCF-29
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE AHCF-31
7.0 CLOSURE PLAN AHCF-39
7.1 Estimate of Maximum Waste in Storage AHCF-39
7.2 Closure Conditions AHCF-39
7.3 Closure Schedule AHCF-40
8.0 TREATMENT PLAN AHCF-43
9.0 REFERENCES AHCF-45
~~1.0 GENERAL UNIT OPERATIONS ..... AHCF-1~~
~~1.1 Designated Waste Management Areas ..... AHCF-2~~
~~1.1.1 Hot Cell ..... AHCF-2~~
~~1.1.2 Work Area ..... AHCF-2~~
~~1.1.3 Fume Hood ..... AHCF-3~~
~~1.1.4 Storage Silos ..... AHCF-3~~
~~1.1.5 Container Storage ..... AHCF-3~~
~~1.2 Unit Operations ..... AHCF-3~~
~~1.2.1 Inspections ..... AHCF-4~~
~~1.2.2 Containment Systems ..... AHCF-4~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... AHCF-4~~
~~1.2.4 Closure ..... AHCF-4~~
~~1.2.5 Preparedness and Prevention ..... AHCF-4~~
~~1.2.5.1 Required Equipment ..... AHCF-5~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... AHCF-5~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... AHCF-5~~
~~1.2.6 Hazards Prevention ..... AHCF-5~~
~~1.2.6.1 Preventing Hazards in Unloading ..... AHCF-5~~
~~1.2.6.2 Preventing Runoff or Flooding ..... AHCF-5~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... AHCF-6~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... AHCF-6~~
~~1.2.6.5 Preventing Undue Exposure ..... AHCF-6~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... AHCF-6~~
~~1.3 Container Storage Practices ..... AHCF-7~~
~~1.3.1 Container Types and Labeling ..... AHCF-7~~
~~1.3.2 Container Handling ..... AHCF-7~~
~~1.3.2.1 Condition of Containers ..... AHCF-8~~
~~1.3.2.2 Aisle Space and Storage Configuration ..... AHCF-8~~
~~1.3.2.3 Compatibility of Waste with Containers ..... AHCF-8~~
~~1.4 Treatment Operations ..... AHCF-8~~
~~2.0 OTHER FEDERAL LAWS ..... AHCF-i~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... AHCF-36~~
~~4.0 REFERENCES ..... AHCF-37~~

LIST OF TABLES

Table No.	Title
1	Fire Suppression System at the Auxiliary Hot Cell Facility
2	Auxiliary Hot Cell Facility Inspection Criteria and Frequency
3	Auxiliary Hot Cell Facility, Emergency Equipment and Locations
4	Auxiliary Hot Cell Facility, Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Auxiliary Hot Cell Facility at Sandia National Laboratories/ New Mexico
2	Location of the Auxiliary Hot Cell Facility (AHCF) in Technical Area (TA) V
3	Auxiliary Hot Cell Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas
4	Auxiliary Hot Cell Facility, Traffic Routes and Controls
5	Topographic Map, Auxiliary Hot Cell Facility
6	Auxiliary Hot Cell Facility, Access Control Features
7	Auxiliary Hot Cell Facility, Drainage Control Features
8	Auxiliary Hot Cell Facility, Evacuation Routes
9	Auxiliary Hot Cell Facility, Emergency Response and Access Information
10	Auxiliary Hot Cell Facility, Emergency Response and Access Information (Detail)

~~LIST OF ATTACHMENTS~~

~~**Attachments**~~

~~A Unit Description for the Auxiliary Hot Cell Facility~~

~~B Waste Analysis Plan for the Auxiliary Hot Cell Facility~~

~~C Inspection Plan for the Auxiliary Hot Cell Facility~~

~~D Personnel Training Plan for the Auxiliary Hot Cell Facility~~

~~E Contingency Plan for the Auxiliary Hot Cell Facility~~

~~F Closure Plan for the Auxiliary Hot Cell Facility~~

~~G Treatment Plan for the Auxiliary Hot Cell Facility~~

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
AHCF	Auxiliary Hot Cell Facility
DOE	U.S. Department of Energy
ft	foot/feet
HEPA	high-efficiency particulate air
HSWA	Hazardous and Solid Waste Amendments
ID	inner diameter
in.	inch(es)
m^3	cubic meter
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	technical area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO AUXILIARY HOT CELL FACILITY PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Auxiliary Hot Cell Facility (AHCF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~–IX (20 NMAC 4.1.5~~1~~00 and –.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage and treatment operations at the AHCF. 20 NMAC 4.1.5~~1~~00 and –.900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264~~0 through 266, 268,~~ and 270 (40 CFR 264~~0–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, ~~2002b~~2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 200~~2~~3a) and Unit-specific Part B modules, including this AHCF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 200~~2~~3a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., AHCF). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The AHCF occupies 5578 square feet in Building 6597 in Technical Area (TA)-V Operations include storage of RCRA-regulated wastes in containers and treating the wastes as needed to render them more suitable for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the AHCF. Sandia/DOE currently operate the AHCF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by New Mexico Environment Department (NMED) (May 2002) and the Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00],~~

~~and 20 NMAC 4.1.500/40 CFR 264, Subpart I [6-14-00].~~ This section provides general descriptions of the AHCF waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a).

Specific information in this section includes: ~~applicable to the AHCF addressed in this permit application is provided for the following subject areas:~~

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; hazards prevention;
- Container storage practices; and
- Treatment practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

~~The AHCF, located in the High Bay of Building 6597 at SNL/NM, will be used for storage and/or treatment of RCRA-regulated wastes.~~ The location of the AHCF at SNL/NM is shown on Figure 1. The location of the AHCF within ~~Technical Area (~~TA~~)~~-V is shown on Figure 2. The AHCF will have five designated WMAs: the hot cell; the work area around the hot cell; the fume hood; the storage silos; and container storage in the High Bay (Figure 3). The following sections provide descriptions of the storage structure, location, and capacity of each WMA.

1.1.1 Hot Cell

Outside overall dimensions of the hot cell are 16 feet (ft), 8 inches (in.) square and 16 ft, 2 in. high. Inside space dimensions are 100 square feet with a height of 13-ft, 10-in. An 18-in. thick concrete foundation mat supports the hot cell. The hot cell walls are constructed of inner and outer, precast, 8-in. reinforced concrete panels. Threaded rods maintain the separation between inner and outer hot cell walls. The inner and outer wall panels are separated by a 24-in. space filled with common construction-grade sand. The roof is constructed of two 8-in. thick reinforced concrete panels with 12 in. of sand between them. Each individual roof panel is designed to structurally support one 5,000-pound point load. Each roof section supports a roof port and roof plug.

1.1.2 Work Area

The work area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. ~~Waste management activities in the work area include storage and treatment and may require the use of a temporary room.~~

From time to time, a temporary tent-like room may be erected in the work area north of the hot cell and east of the permanent shield wall to accommodate large packages. If the package must be handled remotely, the temporary room will be built directly against the permanent shield wall to allow the use of the manipulators. Each time the temporary room is erected, package-specific considerations will determine details of the design; however, basic construction will consist of polyvinyl chloride or metal framing, clear or translucent plastic roof and walls, and plastic doors. The temporary room will operate at a slight negative pressure. A motorized control damper will be opened to allow airflow to the temporary room.

1.1.3 Fume Hood

The 6-ft-wide walk-in fume hood, located north and east of the hot cell, can accommodate two 55-gallon drums placed side by side.

1.1.4 Storage Silos

Four 10-in. inside diameter (ID), 15-ft deep floor silos and two 30-in. ID, 15-ft deep floor silos are located in the work area north of the hot cell and east of the permanent shield wall (Figure 3). These silos have removable locking-type shield plugs. The tops of the silos are raised slightly above the general floor level to reduce the possibility for the entry of water into the silo.

Two additional storage silos are located within the hot cell. Each silo is 10-in. ID~~inside diameter (ID)~~. One silo is 15-ft deep and the other is 11-ft, 8-in. deep.

The maximum waste storage capacity of the silos is 1,456 gallons.

1.1.5 Container Storage (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/ 40 CFR, Subpart I)

Containers of RCRA-regulated waste will be stored in the High Bay. Containers holding RCRA-regulated liquid wastes will be stored on portable spill pallets and pans covered with grating. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives and other liquids. The containers of liquids ~~will~~(~~-~~typically ~~be~~ 5- to 30-gallon capacity) will be stored on the grating. Any liquids released from the containers will drain through the grating into the tub. The ~~, and the~~ pallets come in ~~will be of~~ various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the building, and by the slope of the asphalt pavement and gravel-covered soil surface outside the building that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(4).

The High Bay is also equipped with a system of floor trenches covered with grating. These trenches are not used to provide secondary containment.

The waste storage capacity is 2,200 gallons.

1.2 Unit Operations

The AHCF WMAs will be used to store and/or treat any of the wastes bearing U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002). RCRA-regulated waste constituents are typically solvents, and toxic metals. The RCRA-regulated wastes managed at the AHCF will be primarily those whose characteristics (e.g., exceeding size or weight limitations at other Units, requiring remote~~-~~ handling for personnel protection) make that waste unsuitable for management at the SNL/NM Radioactive and Mixed Waste Management Facility.

General information regarding: ~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; and, hazards prevention requirements are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5]; 20 NMAC 4.1.500/40 CFR 264.15 and 264.174)~~

~~AHCF inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 270.14[b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175~~[a] and~~ [b][5])

~~Liquids that might accumulate at the AHCF WMAs are contained within a secondary containment system that is sufficiently impervious to contain leaks or spills until the liquid is removed, as described in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002a), in accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00].~~

Liquid wastes released from individual containers will accumulate in the spill pallets. Unit personnel will begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel will attempt to identify the source if possible. Accumulated liquid

containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

The floor trenches are not used for secondary containment, and Sandia/DOE do not anticipate that liquid RCRA-regulated wastes would enter the trenches. RCRA-regulated waste liquids would only be released from containers of stored liquid wastes, and the largest single container would contain 122 gallons. The liquid would be contained in the trench, and would be handled as described above upon discovery.

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/ 40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the AHCF. Unit personnel employ the practices described in Section 1.1.~~3~~2 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a). Additional AHCF-specific features, precautions, and practices include: ~~to manage ignitable reactive, and incompatible wastes.~~

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the Unit.

- Forklifts are not used for waste movement near treatment operations involving ignitable or reactive wastes to minimize potential sources of ignition while containers are or may be open.

- Wastes are mixed together on a very limited basis during the treatment and repackaging operations at the Unit. Ignitable and reactive wastes are treated or mixed on a case-by-case basis. Unit personnel plan each such operation carefully to identify the hazards and potential consequences as described in Section B.5. Personnel use waste characterization data and/or published chemical information (e.g., NIOSH Pocket Guide to Chemical Hazards or other chemical or engineering handbook) for each waste in the planning process. Personnel then conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. Treatment operations are described in Appendix G of the General Part B (SNL/NM, 2003b).

- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~AHCF closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the AHCF.

~~1.2.5.1~~1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrants closest to the AHCF are shown in Figure 11.

The high bay of Building 6597 is equipped with an automatic fire suppression system; summarized below:

Table 1
Fire Suppression System at the Auxiliary Hot Cell Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6597	13	Storage	Automatic sprinkler, wet pipe	GB/FS

[a] ~~s~~See references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on other ~~the~~ required equipment located at the AHCF is provided in ~~Attachment E~~ Section 6 and Table 3 of this module.

~~1.2.5.2~~1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the AHCF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 *Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)*

Information about ~~on~~ the types and locations of communications or alarm systems at the AHCF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6~~Attachment E~~ of this module.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the AHCF to prevent hazards. Additional information applicable to the AHCF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

~~1.2.6.1~~1.2.4.1 *Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])*

AHCF personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent hazards in unloading. Unit personnel will typically perform loading and unloading activities just outside the rollup door on the north side of the WMA (Figure 6). The pavement is level and in good condition, and there is sufficient room for operating vehicles and equipment.

Drums and other larger containers will typically be strapped together on a pallet before being loaded onto vehicles. Containers will typically be transported within the Unit with drum dollies or pallet jacks.

~~1.2.6.2~~1.2.4.2 *Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])*

The land surrounding the AHCF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas outside the TA is prevented from entering the TA by a diversion berm east of TA-V that diverts storm water to the north and south.

The floor of the high bay in Building 6597is slightly higher than the surrounding ground, serving to direct storm water away from the building. ~~and runoff from the AHCF are prevented from entering/leaving the WMAs by the existing topography which slopes from the east downward toward the west and a diversion berm east of TA-V that diverts storm water around the TA.~~ The asphalt and concrete pavement around the AHCF slopes toward a storm drain that directs stormwater toward the west.

~~1.2.6.3~~1.2.4.3 *Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])*

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the AHCF will affect water supplies, as ~~personnel employ the practices~~ described in Section 1.1.4~~6~~.3 of the SNL/NM General Part B (SNL/NM, 2002~~3~~a~~a~~). ~~to prevent contamination of water supplies.~~

~~1.2.6.4~~1.2.4.4 *Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a).

The AHCF is equipped with a minimum of 90 minutes of general emergency lighting along the paths of egress. With respect to RCRA-regulated waste management operations, backup power to the chain hoist will be required only during the short periods that the bridge crane is being used for an in-air transfer of RCRA-regulated waste. The bridge crane locks in place and is inoperable during a power outage. Portable generators can provide backup power to the chain hoist whenever the bridge crane is in use. The chain hoist, and tethers if necessary, will be used to lower any suspended packages to a safe configuration until power is restored. No other AHCF systems require redundant power supplies.

~~1.2.6.5~~1.2.4.5 *Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])*

AHCF personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 *Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)*

AHCF personnel employ the practices described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent releases to the atmosphere.

Sandia/DOE do not routinely manage hazardous wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service at the AHCF will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f) [6-14-00]. The equipment use will be noted in the AHCF operating log.

The WMAs at the AHCF are typically used solely for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC

4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the AHCF will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/ 40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a~~a~~).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposed described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

The exhaust system for Building 6597 (Zone 2) is separate from that of the Hot Cell, the Fume Hood, and the Temporary Room (Zone 1). The Zone 1 AHCF ventilation system is a stand-alone system. It does not tie into Building 6597 mechanical systems.

The ventilation system shown on Figure 3 serves the Zone 1 components. The system is designed to accommodate air flow from the process areas: The fume hood, the hot cell, and the Temporary Room (if one is set up) through a two-stage high-efficiency particulate air (HEPA) filter train (Figure 3). The ventilation system will maintain airflow from Zone 2 to Zone 1.

Balancing dampers, and flow and pressure instrumentation have been installed for proper airflow balancing to ensure ventilation-system function and worker safety. The dampers will set the airflow at the design set point. Instrumentation allows workers to monitor airflow during operations. The exhaust fan discharges to a vertical exhaust stack.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR 264 Subpart I)

Container storage practices applicable to the AHCF are presented in the following sections.

1.3.1 Container Types and Labeling

RCRA-regulated waste containers stored at the AHCF are most often strong, tight containers such as steel drums, steel boxes, wooden crates, plastic containers, casks, and cylinders.

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

Routine container handling will not be conducted at the AHCF. Instead, a preliminary assessment of each package will be made to determine a safe and appropriate handling plan.

An initial assessment of package contents will be made using process knowledge. Storage containers may be unpacked either behind the shield wall, in the fume hood, or in the hot cell, depending on the nature of the contents.

1.3.2.1 *Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)*

The condition of containers at the ~~ACHF~~AHCF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a~~a~~).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

AHCF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a~~a~~). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

AHCF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a~~a~~).

1.4 Treatment Operations

Treatment practices applicable to the AHCF are presented in Section 8~~Attachment G~~ of this module.

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE AUXILIARY HOT CELL FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... AHCF-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... AHCF-A-iii~~
~~A.1 AHCF GENERAL UNIT DESCRIPTION ..... AHCF-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... AHCF-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... AHCF-A-2~~
~~A.2.2 Warning Signs ..... AHCF-A-2~~
~~A.3 TRAFFIC PATTERN, VOLUME, AND CONTROLS ..... AHCF-A-2~~
~~A.3.1 Traffic Patterns ..... AHCF-A-3~~
~~A.3.2 Traffic Volumes ..... AHCF-A-3~~
~~A.3.3 Traffic Control Signals ..... AHCF-A-3~~
~~A.4 UNIT LOCATION INFORMATION ..... AHCF-A-3~~
~~A.4.1 Seismic Standard ..... AHCF-A-3~~
~~A.4.2 Floodplain Standard ..... AHCF-A-3~~
~~A.5 TOPOGRAPHIC MAPS ..... AHCF-A-4~~
~~A.6 GROUNDWATER MONITORING ..... AHCF-A-5~~
~~REFERENCE ..... AHCF-A-5~~

~~LIST OF FIGURES~~

~~Figure No.~~	~~Title~~
~~A-1~~	~~Location Map of the Auxiliary Hot Cell Facility at Sandia National Laboratories/New Mexico~~
~~A-2~~	~~Location of the Auxiliary Hot Cell Facility (AHCF) in Technical Area (TA) V~~
~~A-3~~	~~Auxiliary Hot Cell Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas~~
~~A-4~~	~~Auxiliary Hot Cell Facility (AHCF), Traffic Routes and Controls~~
~~A-5~~	~~Topographic Map, Auxiliary Hot Cell Facility~~
~~A-6~~	~~Auxiliary Hot Cell Facility (AHCF), Access Control Features~~
~~A-7~~	~~Auxiliary Hot Cell Facility (AHCF), Drainage Control Features~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~AHCF~~	~~Auxiliary Hot Cell Facility~~
~~ft~~	~~foot/feet~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION AND INFORMATION ~~FOR THE AUXILIARY HOT CELL FACILITY~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (~~20 NMAC 4.1.100–900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~).~~ The following subject areas are addressed in this section~~attachment~~:

- ~~A general description of the Auxiliary Hot Cell Facility (AHCF) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003b).

~~A.1 AHCF General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The AHCF is located approximately 1,000 feet (ft) southeast of the entrance to Technical Area (TA)-V (Figure 1A-1). The AHCF is located in the northern end of Building 6597 in a portion of the building called the High Bay. A Unit layout for the AHCF is provided in Figure 2A-2.~~

~~The AHCF RCRA-regulated waste management areas (WMAs) addressed in this module include (Figure 2A-2):~~

~~□The Hot Cell,~~
~~□The Work Area,~~
~~□The Fume Hood,~~
~~□The Storage Silos, and~~
~~□Container Storage.~~

~~The AHCF RCRA-regulated waste management practices addressed in this module are:~~

~~□Container storage of RCRA-regulated waste, and~~
~~□Treatment of RCRA-regulated waste.~~

~~Descriptions of the AHCF WMAs and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the AHCF.

2.1.1 ~~A.2.1~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the AHCF fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~

~~In addition,~~ The doors to Building 6597 are kept closed and ~~has~~ locked. ~~and alarmed doors.~~ As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the SNL/NM Technical Area gates during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the AHCF RCRA-regulated WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The AHCF is located inside TA-V (Figures 1 and 2). TA-V is enclosed by ~~two~~ 8-ft-high standard security chain-link fences topped with barbed wire. Regular entries into and exits from TA-V are through Building 6577, the Perimeter Access Building, or through the adjoining vehicle gate. TA-V access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-V.

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

Building 6597 and the entrance to the AHCF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to Building 6597, including the AHCF WMAs.

2.2 ~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the AHCF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P~~O~~ Street, and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-V turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Entrance gate.

Waste transport vehicles travel along a 2-lane asphalt-paved drive to enter TA-V from the two-lane paved road as shown on Figures A-4 and A-6 in Appendix A (SNL/NM, 2002c) of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles must stop at a gate prior to entering or leaving TA-V. Within TA-V, waste is transported on asphalt- or concrete-paved surfaces (Figure 4~~A-3~~).

2.2.2 ~~A.3.2~~ Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P~~O~~ Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically travel to the AHCF per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the AHCF.

2.2.3 ~~A.3.3~~ Traffic Control Signals

Within TA-V, there are no traffic control signals or signs. Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Vehicle presence within TA-V is limited to waste transport and other work vehicles. Therefore, signals or signs are not necessary to control traffic within TA-V.

2.3 ~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the AHCF are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A ~~[SNL/NM, 2002c]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the AHCF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 ~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).~~;~~

- Surface waters, including intermittent streams, near the AHCF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).~~;~~

- Surrounding land uses are shown on Figures A-2~~9~~ and A-8~~10~~ in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]).~~;~~ The area surrounding the AHCF is occupied by other Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2~~8~~ in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).~~;~~

- Legal boundaries of SNL/NM (including the AHCF) is provided as Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).~~;~~

- Access control features at the AHCF (e.g., fences, gates) are shown on Figures 5 and 6~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).~~;~~

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the AHCF are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).~~;~~

- The location of the AHCF and associated WMA structures, ~~and~~ loading and unloading areas, roads, and sanitary sewers at the AHCF are shown on Figures 5 and 6~~A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).~~;~~

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 7~~A-7~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00].~~; and~~

- Locations of the AHCF and AHCF WMAs are shown on Figures 3 and~~s A-1, A-2~~, 5~~A-4, and A-5~~ of this module~~attachment~~ (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the AHCF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the New Mexico Environment Department at these scales and contour intervals due to the size of the AHCF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 ~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The AHCF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the AHCF likely to affect groundwater quality during normal operations or during unusual events.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure A-5~~
~~[To Be Provided]~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE AUXILIARY HOT CELL FACILITY~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(2) (~~40 CFR 270.14[b][2]~~)~~; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; and ~~, and~~ 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," ~~revised June 14, 2000~~ [6-14-00], waste analysis requirements applicable to all ~~Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management~~ Uunits, including the AHCF~~Auxiliary Hot Cell Facility~~, are addressed in Appendix B ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b).~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

~~**REFERENCE**~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

4.0 INSPECTION PLAN ~~FOR THE AUXILIARY HOT CELL FACILITY~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act (RCRA)-regulated waste management units, including the Auxiliary Hot Cell Facility (AHCF), are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~
20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that waste management areas (WMAs) and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 20023b~~e~~). AHCF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, with the inspection criteria and frequency. The items listed in the table are inspected in each AHCF WMA.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

Performing inspections of all areas at the AHCF where RCRA-regulated wastes are handled may expose Unit personnel to unnecessary radiation. In order to maintain the radiation exposure to levels as low as reasonably achievable (ALARA), Sandia/DOE will conduct alternative inspections of the storage silos. Instead of inspecting the silos directly, Unit personnel will visually inspect ~~the~~ RCRA-regulated waste containers or packages before they are placed in the silos and when they are removed from the silos. If Unit personnel do not observe any indications of damage to or release from the RCRA-regulated waste items as they are removed from the silos, that will be considered sufficient to determine that there have not

Table 2
Auxiliary Hot Cell Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational and in good condition	Monthly
Spill control equipment	Present, quantities per inventory, and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Treatment area	Good condition, clean, uncluttered, no spills	Prior to treatment event. Monthly otherwise.
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Prior to treatment event. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled.* Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled.* Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled.* Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled.* Weekly otherwise.

Table 2 (Concluded)
Auxiliary Hot Cell Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled.* Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

* Note: Containers will be inspected prior to placement into and immediately following removal from a storage silo.

been releases of RCRA-regulated wastes. The visual inspection may be conducted from a remote area to maintain ALARA conditions for the Unit personnel.

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C. The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained in Building 6597 or in the ~~Technical Area~~TA-V electronic facility documentation system. Inspection records for previous calendar years are maintained in department offices of AHCF personnel or the SNL/NM Records Center.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

Training requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) (~~40 CFR 270.14[b][12]~~)~~, and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training~~.,~~" ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the Auxiliary Hot Cell Facility (AHCF) are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~ The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the AHCF.

AHCF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

Only the following job descriptions identified in Appendix D, Table D-2 are applicable at the AHCF: Training Director, Project Leader, Emergency Coordinator, Chemist, Field Technician, Special Projects Staff, Inspector, and Unit Operations Support Staff.

Training records for AHCF personnel are maintained in the department offices of AHCF personnel.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE~~FOR THE AUXILIARY HOT CELL FACILITY~~

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide Contingency Plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA]-Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002a) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 200~~2c~~3b). Supplemental AHCF-specific information is included in this section, in Figures 8, 9, and 10, and in Tables 3 and 4 of this module.

The ~~Auxiliary Hot Cell Facility (~~AHCF~~)~~ is located in the northeast (high bay) part Building 6597 in ~~approximately 1,000 feet southeast of the entrance to Technical Area (~~TA~~)~~-V at SNL/NM and is used to repackage, store, and treat RCRA-regulated wastes. Building 6597 is a concrete masonry unit building with a roof height of XXX feet. The AHCF includes five WMAs:

- The hot cell is constructed of precast concrete with a stainless steel lining. A permanent shield wall extends north of the cell. The cell is used for repackaging and treatment.
- The work area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. Waste management activities in the work area include storage and treatment and may require the use of a temporary room.
- A 6-ft-wide walk-in fume hood, located north and east of the hot cell, can be used for storage and treatment.
- Eight floor silos (six in the work area and two in the cell) can be used for storage.
- Containers of RCRA-regulated waste may also be stored in the area immediately surrounding the cell.

~~The waste management areas (WMAs) at the AHCF include: the Hot Cell, the Work Area, the Fume Hood, the Storage Silos, and Container Storage Areas. The AHCF WMAs are located within Building 6597 in an area known as the High Bay.~~ RCRA-regulated wastes bearing the U.S. EPA~~Environmental Protection Agency~~ Hazardous Waste Numbers listed in the ~~"Sandia National Laboratories/New Mexico~~ General Part A (SNL/NM, 2002) ~~Permit Renewal Request/Application," Revision 1.0 (SNL/NM, 2002b)~~ may be stored and/or treated at the AHCF WMAs. Wastes will be segregated according to compatibility groups.

During an emergency, Unit personnel will evacuate the unit as described in Section E.5.2 of the Site-wide Contingency Plan. In addition, Unit personnel may choose to implement a

coordinated evacuation of all of TA-V. To notify all TA-V personnel, Unit personnel would activate the TA-V alarm located on the north wall of the high bay area of the building.

During an emergency, Sandia security officers provide unimpeded access for authorized personnel ~~to the facility is provided by Sandia Security officers~~ as directed by the IC. Security officers also provide additional emergency assistance as required by the IC. Personnel who are authorized to enter TA-V in case of emergencies are members of the SNL/NM Emergency Response Organization, including medical personnel, the KAFB fire department, and Air Force security police.

Figure 8 presents the evacuation routes for the AHCF. ~~Figures 9 and 10 present information necessary to access the AHCF. Table 13 lists the emergency equipment typically available at the AHCF. Figure 9E-1 presents the evacuation routes for the AHCF.~~ Figures 9~~10~~E-2 and 10~~11~~E-3 present emergency response and access information ~~necessary to access~~ for the AHCF. ~~Table 2 lists the emergency coordinators for the AHCF.~~

Table 3~~E-1~~ lists the emergency equipment typically available at the AHCF. Table 4~~E-2~~ lists the emergency coordinators for the AHCF.

Current copies of the Site-Wide Contingency Plan and this supplemental information ~~Unit-specific Contingency Plan and the Site-wide Contingency Plan (SNL/NM, 2002a)~~ are maintained in department offices of AHCF personnel, in the TA-V emergency control room, and at the SNL/NM Emergency Operations Center.

~~REFERENCES~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

Table 3~~E-1~~
Auxiliary Hot Cell Facility, Emergency Equipment and Locations

Building 6597

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Personal protective equipment~~ ~~Recovery drums and containers~~ Fixed shower/eyewash	Near north entrance
	Absorbent	Near north entrance
	Personal protective equipment	Near north entrance
Internal Communication and Alarm System	Voice communication~~Fire alarm pull boxes~~	~~On the high-bay walls near the north, east, south, and west entrances~~
	~~Voice communication~~Fire alarm pull stations (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	One near each exit door~~Building 6597~~
	Audible fire alarms	
External Communication System	Telephones~~—unlimited employee access~~	Building 6597
	Emergency public address system	
	Fire a~~A~~larm p~~P~~ull stations (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)~~Boxes, signal sent to Kirtland Air Force Base fire station~~	One near each exit door
	~~Fire detectors~~	~~Throughout Building 6597~~
Fire Extinguishers	Portable (A-B-C)	By personnel doors on the east, south, and west walls
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers~~Wet-pipe sprinkler system, deluge-type; Heat detection system~~	Coverage t~~T~~hroughout the high-bay in Building 6597
	Manually-operated fire suppression system (Halon replacement)	Hot Cell
	Sprinkler head	Under fume hood
	Branch line from the Building 6597 ~~Fire~~ sprinkler system	Temporary Room
	~~Fire extinguisher - ABC~~	~~By personnel doors on the east, south, and west walls~~
	Water supplied by fire hydrant	One hydrant, location shown on Figure 9

Table 4~~E-2~~
Auxiliary Hot Cell Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary~~:~~ ~~John Garcia~~	John Garcia Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-3538 (office) (505) 540-5194 (pager)	(505) 243-5914
First Alternate~~:~~ ~~Jim Andazola~~	Jim Andazola Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 845-3107 (office) (505) 540-8271 (pager)	(505) 892-5120

One or more of these personnel are routinely available during normal work hours (8:00 am to 4:30 pm, Monday through Friday).

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... AHCF-F-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... AHCF-F-iii~~
~~F.1 UNIT DESCRIPTION ..... AHCF-F-1~~
~~F.2 ESTIMATE OF MAXIMUM WASTE IN STORAGE ..... AHCF-F-1~~
~~F.3 CLOSURE CONDITIONS ..... AHCF-F-1~~
~~REFERENCE ..... AHCF-F-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1~~ ~~Auxiliary Hot Cell Facility, Resource Conservation and Recovery Act Regulated Waste Management Areas~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~AHCF~~	~~Auxiliary Hot Cell Facility~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

7.0 CLOSURE PLAN ~~FOR THE AUXILIARY HOT CELL FACILITY~~

~~The information provided in this Closure Plan is submitted to address the a~~Applicable closure requirements are specified in ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~/ ~~, adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~)~~, and 20 NMAC 4.1.500/ 40 CFR 264, Subparts G and I, ~~revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the Sandia National Laboratories/New Mexico (SNL/NM) Auxiliary Hot Cell Facility (AHCF).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated ~~waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002)~~ of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2003a). The general closure information ~~referenced~~ includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

~~F.1 UNIT DESCRIPTION~~

~~The AHCF is located approximately 1,000 feet southeast of the entrance to Technical Area V, inside Building 6597, in an area known as the High Bay. The AHCF consists of several waste management locations that are used for container storage and/or treatment of RCRA-regulated wastes and include the Hot Cell, the Work Area, the Fume Hood, the Storage Silos, and Container Storage Areas. The RCRA-regulated waste storage structures and locations within the AHCF are shown on Figure F-1.~~

7.1 ~~F.2~~ Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the AHCF is estimated at 3,546 gallons of liquids and/or solids.

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002)~~ of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the AHCF:

- RCRA-regulated waste handling and treatment activities involving the opening of waste containers were confined to the interior of the AHCF ~~waste management areas (~~WMAs~~)~~. If contamination occurred, it would have been confined to those areas.

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~Figure F-1. Auxiliary Hot Cell Facility, Waste Management Areas~~

~~ATTACHMENT G~~

~~TREATMENT PLAN FOR THE AUXILIARY HOT CELL FACILITY~~

8.0 TREATMENT PLAN ~~FOR THE AUXILIARY HOT CELL FACILITY~~

In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Section 900 (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.23, revised June 14, 2000, treatment operations for ~~Resource Conservation and Recovery Act (~~RCRA~~)~~-regulated wastes treated at the ~~Auxiliary Hot Cell Facility (~~AHCF~~)~~ are described in Appendix G of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," ~~Revision 1.0~~ (SNL/NM, ~~2002~~2003b). The treatment technologies listed below and described in Appendix G may be used to treat RCRA-regulated wastes at the AHCF~~, co-operated by Sandia Corporation and the U.S. Department of Energy~~:

- Macroencapsulation,
- Stabilization,
- Chemical deactivation, and
- Mechanical processing.

The waste management areas at the AHCF, inside Building 6597, that are used for the treatment of RCRA-regulated wastes include the Hot Cell, the Fume Hood, and the Work Area.

All of the treatment at the AHCF will be batch treatment performed on single packages of waste (each package is one drum or less, or a package that can be placed in one of the silos).

The areas and treatment operations will meet the environmental performance standards described in Appendix G ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

Treatment effectiveness for each waste stream will be determined through analysis or verification as described in Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B SNL/NM, 2003b) and ~~Attachment B~~ Section 3 of this ~~M~~module.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix G (Site-Wide Treatment Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~6.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SWMU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The AHCF is not a SWMU identified in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

~~7.0~~ 9.0 REFERENCES

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM 5890110518-1," effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. US Department of Health and Human Services, National Institute for Occupational Safety and Health.

~~NMED, see New Mexico Environment Department.~~

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~a~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002b~~2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002c~~2003b, Appendices A–F~~Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in~~ in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

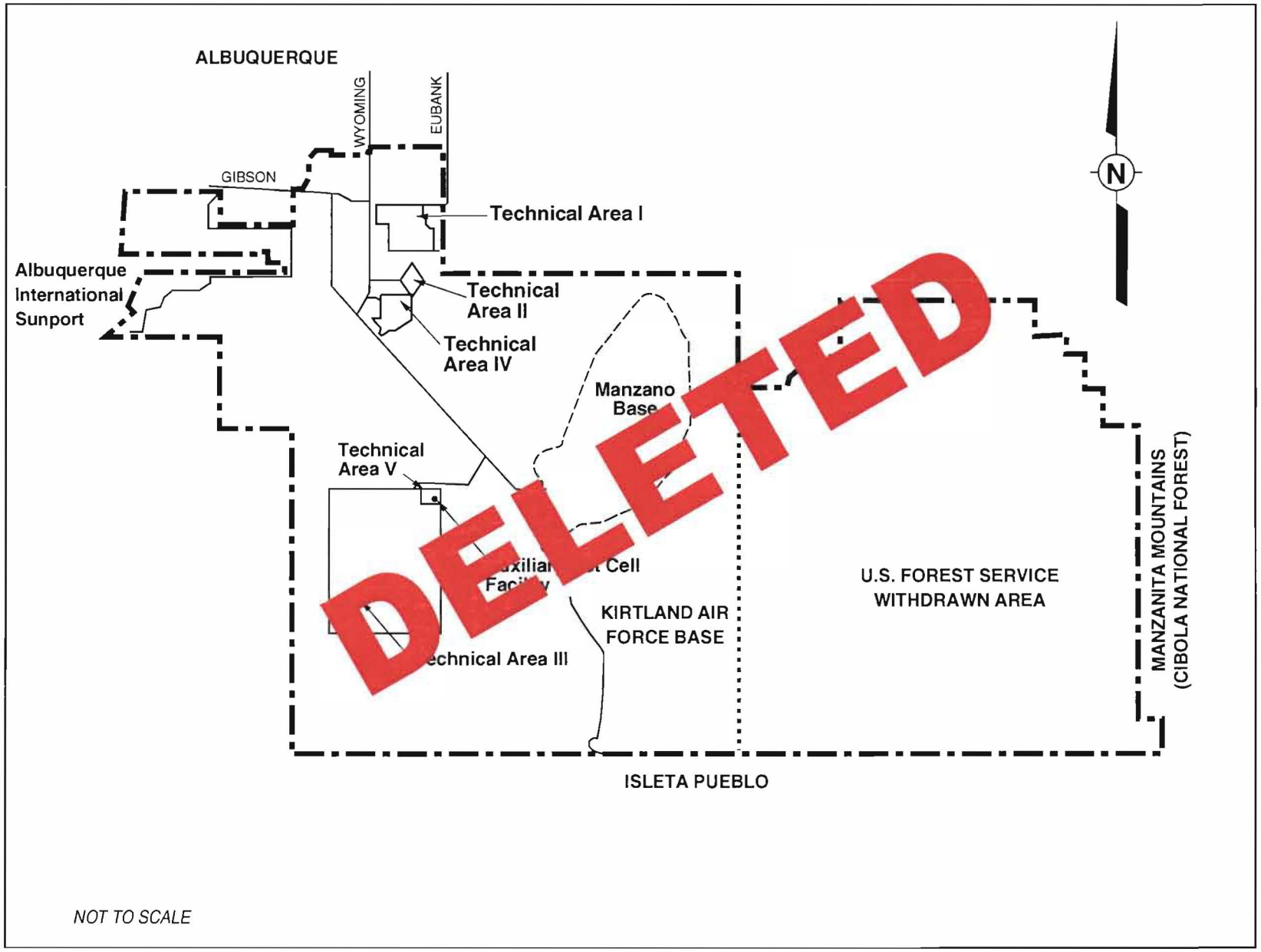


Figure A-1
Location Map of the Auxiliary Hot Cell Facility at Sandia National Laboratories/New Mexico

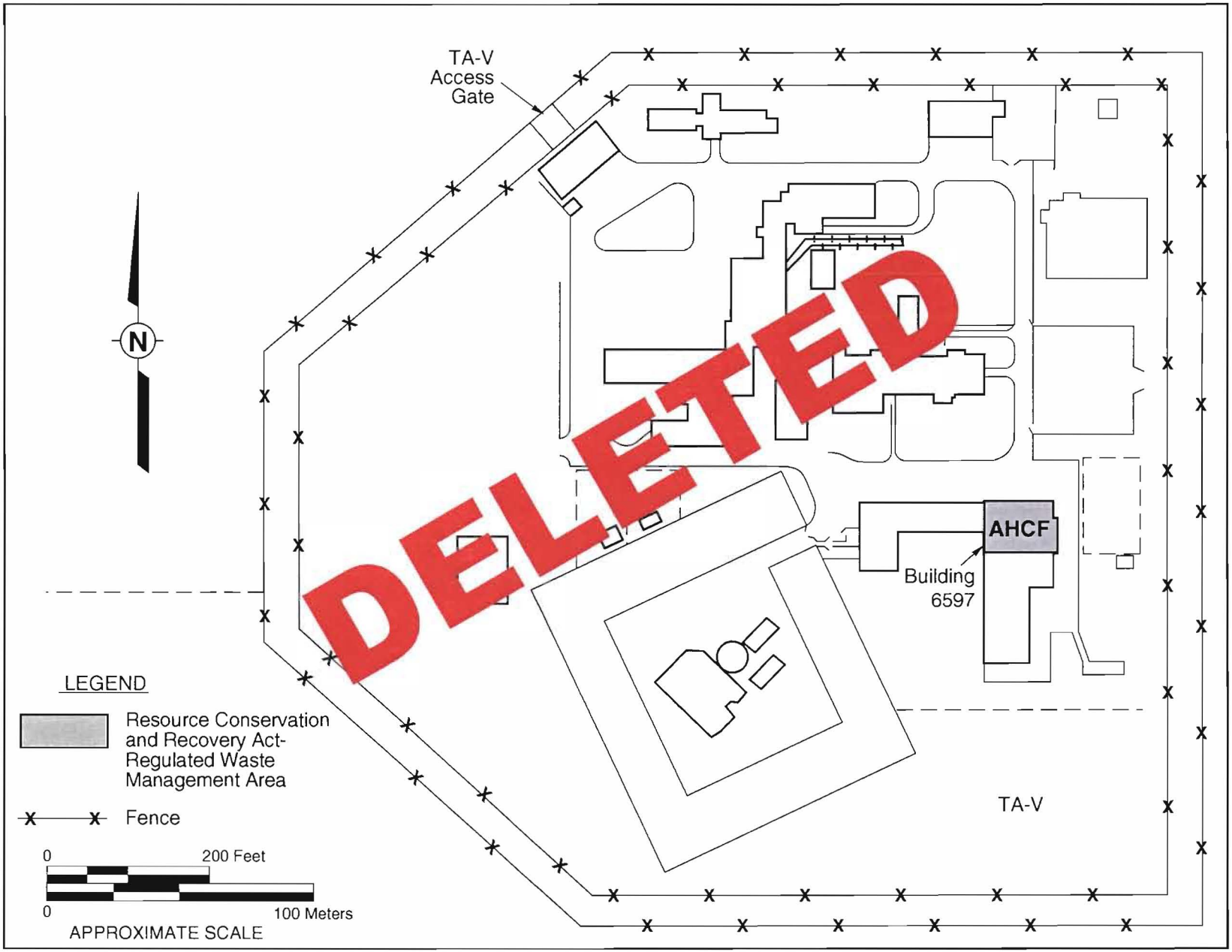
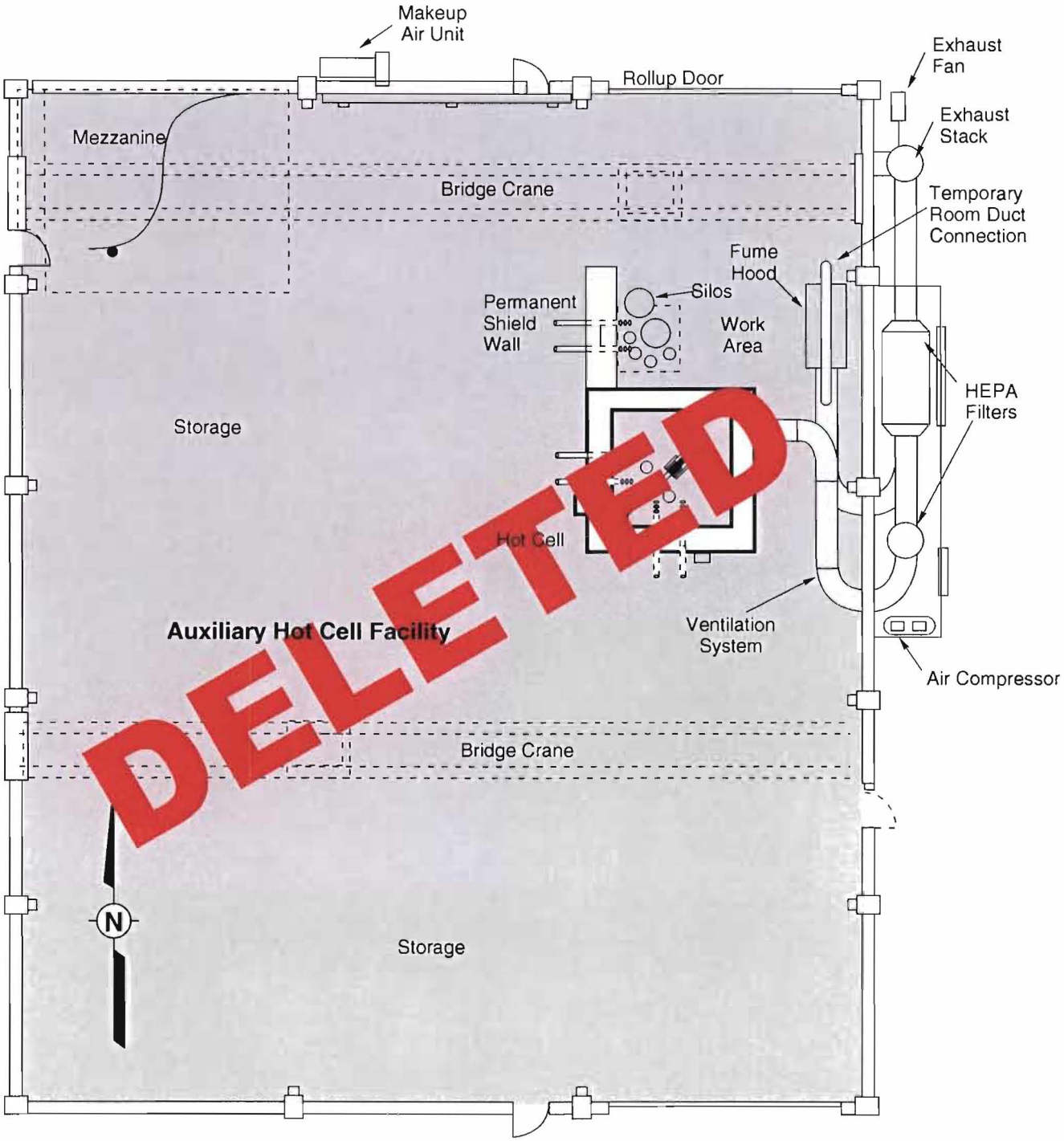


Figure A-2
Location of the Auxiliary Hot Cell Facility (AHCF) in Technical Area (TA) V



LEGEND

Resource Conservation and Recovery Act-Regulated Waste Management Area

Figure A-3

Auxiliary Hot Cell Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

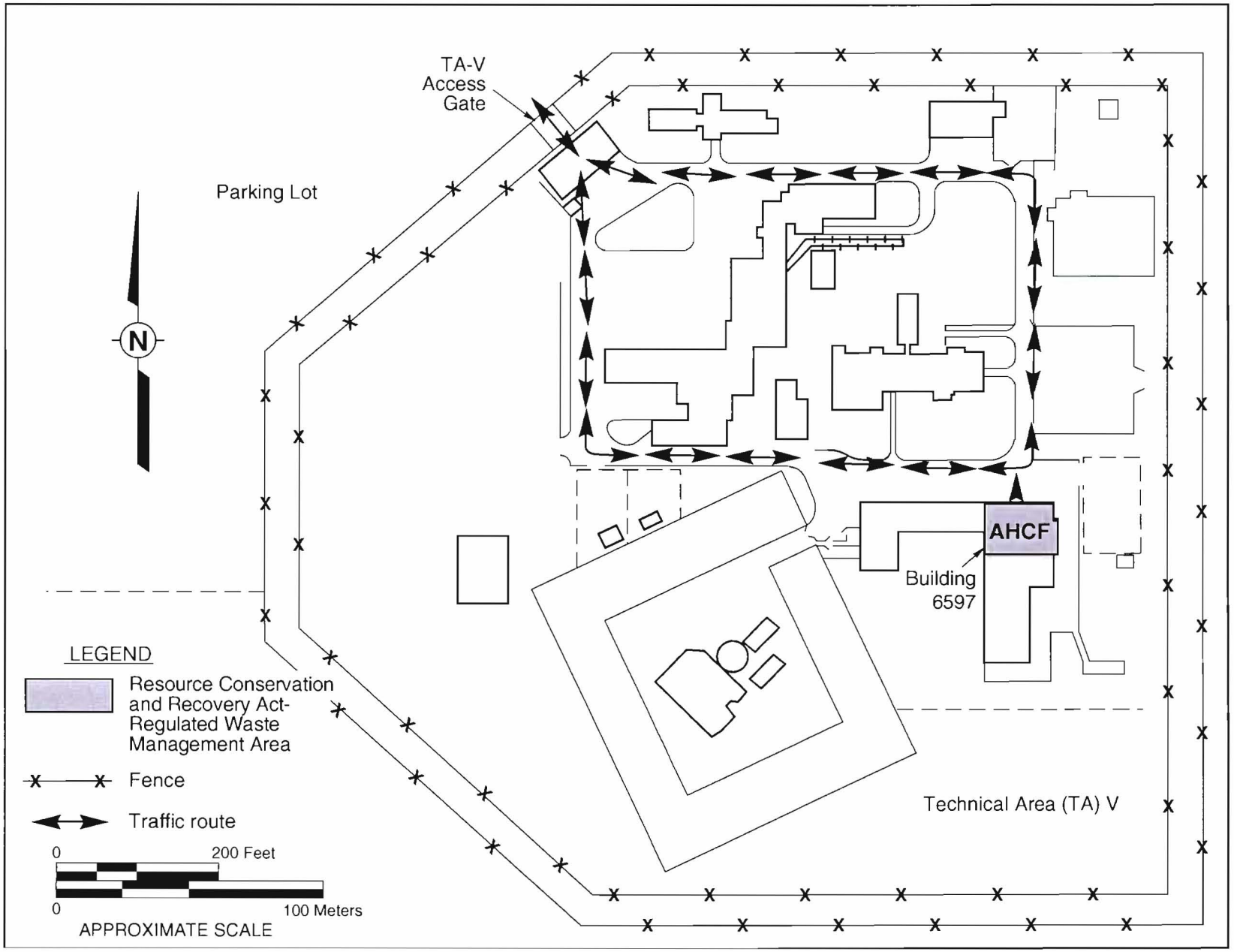


Figure ~~A-4~~ 4
Auxiliary Hot Cell Facility (AHCF), Traffic Routes and Controls

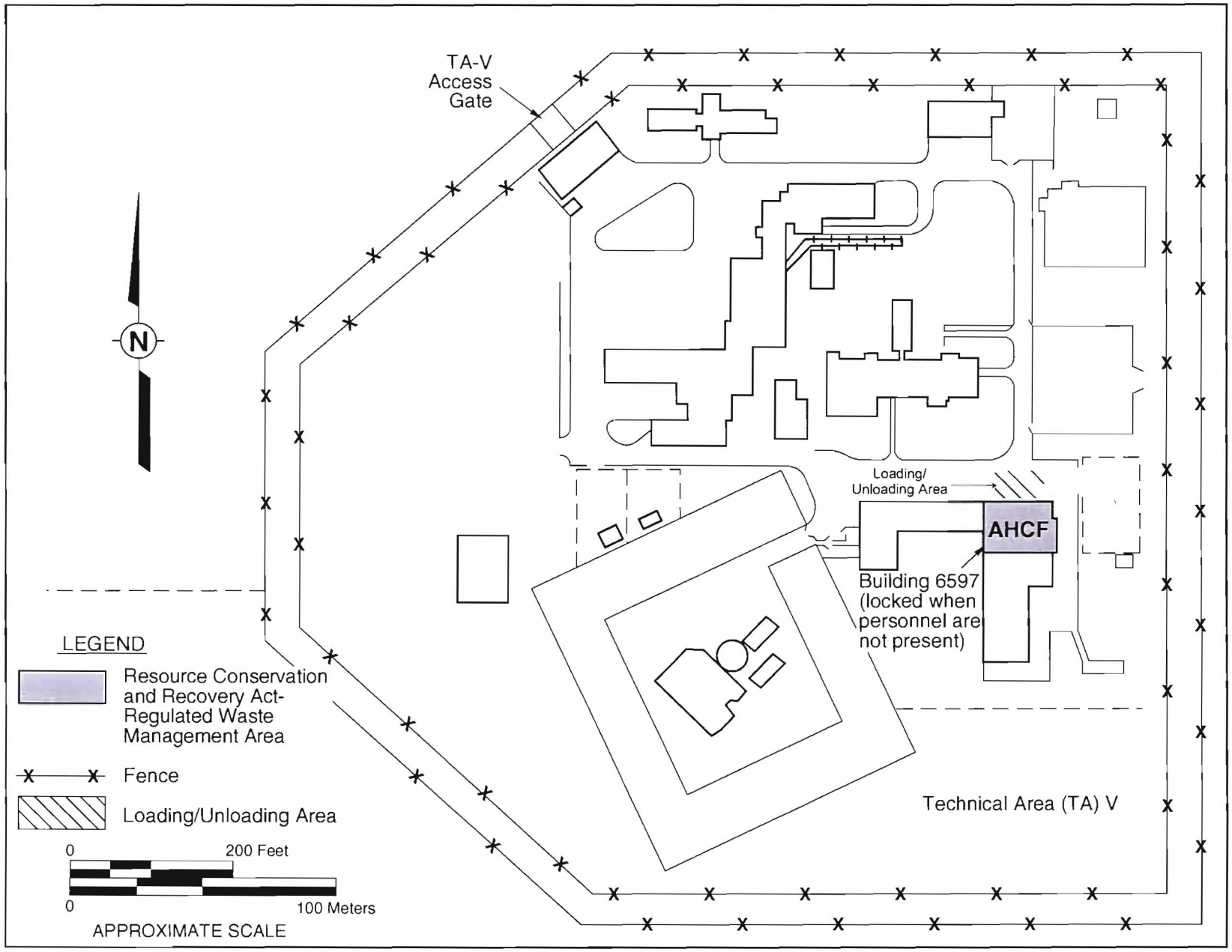


Figure ~~A-6~~ 6
Auxiliary Hot Cell Facility (AHCF), Access Control Features

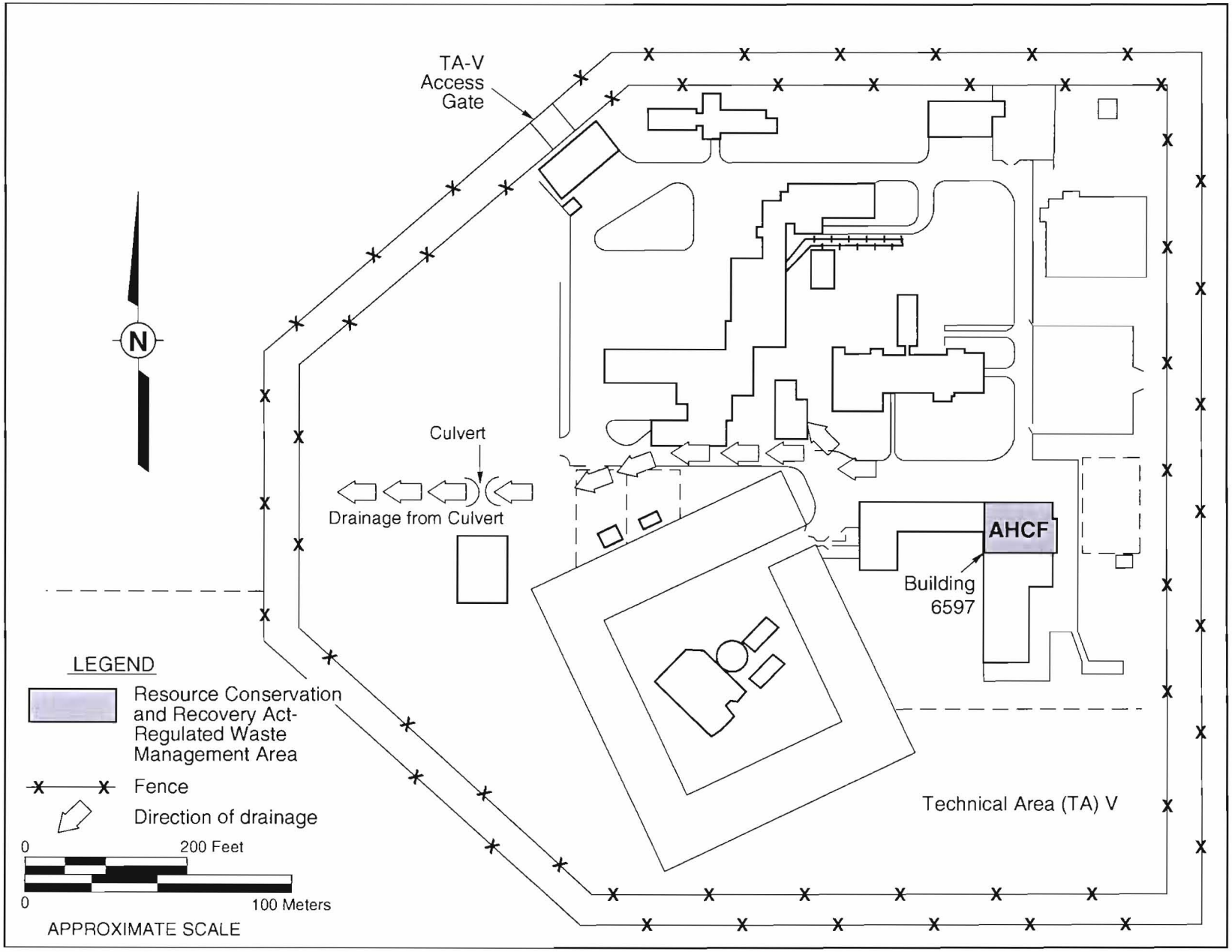


Figure ~~A-7~~ 7
Auxiliary Hot Cell Facility (AHCF), Drainage Control Features

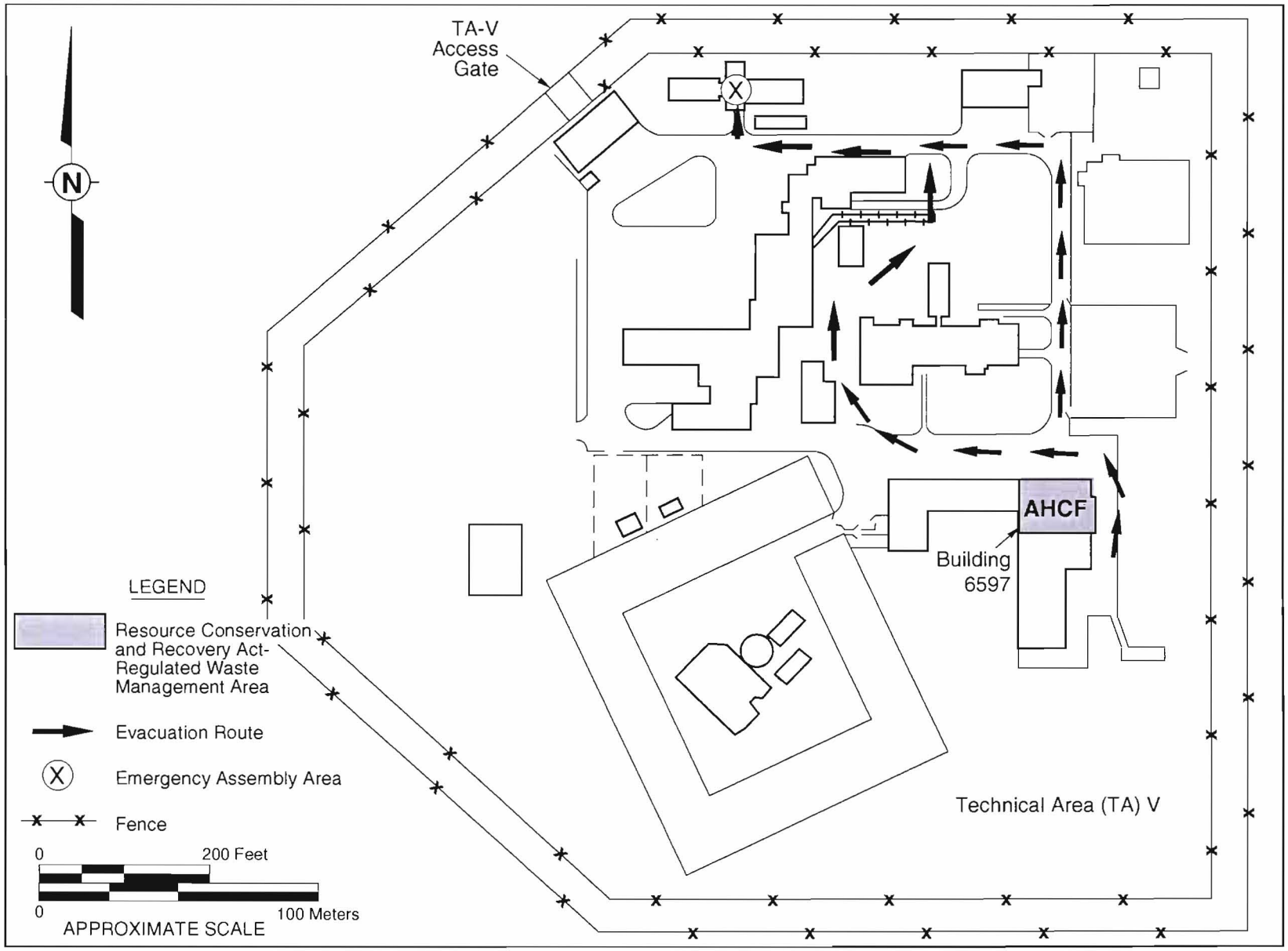


Figure ~~E-1~~ 8

Auxiliary Hot Cell Facility (AHCF), Evacuation Routes

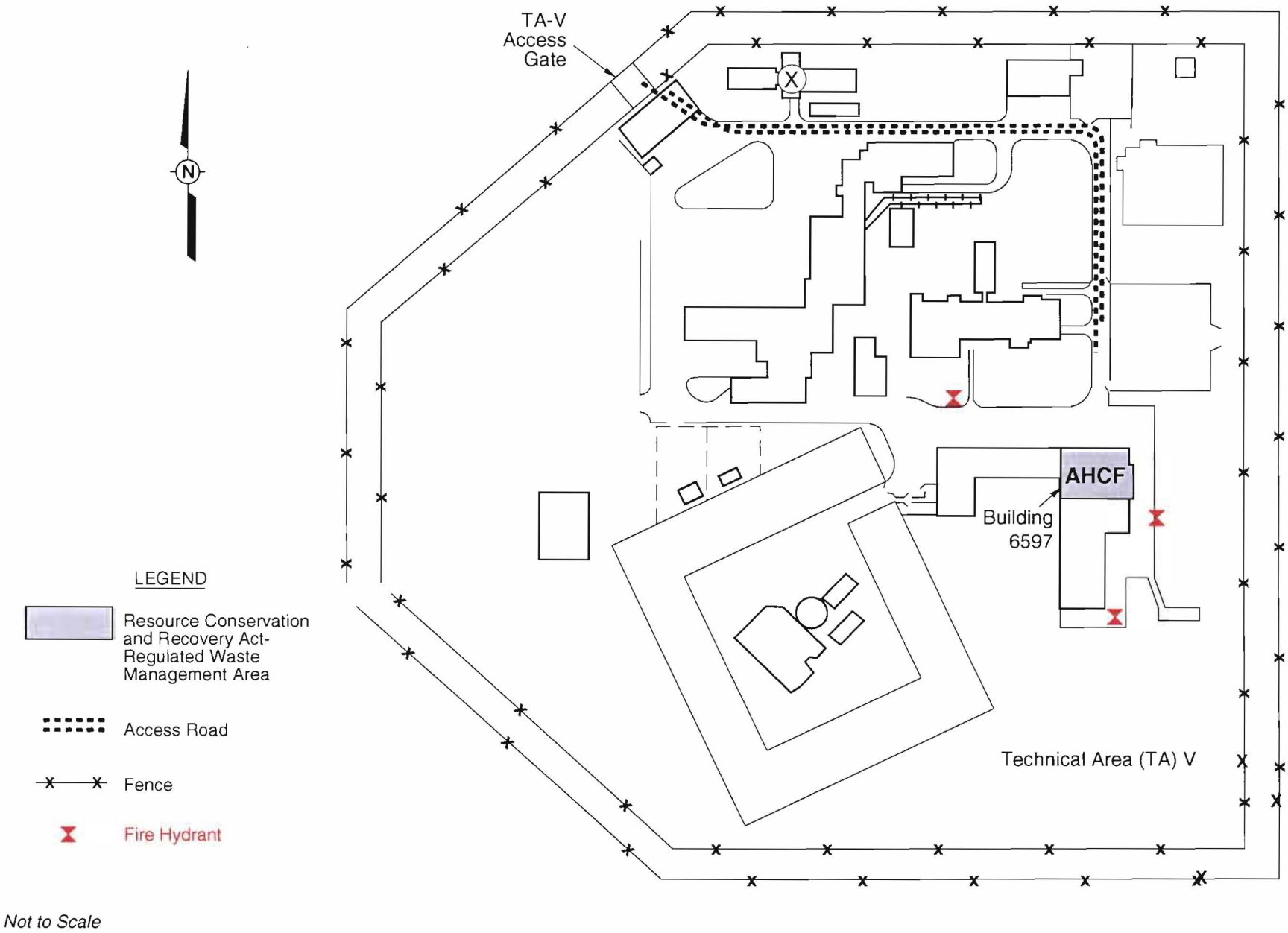
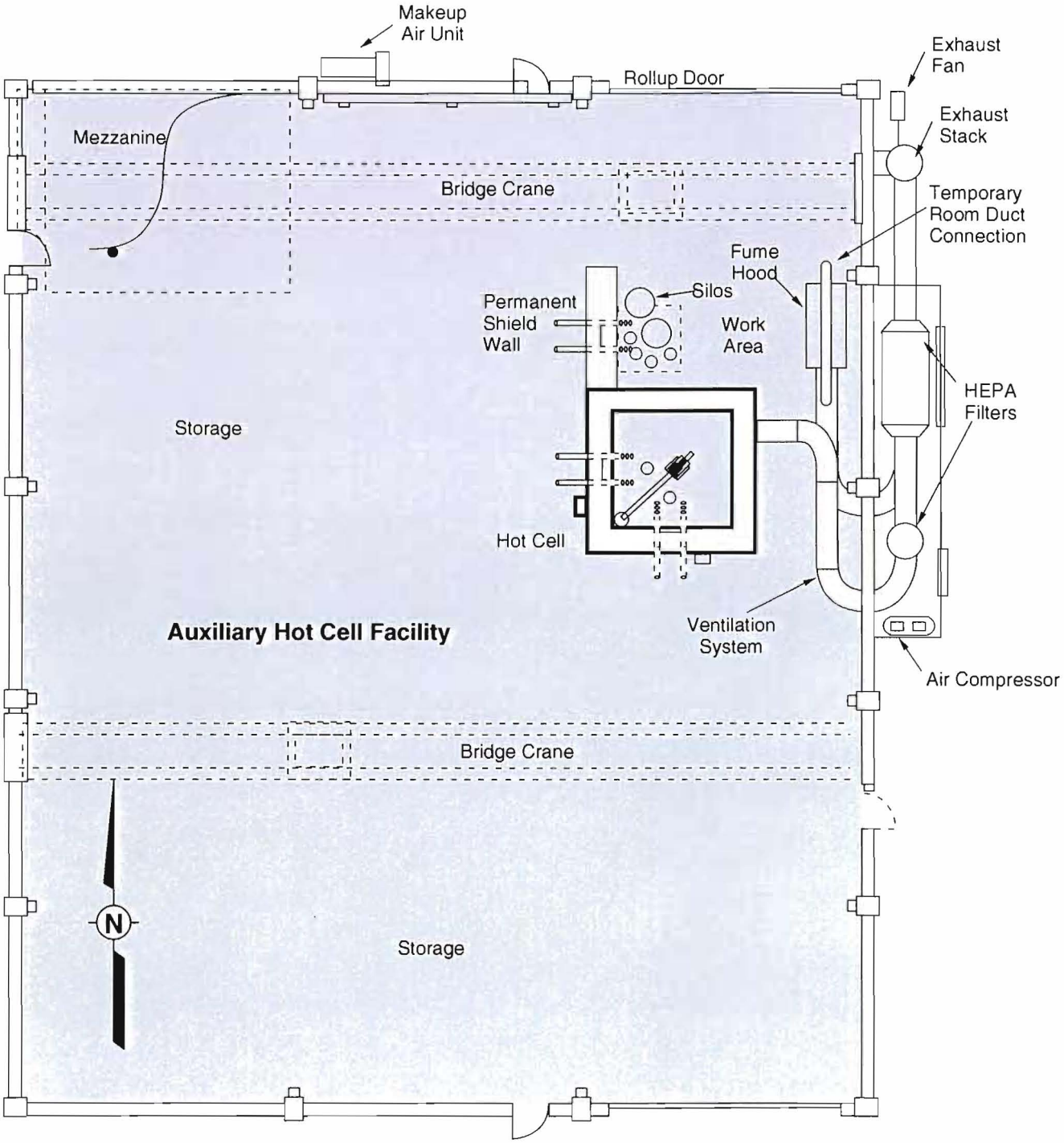


Figure ~~E-2~~ 9
Auxiliary Hot Cell Facility (AHCF), Emergency Response and Access Information

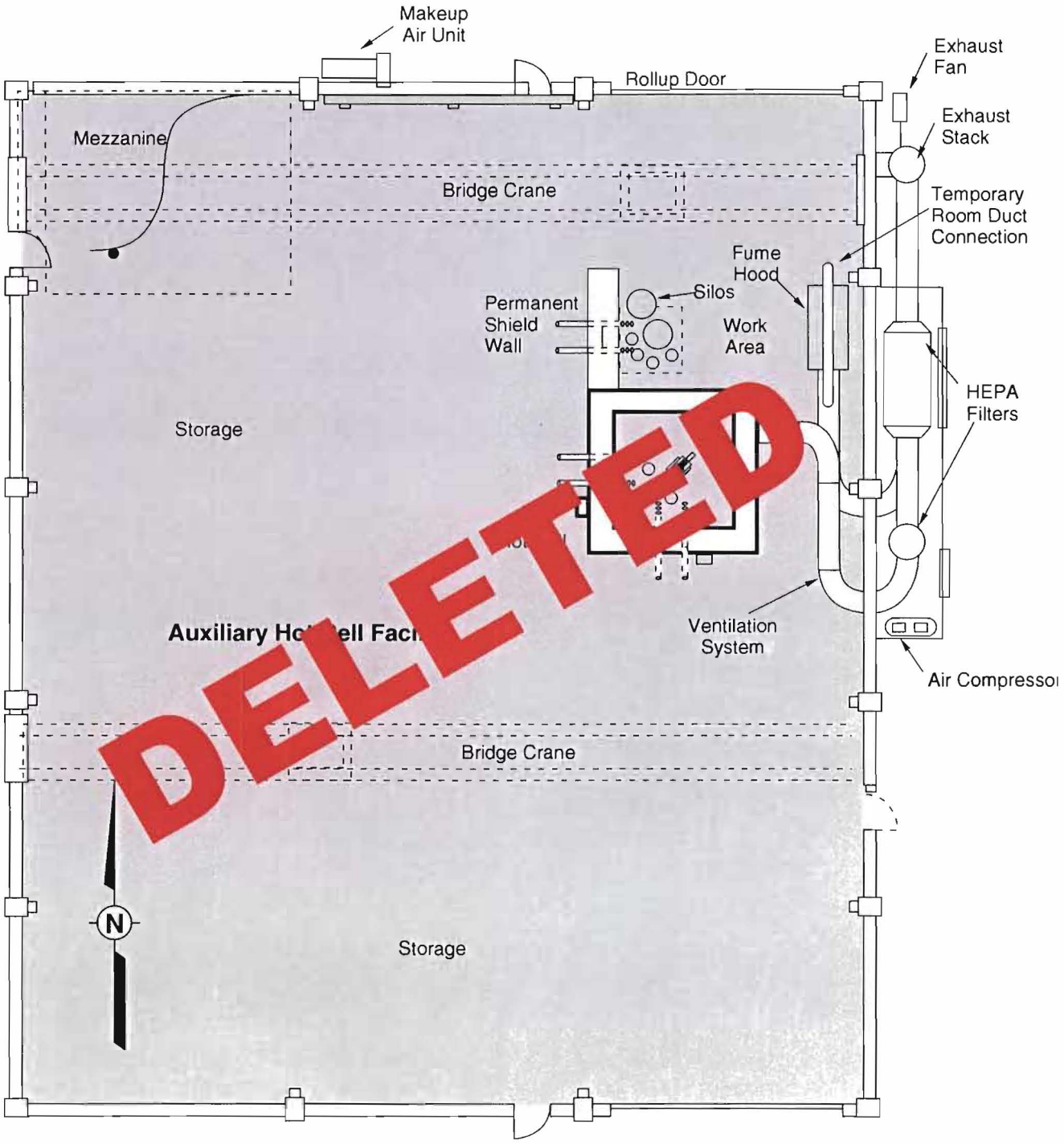


LEGEND

Resource Conservation and Recovery Act-Regulated Waste Management Area

Figure ~~E-3~~ 10

Auxiliary Hot Cell Facility, Emergency Response and Access Information (Detail)



LEGEND

Resource Conservation and Recovery Act-Regulated Waste Management Area

Figure F-1
Auxiliary Hot Cell Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Areas

774470.14000000 A64

Sandia National Laboratories/New Mexico
Manzano Storage Bunkers
Part B Permit Application

Module VI

Revision 2~~1~~.0

February 2003~~2~~

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES~~ATTACHMENTS~~ ..... MSB-iii
LIST OF FIGURES ..... MSB-~~iii~~iv
ACRONYMS AND ABBREVIATIONS ..... MSB-~~iv~~vi
1.0 GENERAL UNIT OPERATIONS MSB-1
1.1 Designated Waste Management Areas MSB-2
1.1.1 Type B Bunkers (37034 and 37063) MSB-3
1.1.2 Type C Bunkers (37078 and 37118) MSB-3
1.1.3 Type D Bunkers (37045, 37055, and 37057) MSB-3
1.2 Unit Operations MSB-4
1.2.1 Operation of Containment Systems MSB-4
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes . MSB-4
1.2.3 Preparedness and Prevention MSB-5
1.2.3.1 Required Equipment MSB-5
1.2.3.2 Testing and Maintenance of Equipment MSB-5
1.2.3.3 Access to Communications or Alarm Systems MSB-5
1.2.4 Hazards Prevention MSB-6
1.2.4.1 Preventing Hazards in Unloading MSB-6
1.2.4.2 Preventing Runoff or Flooding MSB-6
1.2.4.3 Preventing Contamination of Water Supplies MSB-6
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages MSB-7
1.2.4.5 Preventing Undue Exposure MSB-7
1.2.4.6 Preventing Releases to the Atmosphere MSB-7
1.3 Container Storage Practices MSB-8
1.3.1 Container Types and Labeling MSB-8
1.3.2 Container Handling MSB-8
1.3.2.1 Condition of Containers MSB-8
1.3.2.2 Aisle Space and Storage Configuration MSB-8
1.3.2.3 Capability of Waste with containers MSB-8
2.0 UNIT DESCRIPTION AND INFORMATION MSB-14
2.1 Security Procedures and Equipment MSB-15
2.1.1 Barriers and Means to Control Entry MSB-15
2.1.2 Warning Signs MSB-15
2.2 Traffic Pattern, Volume, and Controls MSB-16
2.2.1 Traffic Patterns MSB-16
2.2.2 Traffic Volumes MSB-16
2.2.3 Traffic Control Signals MSB-16
2.3 Unit Location Information MSB-16
2.3.1 Seismic Standard MSB-16
2.3.2 Floodplain Standard MSB-17
2.4 Topographic Maps MSB-17
2.5 Groundwater Monitoring MSB-18
3.0 WASTE ANALYSIS PLAN MSB-21
4.0 INSPECTION PLAN MSB-23
5.0 PERSONNEL TRAINING MSB-26
6.0 CONTINGENCY PLAN MSB-28

TABLE OF CONTENTS (Concluded)

7.0 CLOSURE PLAN MSB-36
7.1 Estimate of Maximum Waste in Storage MSB-36
7.2 Closure Conditions MSB-36
7.3 Closure Schedule MSB-37
8.0 TREATMENT PLAN MSB-38
9.0 REFERENCES MSB-39
~~1.0 GENERAL UNIT OPERATIONS ..... MSB-1~~
~~1.1 Designated Waste Management Areas ..... MSB-2~~
~~1.1.1 Type B Bunkers (37034 and 37063) ..... MSB-2~~
~~1.1.2 Type C Bunkers (37078 and 37118) ..... MSB-2~~
~~1.1.3 Type D Bunkers (37045, 37055, and 37057) ..... MSB-3~~
~~1.2 Unit Operations ..... MSB-3~~
~~1.2.1 Inspections ..... MSB-3~~
~~1.2.2 Containment Systems ..... MSB-4~~
~~1.2.3 Requirements for Ignitable, Reactive, and Incompatible Wastes ..... MSB-4~~
~~1.2.4 Closure ..... MSB-4~~
~~1.2.5 Preparedness and Prevention ..... MSB-4~~
~~1.2.5.1 Required Equipment ..... MSB-4~~
~~1.2.5.2 Testing and Maintenance of Equipment ..... MSB-4~~
~~1.2.5.3 Access to Communications or Alarm Systems ..... MSB-5~~
~~1.2.6 Hazards Prevention ..... MSB-5~~
~~1.2.6.1 Preventing Hazards in Unloading ..... MSB-5~~
~~1.2.6.2 Preventing Runoff or Flooding ..... MSB-5~~
~~1.2.6.3 Preventing Contamination of Water Supplies ..... MSB-5~~
~~1.2.6.4 Mitigating Effects of Equipment Failure or Power Outages ..... MSB-5~~
~~1.2.6.5 Preventing Undue Exposure ..... MSB-6~~
~~1.2.6.6 Preventing Releases to the Atmosphere ..... MSB-6~~
~~1.3 Container Storage Practices ..... MSB-6~~
~~1.3.1 Container Types and Labeling ..... MSB-6~~
~~1.3.2 Container Handling ..... MSB-6~~
~~1.3.2.1 Condition of Containers ..... MSB-7~~
~~1.3.2.2 Aisle Space and Storage Configuration ..... MSB-7~~
~~1.3.2.3 Capability of Waste with containers ..... MSB-7~~
~~1.4 Treatment Operations ..... MSB-7~~
~~2.0 OTHER FEDERAL LAWS ..... MSB-8~~
~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS ..... MSB-9~~
~~4.0 REFERENCES ..... MSB-10~~

LIST OF TABLES

Table No.	Title
1	Manzano Storage Bunker Inspection Criteria and Frequency
~~1~~2	Manzano Storage Bunkers, Emergency Equipment and Locations
~~2~~3	Manzano Storage Bunkers, Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Manzano Storage Bunkers at Sandia National Laboratories/New Mexico
2	Location of the Manzano Storage Bunkers at Manzano Base
3	Manzano Storage Bunkers, Type B, Bunkers 37034 and 37063
4	Manzano Storage Bunkers, Type C, Bunkers 37078 and 37118
5	Manzano Storage Bunkers, Type D, Bunkers 37045, 37055, 37057
6	Manzano Storage Bunkers, Traffic Routes and Controls
7	Topographic Map
8	Manzano Storage Bunkers, Access Control Figures
9	Manzano Storage Bunkers, Drainage Control Features
10	Manzano Storage Bunkers, Evacuation Routes
11	Emergency Response and Access Information in the Vicinity of the Manzano Storage Bunkers
12	Emergency Response and Access Information within the Manzano Storage Bunkers
~~F-1~~	~~Manzano Storage Bunkers, Waste Management Areas~~

~~LIST OF ATTACHMENTS~~

~~**Attachments**~~

~~A Unit Description for the Manzano Storage Bunkers~~

~~B Waste Analysis Plan for the Manzano Storage Bunkers~~

~~C Inspection Plan for the Manzano Storage Bunkers~~

~~D Personnel Training Plan for the Manzano Storage Bunkers~~

~~E Contingency Plan for the Manzano Storage Bunkers~~

~~F Closure Plan for the Manzano Storage Bunkers~~

~~G Treatment Plan for the Manzano Storage Bunkers~~

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	foot/feet
ft^2	square foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
MSB	Manzano Storage Bunkers
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO
MANZANO STORAGE BUNKERS
PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Manzano Storage Bunkers (MSB) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and ~~I~~–IX (20 NMAC 4.1.5~~1~~00 and –.900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the MSB. 20 NMAC 4.1.5~~1~~00 and –.900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 26~~4~~0 ~~through 266, 268,~~ and 270 (40 CFR 26~~4~~0 ~~–266, 268,~~ and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 200~~2a~~3a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002~~b~~), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. ~~with this RCRA-regulated waste management unit (Unit)-specific module.~~ The SNL/NM General Part A (SNL/NM, 2002~~b~~) serves as a companion document to the SNL/NM General Part B (SNL/NM, 200~~2a~~3a) and Unit-specific Part B modules, including this MSB Part B Permit Application.

The MSB are a set of seven units, each with approximately 1600 to 2500 square feet of space. They are located in the Manzano Area on Kirtland Air Force Base (KAFB) and are used for storage of RCRA-regulated wastes in containers. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the MSB. Sandia/DOE currently operate the MSB under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

~~The information provided in this section is submitted to address the applicable RCRA-regulated waste management requirements of 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart I [6-14-00].~~ This section provides descriptions of the MSB waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

Specific information included in this section includes:~~applicable to the MSB addressed in this permit application is provided for the following subject areas:~~

- Unit operations, including: ~~inspections;~~ containment systems; requirements for ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention; hazards prevention; and

- Container storage of RCRA-regulated wastes~~practices~~.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

~~The MSB are used for storage of RCRA-regulated wastes.~~ The location of the MSB at SNL/NM is shown on Figure 1. The MSB include seven Units~~designated WMAs~~: Bunkers 37034, 37045, 37055, 37057, 37063, 37078, and 37118 (Figure 2). The MSB are owned by ~~Kirtland Air Force Base~~ KAFB and leased to the DOE.

In each MSB bunker, containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. ~~covered with grating.~~ These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives and other liquids. The containers of liquids ~~are~~ (typically 5- to 30-gallon capacity) are stored on the grating. Any liquids released from the containers drain through the grating into the tub. The ~~, and the~~ pallets come in ~~are of~~ various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(~~1~~1-3).

The pallets come in various sizes and capacities; Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the bunkers, and by the slope of the concrete paved surface outside the door that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(4).

The MSB are constructed of concrete (walls, roof, and floor) and are covered by earthen materials. The walls and roof of each bunker are rounded. There are three types of bunkers: Type B (37034 and 37063); Type C (37078 and 37118); and Type D (37045, 37055, and 37057). The following sections provide descriptions of specific bunker storage structures, locations, and capacities.

1.1.1 Type B Bunkers (37034 and 37063)

Type B bunkers consist of an access tunnel leading to a main chamber that is used for storage of RCRA-regulated wastes. Figure 3 provides a typical floor plan for a Type B bunker. The Type B access tunnel is approximately 20 feet (ft) long, 12 ft wide, and 12.5~~8~~ ft high. The concrete walls of the access tunnel are 1 ft thick. The main chamber is 81 ft long, 26.5 ft wide, and 12.8 ft high. The concrete walls of the main chamber are 8 inches (in.) thick. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface above and around each bunker is sloped so water drains away from the bunker. Access to the WMA of each bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber.

Based on the available floor space (2,100 square feet [ft^2]) in each of the Type B bunkers, each bunker can hold a maximum of 25,080 gallons of RCRA-regulated wastes.

1.1.2 Type C Bunkers (37078 and 37118)

Type C bunkers do not have an access tunnel and consist entirely of a main chamber used for storage of RCRA-regulated wastes. Figure 4 is a typical floor plan of a Type C bunker. The main chamber is approximately 80 ~~82.9~~ ft long, 27 ~~29.3~~ ft wide, and 12.8 ft high. The concrete walls are 1.3 ft thick. A 6-in. drain tile is located outside the bunker perimeter. Access to the main chamber is through a set of double doors 8 ft wide and 9.5 ft high. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped so water drains away from the bunker.

Based on the available floor space (approximately 2,400 ft^2) in each of the Type C bunkers, each bunker can hold a maximum of 35,200 gallons of RCRA-regulated wastes.

1.1.3 Type D Bunkers (37045, 37055, and 37057)

Type D bunkers consist of an access tunnel leading to a main chamber. Only the main chamber is used for storage of RCRA-regulated wastes. Figure 5 is a typical floor plan of a Type D bunker. Type D access tunnels vary in length from 76 feet to 110 feet~~(Bunker 37045—101.5 ft; Bunker 37055—88 ft; Bunker 37057—65.5 ft)~~ and are 9 ft ~~to 12 ft~~ wide and 11 to 12 ft high. The concrete walls of the access tunnel are 1 ft thick. The main chamber in each bunker is approximately 61~~60.7~~ ft long, 26.5 ft wide, and 12.5 ft high. Access to the WMA of each bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped so water drains away from each bunker.

Based on the available floor space (1,600 ft^2) in each of the Type D bunkers, each bunker can hold a maximum of 18,480 gallons of RCRA-regulated wastes.

1.2 Unit Operations

The MSB WMAs are used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, ~~2001b~~2002).

The MSB are not continuously occupied. All personnel sign in on a log upon entering each bunker and sign out when they leave. Waste handling personnel work in pairs and maintain contact with each other. All personnel are trained to check that everyone has signed out and exited the bunker before turning off the lights and closing and locking the doors.

General information regarding: ~~Inspection;~~ containment systems; management of ignitable, reactive, and incompatible wastes; ~~closure;~~ preparedness and prevention, and hazards prevention requirements are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Additional Unit-specific information is provided in the following sections.

~~1.2.1Inspections (20 NMAC 4.1.900/40 CFR 270.14[b][5]; 20 NMAC 4.1.500/40 CFR 264.15 and 264.174)~~

~~MSB inspection requirements and procedures are addressed in Attachment C of this module.~~

~~1.2.2~~1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 264.175[b][5]; 20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15[a] and [b])

~~Liquids that might accumulate at the MSB WMAs are contained within portable spill pans. The spill pans are sufficiently impervious to contain leaks, spills, or accumulated precipitation until the liquid is removed, as described in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2002a), in accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00].~~ Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked-up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

~~1.2.3~~1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/ 40 CFR 40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the MSB. Unit personnel employ the practices described in Section 1.1.~~3~~2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). ~~to manage ignitable, reactive, and incompatible wastes.~~Additional Unit-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the bunkers.
- Containers are kept closed during storage at the bunkers.
- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

~~1.2.4Closure (20 NMAC 4.1.500/40 CFR 264, Subpart G)~~

~~MSB closure procedures and requirements are addressed in Attachment F of this module.~~

~~1.2.5~~1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the MSB.

~~1.2.5.1~~1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32~~ and 264.34~~)

The MSB are not equipped with automatic fire suppression systems. As noted in Table ~~1~~2, fire-fighting services are provided by the KAFB fire department tanker trucks. Information on other ~~the~~ required equipment located at the MSB is provided in Section 6 and Table ~~1~~2 ~~Attachment E~~ of this module.

~~1.2.5.2~~1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the MSB is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 ~~Attachment C~~ of this module.

~~1.2.5.3~~1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about~~on~~ the types and locations of communications or alarm systems at the MSB is provided in Section ~~1.1~~1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 ~~Attachment E~~ of this module. Personnel at the Unit typically maintain contact with

the emergency coordinator and other Radioactive and Mixed Waste Management Facility (RMWMF) personnel through 2-way radios or cellular phones.

~~1.2.6~~1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the MSB to prevent hazards. Additional information applicable to the MSB and all other Units at SNL/NM is included in Section ~~1.1~~1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

~~1.2.6.1~~1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

MSB personnel employ the practices described in Section 1.1.4~~6~~.1 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent hazards in unloading. Loading and unloading activities take place on the paved areas immediately outside the bunkers. The surface is sloped gently away from the door, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Containers are typically strapped together or tied down on a pallet before being moved. Containers are moved with a forklift from the storage areas through the access tunnels to the loading areas at each bunker. Containers may be moved with a drum dolly or hand truck within each bunker.

Waste handling personnel work in pairs at the Unit, and maintain contact with one another. Because the Unit is not routinely occupied, personnel are trained to be particularly aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts.

~~1.2.6.2~~1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

Sheet-flow run-on of surface water from surrounding areas and runoff from the MSB are prevented from entering/leaving the WMAs by the design and construction of the bunkers. The MSB are constructed of concrete and covered by earthen materials. The slope of the earthen materials covering the bunkers prevents run-on of storm water or snow melt. The interior roof and side walls of each bunker are protected by a waterproof membrane. In Type B and Type C bunkers, a 6-ft drain tile is located on the exterior perimeter, so any water that percolates through the earthen fill is drained away from the bunkers. The drive at the front of each bunker is level or sloped slightly away from the bunker doors.

~~1.2.6.3~~1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the MSB will affect water supplies, as described in this section (containment) and in Section 1.1.4.3 of

the SNL/NM General Part B (SNL/NM, 200~~2~~3a)~~MSB personnel employ the practices described in Section 1.1.6.3 of the SNL/NM General Part B (SNL/NM, 2002a) to prevent contamination of water supplies.~~

~~1.2.6.~~41.2.4.4 *Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])*

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). RCRA-regulated waste management activities at the MSB will be suspended in response to equipment failures of power outages affecting those WMAs.

Electrical power is not required for the safe operation of the MSB WMAs. Equipment and/or power failures will not result in a loss of RCRA-regulated waste containment.

~~1.2.6.5~~1.2.4.5 *Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])*

MSB personnel employ the practices described in Section 1.1.~~6~~4.5 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent undue exposure.

~~1.2.6.6~~1.2.4.6 *Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)*

MSB personnel employ the practices described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 2002b~~a~~) to prevent releases to the atmosphere.

The WMAs at the MSB are typically used solely for the storage of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the MSB will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.~~6~~4.6 of the SNL/NM General Part B (SNL/NM, 200~~2~~3a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(~~3~~5) [6-14-00].

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

Container storage practices applicable to the MSB are presented in the following sections.

1.3.1 Container Types and Labeling

MSB personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

MSB personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the MSB is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

MSB personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 200~~2a~~3a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than two pallets high. Box-shaped containers may be stacked two high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Capability of Waste with containers (20 NMAC 4.1.500/40 CFR 264.172)

MSB personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 2002~~3a~~3a).

~~1.4 Treatment Operations~~

~~Sandia/DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the MSB.~~

~~2.0 OTHER FEDERAL LAWS~~

~~A discussion of federal laws, as required by 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], is provided in Section 2.0 of the SNL/NM General Part B (SNL/NM, 2002a).~~

~~ATTACHMENT A~~

~~UNIT DESCRIPTION FOR THE MANZANO STORAGE BUNKERS~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... MSB-A-ii~~
~~ACRONYMS AND ABBREVIATIONS ..... MSB-A-iii~~
~~A.1 MSB General Unit Description ..... MSB-A-1~~
~~A.2 SECURITY PROCEDURES AND EQUIPMENT ..... MSB-A-2~~
~~A.2.1 Barriers and Means to Control Entry ..... MSB-A-2~~
~~A.2.2 Warning Signs ..... MSB-A-2~~
~~A.3 Traffic Pattern, Volume, and Controls ..... MSB-A-2~~
~~A.3.1 Traffic Patterns ..... MSB-A-2~~
~~A.3.2 Traffic Volumes ..... MSB-A-3~~
~~A.3.3 Traffic Control Signals ..... MSB-A-3~~
~~A.4 Unit Location Information ..... MSB-A-3~~
~~A.4.1 Seismic Standard ..... MSB-A-3~~
~~A.4.2 Floodplain Standard ..... MSB-A-3~~
~~A.5 Topographic Maps ..... MSB-A-3~~
~~A.6 Groundwater Monitoring ..... MSB-A-4~~
~~reference ..... MSB-A-5~~

LIST OF FIGURES

Figure No.	Title
A-1	Location of the Manzano Storage Bunkers at Sandia National Laboratories/New Mexico
A-2	Manzano Storage Bunkers, Layout
A-3	Manzano Storage Bunkers, Traffic Routes and Controls
A-4	Topographic Map, Manzano Storage Bunkers
A-5	Manzano Storage Bunkers, Access Control Features
A-6	Manzano Storage Bunkers, Drainage Control Features

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~ft~~	~~foot/feet~~
~~MSB~~	~~Manzano Storage Bunkers~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~TA~~	~~Technical Area~~
~~Unit~~	~~RCRA-regulated waste management unit~~
~~WMA~~	~~waste management area~~

2.0 UNIT DESCRIPTION AND INFORMATION ~~FOR THE MANZANO STORAGE BUNKERS~~

The information provided in this section ~~attachment~~ is submitted to address ~~in accordance with~~ the applicable requirements of the ~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts I–IX (~~20 NMAC 4.1.100–.900/~~), revised June 14, 2000~~ [6-14-00]. ~~20 NMAC 4.1.100–.900 adopted by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 260 through 266, 268, and 270 (~~40 CFR 260–266, 268, and 270.~~).~~ The following subject areas are addressed in this section ~~attachment~~:

- ~~A general description of the Manzano Storage Bunkers (MSB) at Sandia National Laboratories/New Mexico (SNL/NM) (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);~~

- ~~Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (~~Unit~~)~~-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);

- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);

- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);

- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and

- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/40 CFR 270.14[c] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of ~~the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the~~ SNL/NM General Part B (SNL/NM, 2002~~c~~3b).

~~A.1 MSB General Unit Description (20 NMAC 4.1.900/40 CFR 270.14[b][1])~~

~~The MSB are located within the fenced Manzano Base, approximately 1 mile east of the exit road leading to the entrances to Technical Areas (TAs) III and V and at the end of Pennsylvania Avenue (Figure 1 A-1). Entrance to the MSB, whether by personnel or vehicles, is through one gate. A Unit layout for the MSB is provided on Figure 2A-2.~~

~~The MSB RCRA-regulated waste management areas (WMAs) addressed in this permit application include Bunkers 37034, 37045, 37055, 37057, 37063, 37078, and 37118.~~

~~The MSB RCRA-regulated waste management practice addressed in this module is container storage of RCRA-regulated wastes.~~

~~Descriptions of the MSB WMAs and associated structures and procedures are provided in Section 1.0 of this module.~~

2.1 ~~A.2~~ Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the MSB.

2.1.1 ~~A.2.1~~ Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

~~The design and operation of the MSB fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].~~

The doors of the individual bunkers are locked except when personnel are present. As noted in Appendix A of the General Part B (SNL/NM, 200~~2c~~3b), Sandia security personnel periodically monitor the SNL/NM RCRA-regulated Units during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the MSB WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The MSB are located within the Manzano Base area. The Manzano Base is surrounded by ~~four~~ 8-ft, chain-link fences (Figures 1, 2, and 8). Entrance to the Manzano Base area, whether by personnel or vehicles, is through one controlled gate. Manzano Base access control procedures are designed to assure that only properly authorized persons, vehicles, and property are allowed access to the bunkers.

2.1.2 ~~A.2.2~~ Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The entrance to each bunker is posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from the paved access road approach to the MSB. Additional signs are not necessary because employees and visitors do not approach the MSB from any other direction.

2.2~~A.3~~ Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 ~~A.3.1~~ Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the MSB include Wyoming Boulevard, ~~O Street,~~ and Pennsylvania Avenue as shown on Figure A-4 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b). Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. The MSB are located approximately 1 mile east of the exit road leading to the entrance of TA-III and TA-V and at the end of Pennsylvania Avenue. Within Manzano Base, waste is transported to the MSB on 2-lane asphalt-paved roads~~surfaces~~ (Figure 6~~A-3~~).

2.2.2 ~~A.3.3~~ Traffic Volumes

Traffic volumes on Wyoming Boulevard, ~~O Street,~~ and Eubank Boulevard are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 10 vehicles typically travel to the MSB per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the MSB.

2.2.3 ~~A.3.3~~ Traffic Control Signals

A stop sign is located approximately 50 ft west of the Manzano Base entrance gate. Traffic control signals within Manzano Base include stop signs, yield signs, and posted speed limits. Traffic routes and controls at Manzano Base are shown on Figure 6~~A-3~~.

2.3~~A.4~~ Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 ~~A.4.1~~ Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii] and 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the MSB are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 ~~A.4.2~~ Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the MSB are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A ~~[SNL/NM, 2002c]~~ of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4~~A.5~~ Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).~~;~~

- Surface waters, including intermittent streams, near the MSB are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 7~~A-4~~ of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).~~;~~

- Surrounding land uses are shown on Figures A-2~~9~~ and A-8~~10~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the MSB is occupied by test facilities.~~;~~

- Wind roses for SNL/NM are shown on Figure A-2~~8~~ in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) ~~and Figure A-4 of this attachment~~(20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).~~;~~

- Legal boundaries of SNL/NM (including the MSB) are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).~~;~~

- Access control features at the MSB (e.g., fences, gates) are shown on Figure 8~~A-5~~ of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).~~;~~

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the MSB are shown on Figure A-2 in Appendix A ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 7~~A-4~~ of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).~~;~~

- Locations of Manzano Base and the MSB WMAs, access roads, and loading and unloading areas are shown on Figure 8~~A-5~~ of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).~~;~~ There are no sanitary sewers in the vicinity of the MSB.

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 9~~A-6~~ of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).~~; and~~

- Locations of Manzano Base and MSB WMAs are shown on Figure~~s A-1, A-2, and A-4~~7 of ~~this attachment~~this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the MSB. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the ~~New Mexico Environment Department~~ NMED at these scales and contour intervals due to the size of the MSB, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5~~A.6~~ Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c] and 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The MSB is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor are the MSB likely to affect groundwater quality during normal operations or during unusual events.

~~9.0 reference~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix A (Site-Wide Description for Sandia National Laboratories/New Mexico) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories, New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~3.0 CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS~~

~~The information provided in this section is submitted to address the applicable solid waste management unit (SWMU) requirements of 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00].~~

~~The MSB are not SWMUs listed in the Hazardous and Solid Waste Amendments (HSWA) module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Corrective actions for any releases of RCRA-regulated waste or constituents that are necessary to protect human health and the environment are performed in compliance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00], and the permit conditions in the HSWA module of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992).~~

~~SWMUs are addressed in Part 4 of this comprehensive Part B permit request.~~

~~ATTACHMENT B~~

~~WASTE ANALYSIS PLAN FOR THE MANZANO STORAGE BUNKERS~~

3.0 WASTE ANALYSIS PLAN ~~FOR THE MANZANO STORAGE BUNKERS~~

In accordance with ~~the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(2)~~ (40 CFR 270.14[b][2]~~);~~, 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"~~; and~~, and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping~~,~~" ~~revised June 14, 2000~~ [6-14-00], waste analysis requirements applicable to all ~~Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-regulated waste management u~~ Units, including the MSB ~~Manzano Storage Bunkers~~, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2002~~e~~3b). ~~(SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix B (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT C~~

~~INSPECTION PLAN FOR THE MANZANO STORAGE BUNKERS~~

4.0 INSPECTION PLAN ~~FOR THE MANZANO STORAGE BUNKERS~~

~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14[b][5] (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], inspection requirements applicable to all Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management units, including the Manzano Storage Bunkers, are addressed in Appendix C (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] required that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). Unit personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 1, with the inspection criteria and frequency.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) is maintained at the ~~Radioactive and Mixed Waste Management Facility (~~RMWMF~~)~~. Inspection records for the current calendar year are maintained at each bunker. Inspection records for previous calendar years are maintained at the RMWMF or the SNL/NM Records Center.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix C (Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

Table 1
Manzano Storage Bunker Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Portable eye wash	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, quantities per inventory, accessible, in good condition	Monthly
Smoke alarm	Present	Monthly
Fire extinguisher	Present, charged, accessible, and in good condition	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Bunker floor	Clean, no spills or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Bunker walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Bunker ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Bunker lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (2 maximum)	Daily for individual containers that were handled. Weekly otherwise.

~~ATTACHMENT D~~

~~PERSONNEL TRAINING PLAN FOR THE MANZANO STORAGE BUNKERS~~

5.0 PERSONNEL TRAINING ~~PLAN FOR THE MANZANO STORAGE BUNKERS~~

Training requirements for Unit personnel are specified in ~~In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~20 NMAC 4.1.900~~)~~, ~~adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(12) (~~40 CFR 270.14[b][12]~~)~~, and 20 NMAC 4.1.500/40 CFR 264.16 [6-14-00], "Personnel Training.~~,~~" ~~revised June 14, 2000, training requirements for Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act-regulated waste management unit workers, including those who work at the Manzano Storage Bunkers (MSB), are addressed in Appendix D (SNL/NM, 2002) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0.~~ The Sandia/DOE training program ~~isdesignedis~~ designed and implemented to prepare personnel to operate and safely maintain those areas used for managing RCRA-regulated waste at the MSB.

All job descriptions identified in Appendix D, ~~–~~Table D-2 of the SNL/NM General Part B (SNL/NM, 2002~~c~~3a) are applicable at the MSB. MSB personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act- Regulated Waste Management Units" as provided in Appendix D of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b).

Training records for MSB personnel are maintained at the Radioactive and Mixed Waste Management Facility at SNL/NM.

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix D (Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act–Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT E~~

~~CONTINGENCY PLAN FOR THE MANZANO STORAGE BUNKERS~~

6.0 CONTINGENCY PLAN ~~FOR THE MANZANO STORAGE BUNKERS~~

~~The Unit-specific Contingency Plan information provided in this attachment supplements the site-wide Contingency Plan information in Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico [SNL/NM] Resource Conservation and Recovery Act [RCRA]-Regulated Waste Management Units) (Site-wide Contingency Plan; SNL/NM, 2002a) of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application."~~

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia/DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2002~~c~~3b). Supplemental MSB-specific information is included in this section, Figures 10-12, and in Tables 2 and 3 of this module.

The U.S. Department of Energy and Sandia Corporation use the seven bunkers ~~(i.e., the Manzano Storage Bunkers [MSB]) at the Manzano Base~~ of the MSB to store containers of RCRA-regulated waste. The MSB are located approximately 1 mile east of the ~~exit~~ road leading to the entrance of ~~Technical Areas~~ TA-III and -V at the end of Pennsylvania Avenue. The ~~waste management areas (~~WMAs~~)~~ at the MSB include: Type B bunkers (37034 and 37063); Type C bunkers (37078 and 37118); and Type D bunkers (37045, 37055, and 37057). Bunkers are constructed of concrete (walls, roof, and floor) and are covered by earthen materials.

RCRA-regulated wastes bearing the U.S. EPA ~~Environmental Protection Agency Hazardous Waste Numbers~~ listed in the ~~"Sandia National Laboratories/New Mexico~~ General Part A Permit ~~Renewal Request/Application," Revision 1.0~~ (SNL/NM, 2002~~b~~), may be stored at the MSB WMAs. Waste is segregated based on compatibility groups within each bunker.

Figure 10~~E-1~~ presents evacuation routes for the MSB. Figures 11~~E-2~~ and 12~~E-3~~ present emergency response and access information ~~necessary to access~~ for the MSB. Table 2~~E-1~~ lists the emergency equipment typically available at the MSB. Table 3~~E-2~~ lists the emergency coordinators for the MSB.

Current copies of ~~this Unit-specific~~ the Site-Wide Contingency Plan ~~and the Site-wide Contingency Plan (SNL/NM, 2002a)~~and this supplemental information are maintained at each bunker, at the ~~Radioactive and Mixed Waste Management Facility~~ RMWMF and at the SNL/NM Emergency Operations Center.

Table 2~~E-1~~
Manzano Storage Bunkers,
Emergency Equipment and Locations

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	~~Absorbents~~ Portable Eyewash	~~By inner door inside each bunker~~ By inner door inside each bunker
	Absorbents	By inner door inside each bunker
Internal Communication and Alarm System	Voice c~~C~~ommand~~s~~ Portable 2-way radio ~~Smoke Alarms~~	Operating personnel typically carry radios.~~Smoke detectors and alarms inside each bunker~~ ~~Strobe light on front outside each bunker~~
	Smoke Alarms	• Smoke detectors and alarms inside each bunker • Strobe light on front outside each bunker
External Communication System	Mobile Telephone or Portable Radio	Taken to bunkers by personnel
Fire Extinguishers	Portable (A-B-C)	By entrance door outside each bunker
Fire Suppression	Water to Extinguish Fires	Kirtland Air Force Base (KAFB) tanker truck at the KAFB fire station in the Manzano ~~Base~~ administrative area

Table 3~~E-2~~
Manzano Storage Bunkers,
Facility Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Jeff Jarry Sandia National Laboratories P. O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
~~Second Alternate~~	~~Gloria Chavez~~ ~~Sandia National Laboratories~~ ~~P.O. Box 5800~~ ~~Albuquerque, NM 87185~~	~~(505) 845-8737 (office)~~ ~~(505) 540-4038 (pager)~~	~~(505) 281-4074~~
Second ~~Third~~ Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of these listed personnel are routinely available at the Radioactive and Mixed Waste Management Facility during normal work hours (7:00 am to 5:30 pm, Monday through Thursday) and can be contacted by radio or telephone during those hours.

The emergency coordinators are informed of planned work activities at the beginning of each work day; this includes activities at Units that are not routinely staffed (such as the MSB).

~~REFERENCES~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002a, Appendix E (Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002b, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

~~ATTACHMENT F~~

~~CLOSURE PLAN FOR THE MANZANO STORAGE BUNKERS~~

~~TABLE OF CONTENTS~~

~~LIST OF FIGURES ..... MSB-F-II~~
~~ACRONYMS AND ABBREVIATIONS ..... MSB-F-iii~~
~~F.1 Unit Description ..... MSB-F-1~~
~~F.2 Estimate of Maximum Waste in Storage ..... MSB-F-1~~
~~F.3 Closure Conditions ..... MSB-F-1~~
~~Reference ..... MSB-F-2~~

~~LIST OF FIGURES~~

~~Figure No.~~ ~~Title~~

~~F-1 Manzano Storage Bunkers, Resource Conservation and Recovery Act-Regulated Waste Management Areas~~

~~ACRONYMS AND ABBREVIATIONS~~

~~20 NMAC 4.1.*X*00~~	~~New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*~~
~~40 CFR 2*XX.XX*~~	~~Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*~~
~~MSB~~	~~Manzano Storage Bunkers~~
~~RCRA~~	~~Resource Conservation and Recovery Act~~
~~SNL/NM~~	~~Sandia National Laboratories/New Mexico~~
~~Unit~~	~~RCRA-regulated waste management unit~~

7.0 CLOSURE PLAN ~~FOR THE MANZANO STORAGE BUNKERS~~

~~The information provided in this Closure Plan is submitted to address the applicable closure requirements specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (~~Applicable closure requirements are specified in 20 NMAC 4.1.900/~~)~~, ~~adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(13) (~~40 CFR 270.14[b][13]~~)~~, and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I~~, revised June 14, 2000~~ [6-14-00]. ~~This Closure Plan describes the activities necessary to close the Sandia National Laboratories/New Mexico (SNL/NM) Manzano Storage Bunkers (MSB).~~ General closure information applicable to all ~~Resource Conservation and Recovery Act (RCRA) waste management units (~~Units~~)~~ at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F ~~(SNL/NM, 2002)~~ of the ~~"Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, hereinafter referred to as the~~ SNL/NM General Part B (~~SNM~~SNL/NM, 2002~~c~~3b). The general closure information ~~referenced~~ includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; ~~closure cost estimate, financial assurance, and liability requirements;~~ closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

~~7.1F.1 Unit Description~~

~~The MSB are located approximately 1 mile east of the exit road to the entrance to Technical Areas III and V. The MSB include seven storage structures used to store RCRA-regulated wastes. The RCRA-regulated waste storage locations at the MSB are shown on Figure F-1.~~

7.1 ~~F.2~~ Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time in the MSB is approximately 176,000 gallons of liquids and/or solids. WMAs are located at the bunkers shown in Figure 2.

7.2 ~~F.3~~ Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F ~~(SNL/NM, 2002c)~~ of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the MSB:

- RCRA-regulated waste handling activities involving the opening of waste containers at the MSB were confined to the interiors of the bunkers. If contamination occurred, it would have been confined to those areas; and

- The interior walls and floors of RCRA-regulated waste management areas were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

~~REFERENCE~~

~~Sandia National Laboratories/New Mexico (SNL/NM), 2002, Appendix F (Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.~~

~~SNL/NM, see Sandia National Laboratories/New Mexico.~~

8.0 TREATMENT PLAN

Sandia/DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the MSB.

~~4.0~~ 9.0 REFERENCES

~~New Mexico Environment Department (NMED), 1992, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1," effective August 6, 1992, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.~~

~~NMED, see New Mexico Environment Department.~~

Sandia National Laboratories/New Mexico (SNL/NM), 2002~~b~~, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 200~~2a~~3a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), ~~2002c~~2003b, Appendices~~x~~ A-F~~B~~ (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

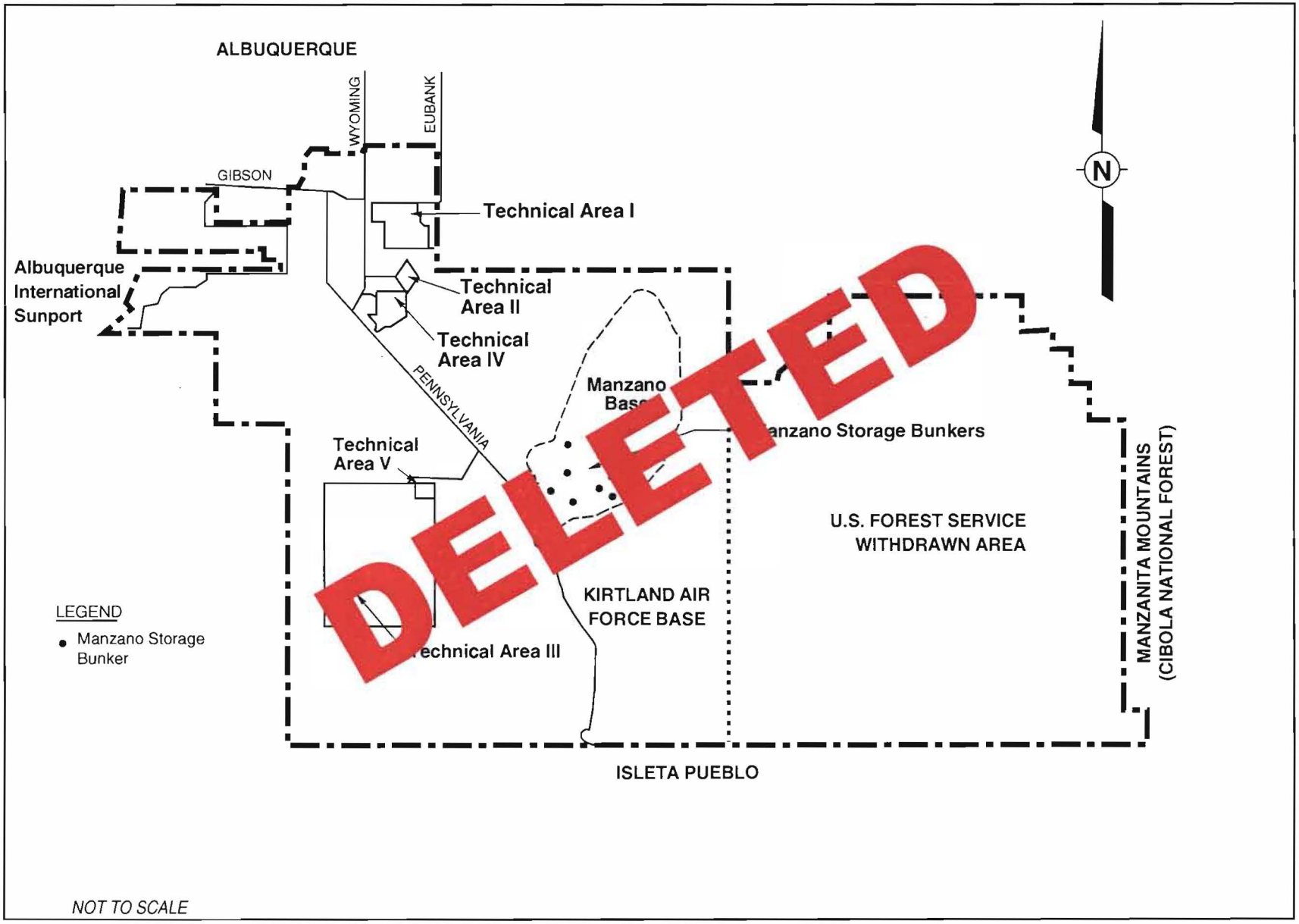


Figure A-1
Location of the Manzano Storage Bunkers at Sandia National Laboratories/New Mexico

774470.14000000 A20

Figure A-2
Manzano Storage Bunkers, Layout

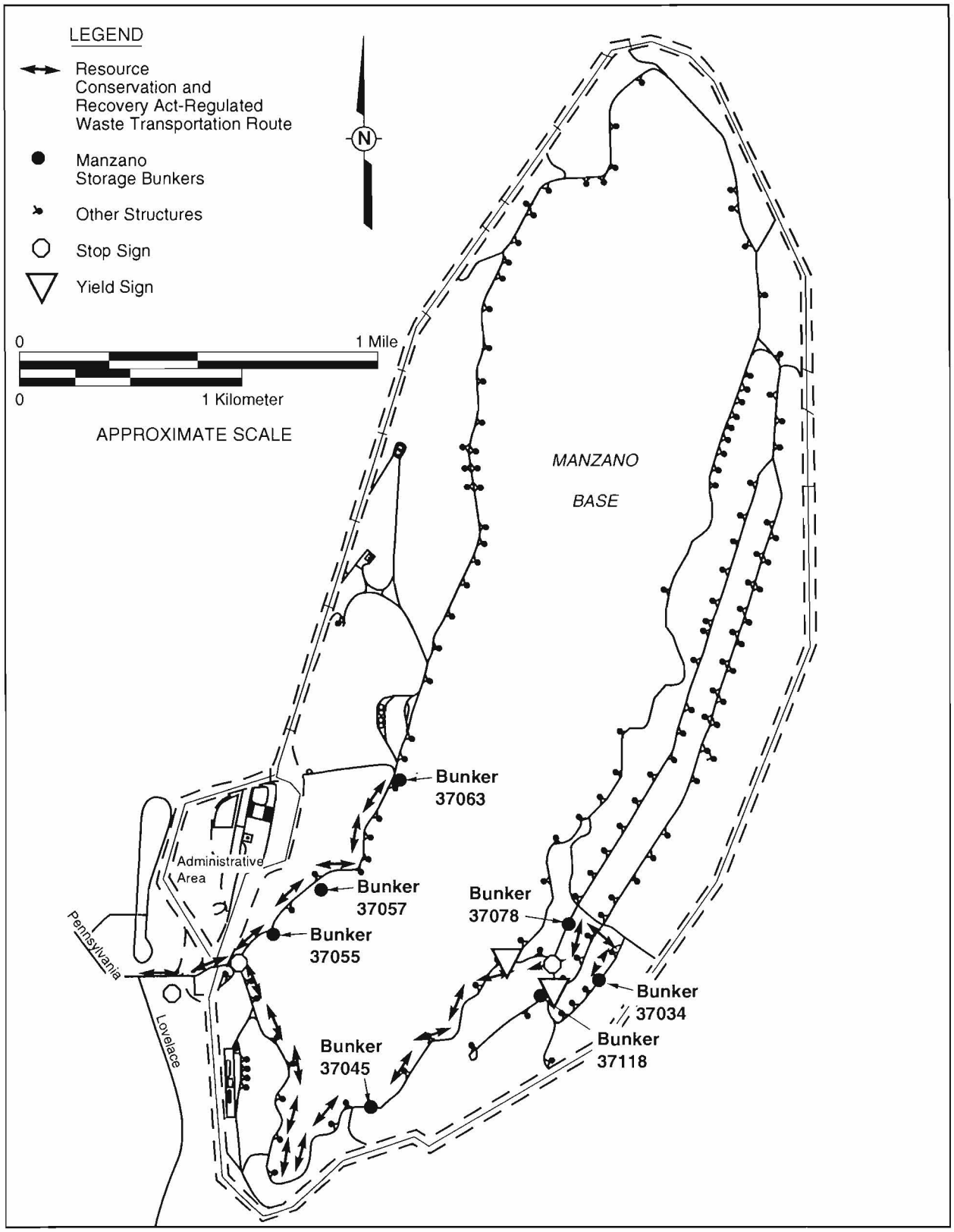


Figure ~~A-3~~ 6

Manzano Storage Bunkers, Traffic Routes and Controls

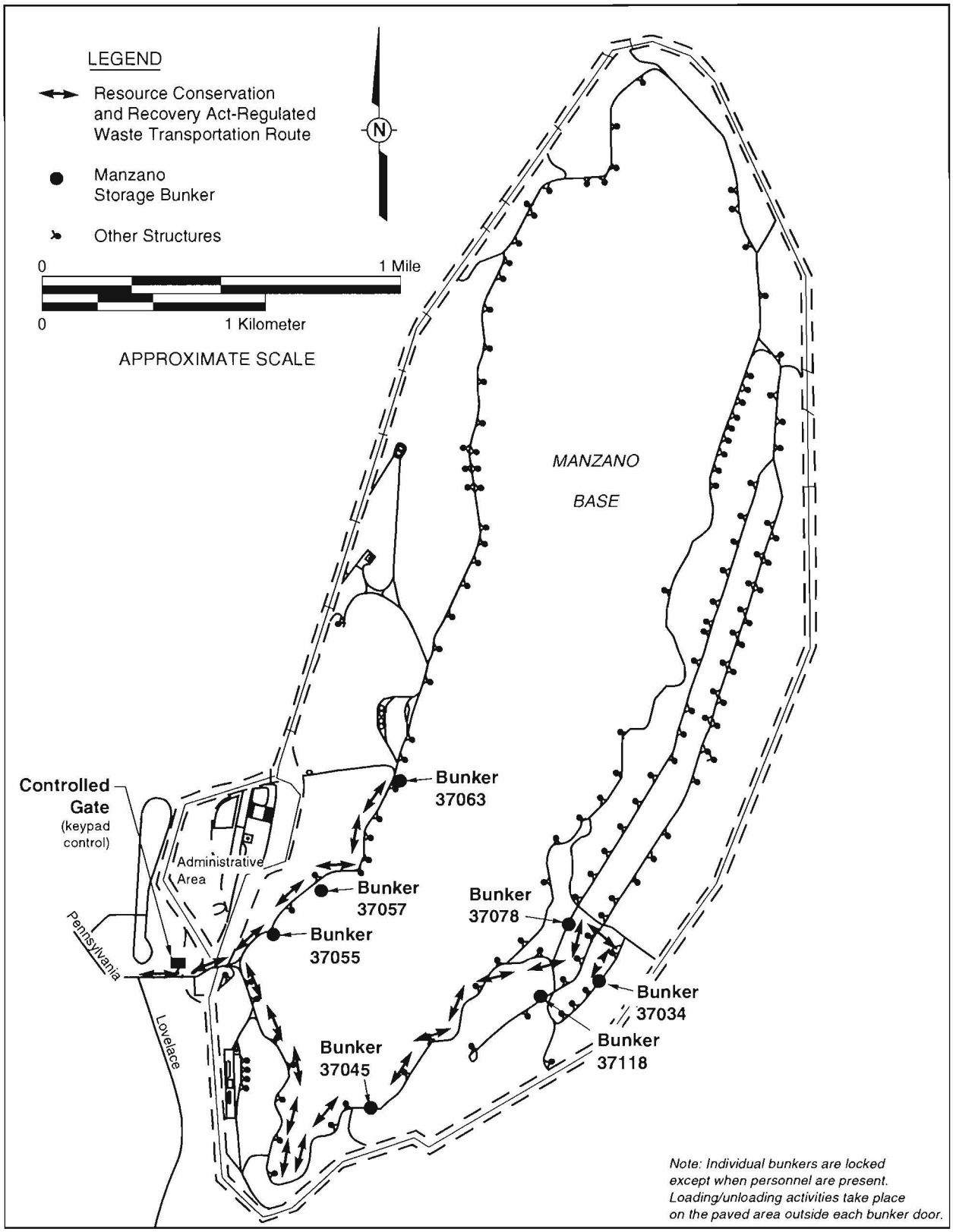


Figure ~~A-5~~ 8

Manzano Storage Bunkers, Access Control Features

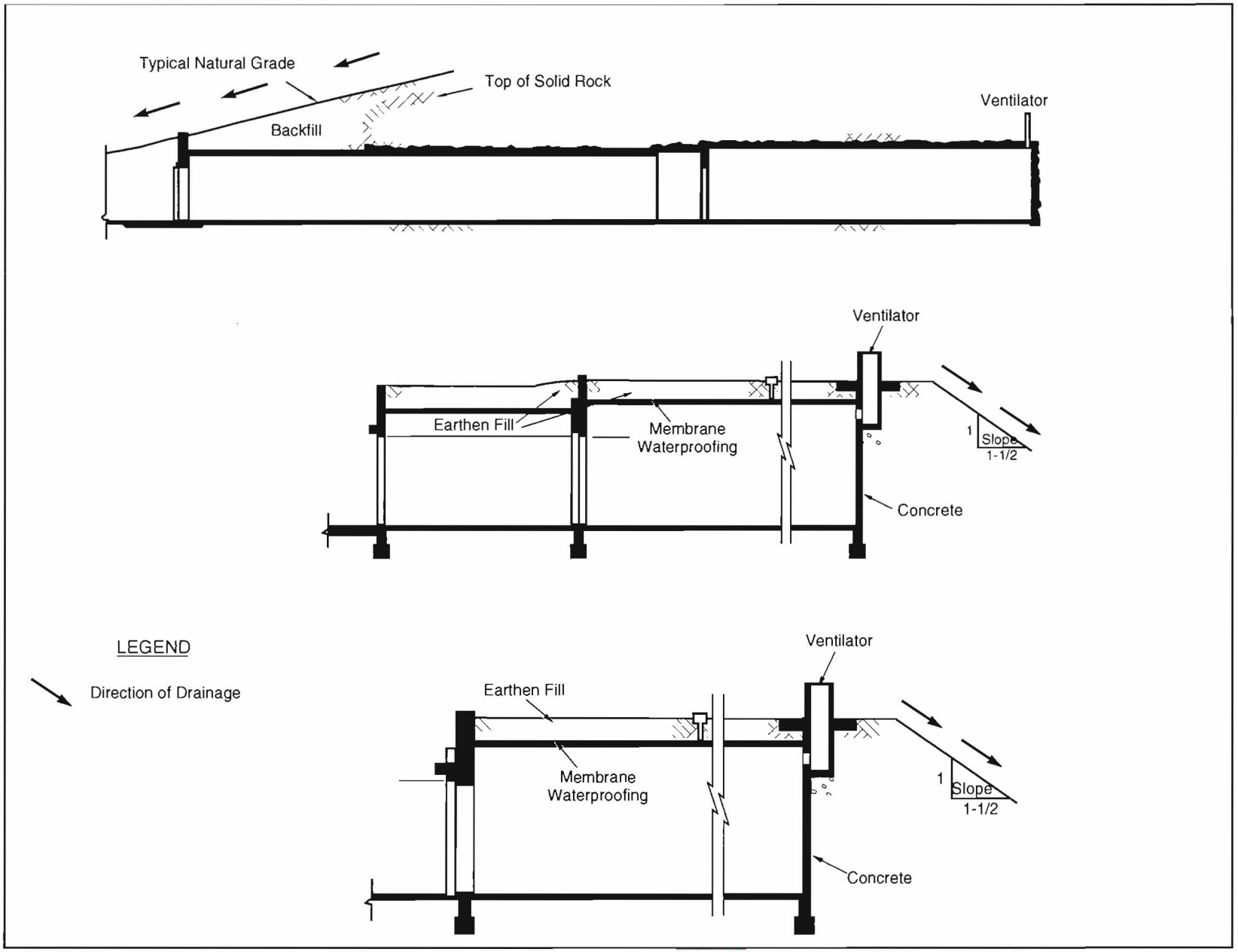


Figure ~~A-6~~ 9
Manzano Storage Bunkers, Drainage Control Features

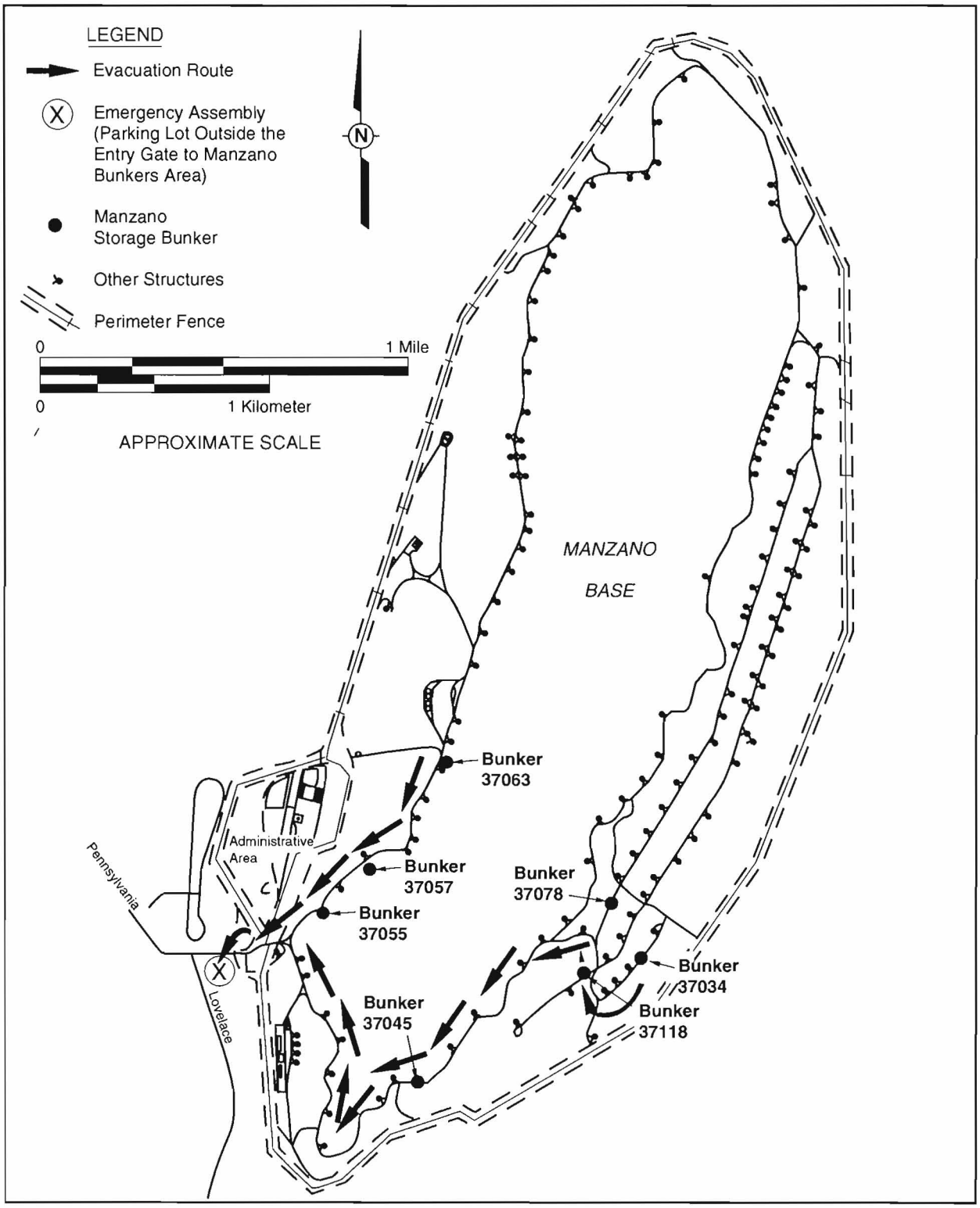


Figure ~~E-1~~10

Manzano Storage Bunkers, Evacuation Routes

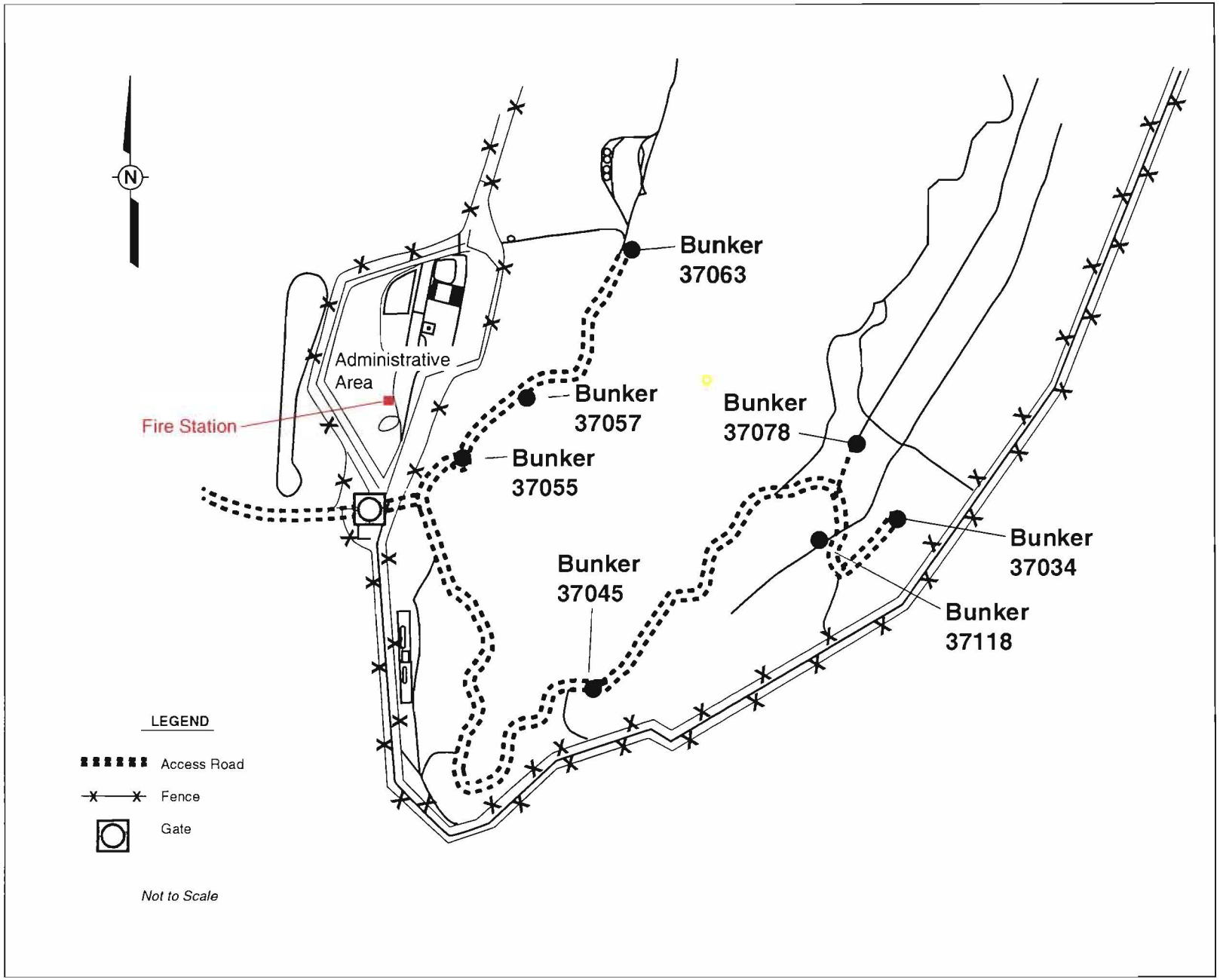


Figure ~~E-2~~ 11

Emergency Response and Access Information in the Vicinity of the Manzano Storage Bunkers

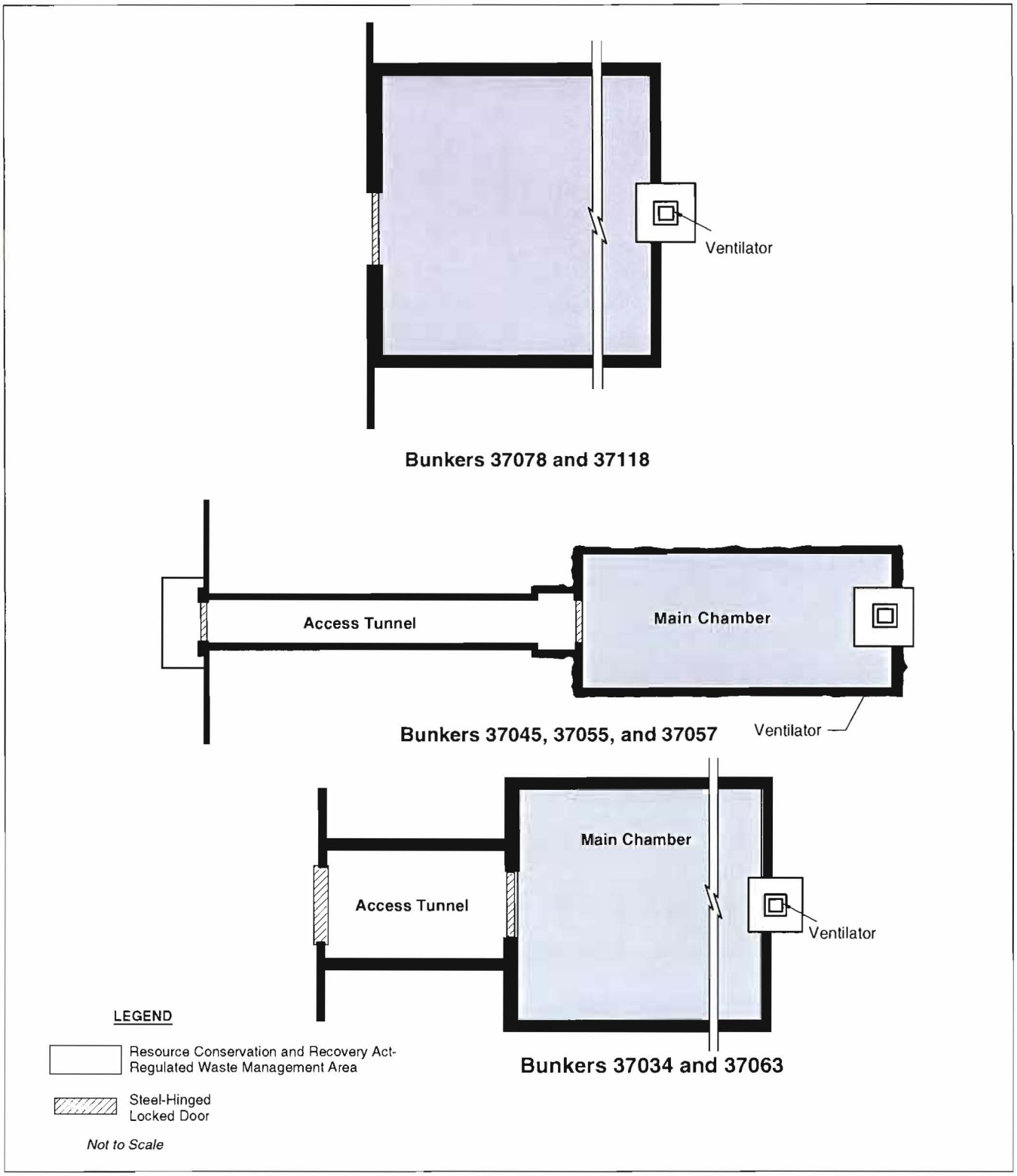


Figure ~~E-3~~ 12

Emergency Response and Access Information at the Manzano Storage Bunkers

Figure F-1
Manzano Storage Bunkers,
Resource Conservation and Recovery Act-
Regulated Waste Management Areas

774470.14000000 A74

PART 3

ADDITIONAL INFORMATION REQUIREMENTS
PROTECTION OF GROUNDWATER

This part addresses information required by ~~20.4.1.900 NMAC,~~ 20 NMAC 4.1.900/40 CFR 270.14(c), "Additional information requirements." This provision requires additional information related to protection of groundwater for facilities containing a regulated unit. A regulated unit, defined in ~~20.4.1.500 NMAC,~~ 20 NMAC 4.1.500/40 CFR 264.90(a)(2), is a surface impoundment, waste pile, and land treatment unit or landfill that received hazardous waste after July 26, 1982.

Using this definition, the Chemical Waste Landfill (CWL) qualifies as a regulated unit. The CWL is an inactive landfill located in the southeastern corner of Technical Area (TA) III at Sandia National Laboratories in New Mexico (SNL/NM).

The CWL qualified for interim status under ~~20.4.1.900 NMAC,~~ 20 NMAC 4.1.900/40 CFR 270.70 and is now closing under interim status. The closure process is governed by the ~~Chemical Waste Landfill~~ CWL Final Closure Plan and Post-Closure Permit Application (SNL/NM, December 1992), fulfilling the requirements of ~~20.4.1.600 NMAC,~~ 20 NMAC 4.1.600/40 CFR 265 Subpart G. The approved CWL Closure Plan contains the details of the groundwater monitoring program.

~~1.0 INTRODUCTION~~

~~This part provides information required by 20 NMAC 4.1.900, 40 CFR 270.14(c), *Additional information requirements*. This provision 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 surface impoundment, waste pile, and land treatment unit or landfill that received hazardous waste after July 26, 1982.~~

~~Using this definition, the Chemical Waste Landfill (CWL) qualifies as a regulated unit. The CWL is an inactive landfill located in the southeastern corner of Technical Area III at Sandia National Laboratories in New Mexico (SNL/NM). Disposal activities at the CWL were conducted from 1962 until 1985. Separate, shallow, unlined pits were used for the disposal of a variety of hazardous wastes.~~

~~The CWL qualified for interim status under 20 NMAC 4.1.900, 40 CFR 270.70 and is now closing under interim status. The closure process is governed by the Chemical Waste Landfill Final Closure Plan and Post-Closure Permit Application (SNL/NM, December 1992). The CWL Closure Plan and its modifications contain the details of the groundwater monitoring program and also establish a corrective action program. The corrective action includes the performance of two voluntary corrective measures (VCMs)—a vapor extraction (VE) VCM (now completed) and a landfill excavation (LE) VCM (nearing completion).~~

~~Because the CWL is closing under interim status, many of the requirements associated with a permitted unit are not applicable. The additional information requirements (20 NMAC 4.1.900,~~

~~40 CFR 270.14(c)) addressed in this appendix primarily are related to permitted units, referring to provisions of 20 NMAC 4.1.500, 40 CFR 264. As an interim status unit, the CWL has not been subject to these requirements for permitted units and some of the information required for permitted units is not available. Nonetheless, Sandia/DOE have compiled CWL information that corresponds as closely as possible to the additional information requirements of 20 NMAC 4.1.900, 40 CFR 270.14(c). The information presented is intended only to satisfy the additional information requirements of 20 NMAC 4.1.900, 40 CFR 270.14(c); as a unit closing under interim status, the CWL is not subject to permitting and is not included in this permit application as an operating RCRA-regulated waste management unit.~~

~~The CWL groundwater information is summarized in the sections that follow. Detailed information has been submitted routinely to the New Mexico Environment Department (NMED) since the inception of groundwater monitoring in 1985. Additional details can be found in the references of primary submittals containing CWL groundwater information.~~

~~2.0 ADDITIONAL INFORMATION REQUIREMENTS~~

~~270.14(c)(1) Summary of Groundwater Monitoring Data~~

~~The constituents of concern for CWL groundwater are trichloroethylene (TCE) and chromium. TCE has been detected in the groundwater since January 1990. The maximum concentration of TCE detected has been 31 micrograms per liter (µg/L). When the VE VCM, designed to remove TCE vapor from the vadose zone, was completed in 1998, the level of TCE in groundwater decreased to well below the maximum contaminant level (MCL) of 5 µg/L. Chromium has been detected in the groundwater at a maximum concentration of 690 µg/L in background monitoring well CWL-BW 3. The MCL for chromium is 100 µg/L. The chromium has been found only in wells with stainless steel screens that were installed at the landfill. Sandia and DOE have researched this issue and found a number of other installations where the presence of this metal is due to the corrosion of the stainless steel screen in the wells. Nickel, another component of stainless steel, has also been found in these wells at concentrations above the MCL. With one exception of a detection slightly above the MCL level, chromium has not been detected above the MCL since late1996 at the CWL.~~

~~240.14(c)(2) Identification of Aquifers~~

~~The groundwater beneath the CWL occurs in the heterogeneous sediments under locally semi-confined conditions. The water table is at approximately 490 feet (ft) below ground surface (bgs). The uppermost aquifer consists of interbedded clays, silts, and sands of low permeability. The second significant water-bearing zone, which occurs approximately 25 ft below the uppermost aquifer, has higher (a few orders of magnitude) permeability resulting from a higher percentage of sand and gravel layers in these strata. The groundwater flow is to the northwest at a rate of about 1 ft/yr. The groundwater level is declining at a rate of about 0.85 ft/year (yr) at the CWL.~~

~~270.14(c)(3) Location of Landfill and Monitoring Wells~~

~~The location of the CWL is shown on the facility-wide topographic map, Figure A-2 of the SNL/NM General Part B, Part 2. Figure 1 shows the property boundary and the locations of the monitoring wells at the CWL. No point of compliance has been established for the CWL.~~

~~270.14(c)(4) Description of Plume~~

~~Figure 2 shows the extent of the TCE plume in groundwater as of February 1997, prior to the vapor extraction VCM. Figure 3 shows the TCE concentrations as of February 2001, after the vapor extraction VCM was completed.~~

~~270.14(c)(5) Description of Groundwater Monitoring Program~~

~~Groundwater monitoring at the CWL started in 1985 with the installation of five monitoring wells. These wells were installed to establish a detection-well network around the CWL. These wells were installed at various depths (445 to 980 ft bgs), but the NMED determined that these wells were inadequately constructed for monitoring wells, particularly because of the well screen lengths. In 1988, four more wells were installed to replace the 1985 wells and a fifth well was installed in 1990. All of these new wells were approved for monitoring by the NMED.~~

~~The first detection of TCE at 7.3 µg/L occurred in January 1990. The monitoring wells were then placed on an assessment-monitoring program. Due to the discovery of TCE, the NMED issued a notice of violation, which resulted in the completion of the Compliance Agreement Report (CAR) that details the activities associated with performing a 30-day aquifer test. The NMED wanted the test done to gain observation-well data and to provide an interim measure for the groundwater contamination. Difficulty in obtaining these data resulted from the low permeability of the aquifer, the distance between wells, and the low flow rate (SNL/NM, October 1995).~~

~~The NMED conditionally approved the CAR in September 1991, stating that further characterization of the groundwater was necessary to determine the vertical gradient and the lateral and vertical extent of the TCE plume and the aquifer. These requirements resulted in the development of Section 7.0 of the Closure Plan (approved in February 1993) and the Groundwater Assessment Plan (approved in November 1993). Five additional monitoring wells were installed between January and June 1994, of which three were completed at two intervals. These wells and the wells installed in 1988 and 1990 became part of the quarterly groundwater monitoring program in August 1995 (SNL/NM, October 1995).~~

~~Until 1990, all groundwater sampling at the CWL was conducted on a quarterly basis in accordance with 40 CFR 265.92(c). Because no contaminants above EPA's drinking water standards had been detected in the wells until early in 1990, the NMED approved a reduction in the sampling frequency from quarterly to semi-annually for groundwater contamination indicator parameters and annually for groundwater quality parameters. That same year, TCE was detected above the MCL in the groundwater and later confirmed through re-sampling. The NMED reinstated the quarterly sampling requirement based on these results.~~

~~The wells have been sampled quarterly according to the Sampling and Analysis Plan for Groundwater Assessment Monitoring at the CWL (Appendix G of the Closure Plan). After the~~

~~implementation of the VE VCM in 1997 through 1998, TCE was detected below the MCL for the next nine consecutive quarters. In May 2000, the NMED granted permission to reduce the sampling frequency from quarterly to semi-annually for contamination indicator parameters (volatile organic compounds and metals). Every other year, samples are also collected and analyzed for semi-volatile organic compounds, polychlorinated biphenyls, cyanide, and sulfide.~~

~~In February 1997, revisions to Appendix G were submitted as a modification to the Closure Plan. In March 1998, the NMED issued a request for supplemental information (RSI) for the modification. Sandia and DOE submitted the response to the RSI in June 1998, but to date, the modification has not been fully approved. One outstanding issue is the use of the low-flow sampling technique. Beginning in February 2002, Sandia and DOE will re-implement the approved Appendix G methodology for well purging.~~

~~Regulatory schedules for monitoring and reporting are set and agreed to by the NMED and are presented in the Closure Plan. These schedules are updated as needed in the modifications to the Plan.~~

~~270.14(c)(6) Detection Monitoring Program~~

~~The information requirements of this section are not applicable to the CWL.~~

~~270.14(c)(7) Compliance Monitoring Program~~

~~Because the CWL is an interim status unit, the groundwater monitoring program is an assessment monitoring program (not compliance monitoring). The summary of the groundwater monitoring program is provided for Section 270.14(c)(5) above.~~

~~270.14(c)(8) Corrective Action Program~~

~~A corrective action program has been included as part of the CWL closure, as documented in the CWL Closure Plan. Two VCMs, vapor extraction and landfill excavation, have been conducted as part of the corrective action program. Because the CWL is an interim status unit, the requirements of 20 NMAC 4.1.500, 40 CFR 264.100 are not applicable. The corrective action program has been tailored to incorporate remediation activities into the interim status closure process (see Chapter 12 of the CWL Closure Plan).~~

REFERENCES

Sandia National Laboratories/New Mexico (SNL/NM), December 1992. The Chemical Waste Landfill Closure Plan and Post-Closure Permit Application, Sandia National Laboratories, Albuquerque, New Mexico.

~~The following references identify detailed CWL groundwater information previously submitted to the NMED.~~

~~IT Corporation (IT), December 1995. RCRA Interim Status Groundwater Monitoring Plan Chemical Waste Landfill, IT Corporation, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), February 1989. Calendar Year 1988 Groundwater Monitoring Program for the Annual Report for the Chemical Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), February 1990. Calendar Year 1989 Groundwater Monitoring Program Annual Report: Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), August 1990. Report on the Installation of the MW-4 at the Chemical Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1991. Annual Groundwater Monitoring Report for the Chemical Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1992. Calendar Year 1991 Groundwater Monitoring Program Annual Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), December 1992. The Chemical Waste Landfill Closure Plan and Post-Closure Permit Application, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1993. Calendar Year 1992 Groundwater Monitoring Program Annual Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), May 1993 – (ongoing on a quarterly basis). The Chemical Waste Landfill Quarterly Closure Progress Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), November 1993. The Chemical Waste Landfill Unsaturated Zone Contaminant Characterization, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1994. Calendar Year 1993 Groundwater Monitoring Program Annual Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1995. Calendar Year 1994 Groundwater Monitoring Program Annual Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), October 1995. Chemical Waste Landfill Ground-Water Assessment Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1996. Calendar Year 1995 Groundwater Monitoring Program Annual Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1997. Fiscal Year 1997 Annual Groundwater Monitoring Report, Groundwater Protection Program, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), May 1997. Stage 1 Field Implementation Work Plan Vapor Extraction Voluntary Corrective Measure Chemical Waste Landfill, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1998. Fiscal Year 1998 Annual Groundwater Monitoring Report, Groundwater Protection Program, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), March 1999. Annual Groundwater Monitoring Report, Fiscal Year 1999, Groundwater Protection Program, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), April 2000. Annual Groundwater Monitoring Report, Fiscal Year 2000, Groundwater Protection Program, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), May 2000. Chemical Waste Landfill Vapor Extraction Voluntary Corrective Measures Design Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~Sandia National Laboratories/New Mexico (SNL/NM), May 2000a. Chemical Waste Landfill Vapor Extraction Corrective Measures Final Report, Sandia National Laboratories, Albuquerque, New Mexico.~~

~~U.S. Department of Energy (DOE), May 9, 1997. Letter requesting incorporation of a revised Appendix G to the Chemical Waste Landfill Closure Plan, from Michael Zamorski, DOE/Kirtland Area Office, to Benito Garcia, HRMB/NMED.~~

~~U.S. Department of Energy (DOE), May 5, 2000. Letter requesting change in the Chemical Waste Landfill monitoring schedule, from Michael Zamorski, DOE/Kirtland Area Office, to James Bearzi, HWB/NMED.~~

Attachment D

Clean Copy of Revised Text and Figures

DOE/Sandia Response to NMED Comments on Parts 2 and 3

Task # HWE3-SNL-02-002

PART 2
General Part B, Appendix A, Appendix C, Appendix D, Appendix E
Modules I – VI

PART 3
All text

PART 4
Figure 1

Notes:

1. All figures (including figures that were not revised) are included for clarity and reader convenience in the enclosed sections of Part 2.

2. Figure 1 in Part 4 has been renumbered and is included for reader convenience.

Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... SW-ii
LIST OF FIGURES ..... SW-iii
LIST OF APPENDICES ..... SW-iv
LIST OF MODULES ..... SW-v
ACRONYMS AND ABBREVIATIONS ..... SW-vi
DEFINITIONS ..... SW-ix
1.0 GENERAL SITE OPERATIONS SW-7
1.1 General Unit Operations SW-7
1.1.1 Operation of Containment Systems SW-7
1.1.2 Requirements for Ignitable, Reactive, and Incompatible Waste SW-8
1.1.2.1 Measures to Prevent Accidental Ignition or Reaction SW-8
1.1.2.2 Precautions to Prevent Uncontrolled Reactions SW-9
1.1.3 Preparedness and Prevention SW-10
1.1.3.1 Required Equipment SW-10
1.1.3.2 Testing and Maintenance of Equipment SW-10
1.1.3.3 Access to Communications or Alarm System SW-11
1.1.4 Hazards Prevention SW-11
1.1.4.1 Preventing Hazards in Unloading SW-11
1.1.4.2 Preventing Runoff or Flooding SW-12
1.1.4.3 Preventing Contamination of Water Supplies SW-12
1.1.4.4 Mitigating Effects of Equipment Failure and Power Outages SW-12
1.1.4.5 Preventing Undue Exposure SW-13
1.1.4.6 Preventing Releases to the Atmosphere SW-14
1.2 Container Storage SW-15
1.2.1 Container Types and Labeling SW-16
1.2.2 Container Handling SW-16
1.2.2.1 Condition of Containers SW-16
1.2.2.2 Aisle Space and Storage Configuration SW-17
1.2.2.3 Compatibility of Waste with Containers SW-17
2.0 SITE DESCRIPTION SW-18
3.0 WASTE ANALYSIS PLAN SW-19
4.0 INSPECTION PLAN SW-20
5.0 PERSONNEL TRAINING PLAN SW-21
6.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN SW-22
7.0 CLOSURE PLAN SW-23
8.0 TREATMENT SW-24
9.0 RECORDKEEPING SW-25
9.1 Hazardous Waste Report SW-26
9.2 Unmanifested Waste Report SW-27
9.3 Additional Reports SW-27
10.0 OTHER FEDERAL LAWS SW-29
11.0 CORRECTIVE ACTION SW-31
12.0 CERTIFICATION SW-32
13.0 REFERENCES SW-33

LIST OF TABLES

Table No.	Title
1	Resource Conservation and Recovery Act-Regulated Waste Management Units Included in Part 2 of Comprehensive Part B Permit Request
2	Regulatory References and Corresponding Permit Renewal Request/Application Location
3	Cultural Properties Used by Sandia/DOE on Kirtland Air Force Base

LIST OF FIGURES

Figure No.	Title
1	Sandia National Laboratories/New Mexico Technical Areas (TAs) and Resource Conservation and Recovery Act-Regulated Waste Management Units in Relation to Kirtland Air Force Base

LIST OF APPENDICES

Appendix	Title
A	Site-Wide Description for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
B	Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
C	Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
D	Site-Wide Personnel Training Plan for Sandia National Laboratories/ New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
E	Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
F	Site-Wide Closure Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units
G	Site-Wide Treatment Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units

LIST OF MODULES

Module	Title
I	HWMF-Hazardous Waste Management Facility
II	TTF-Thermal Treatment Facility
III	RMWMF-Radioactive and Mixed Waste Management Facility
IV	HBWSF-High Bay Waste Storage Facility
V	AHCF-Auxiliary Hot Cell Facility
VI	MSB-Manzano Storage Bunkers

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	microgram(s) per cubic meter
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
A/BCAQCB	Albuquerque/Bernalillo County Air Quality Control Board
AHCF	Auxiliary Hot Cell Facility
ALARA	as low as reasonably achievable
ARPA	Archeological Resources Protection Act
ASTM	American Society for Testing and Materials
CMU	concrete masonry unit
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOT	U.S. Department of Transportation
DQO	data quality objective
DR	disposal request
EC	Emergency Coordinator
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ER	Environment Restoration
ERO	Emergency Response Organization
^{o}F	degree(s) Fahrenheit
ft	foot/feet
ft^2	square foot/feet

ACRONYMS AND ABBREVIATIONS (Continued)

ft^3	cubic foot/feet
HBWSF	High Bay Waste Storage Facility
HEPA	high efficiency particulate air
HSWA	Hazardous and Solid Waste Amendments
HWMF	Hazardous Waste Management Facility
IC	Incident Commander
ICS	Incident Command System
ID	inner diameter
in.	inch(es)
KAFB	Kirtland Air Force Base
KOP	knowledge of process
lb/ft^2	pound(s) per square foot/feet
LDR	land disposal restriction
m^3	cubic meter(s)
mi	mile(s)
mph	mile(s) per hour
MSB	Manzano Storage Bunkers
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NMED	New Mexico Environment Department
OKSO	Office of Kirtland Site Operations
ppmw	part(s) per million by weight

ACRONYMS AND ABBREVIATIONS (Concluded)

PPE	personal protective equipment
psi	pounds per square inch (pressure)
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
R&D	research and development
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SASN	silver acetylide/silver nitrate
SNL/NM	Sandia National Laboratories/New Mexico
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TA	Technical Area
TSDF	treatment, storage, and disposal facility
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
USC	United States Code
USFS	U.S. Forest Service
VOC	volatile organic compound
WAP	waste analysis plan
WMA	waste management area

DEFINITIONS

Characterization: The identification of hazardous characteristics or constituents of waste, using sampling and analysis, acceptable knowledge, or a combination of chemical analysis and acceptable knowledge.

Emergency: Any imminent or existing fire, explosion, or unplanned sudden or nonsudden release of Resource Conservation and Recovery Act (RCRA)-regulated waste or hazardous constituents to air, soil, or surface water that significantly threatens human health or the environment outside the Unit.

RCRA-Regulated Waste: For the purposes of this permit renewal request/application and Unit-specific modules, a waste that meets the regulatory definition of either hazardous waste or hazardous/radioactive mixed waste.

RCRA-Regulated Waste Management Area (WMA): For the purposes of this permit renewal request/application and Unit-specific modules, an area used for the treatment or storage of RCRA-regulated waste within a RCRA-regulated Waste Management Unit.

RCRA-Regulated Waste Management Unit (Unit): For the purposes of this permit renewal request/application and Unit-specific modules, a specific operational area subject to a RCRA permit that is used for the treatment and/or storage of RCRA-regulated waste. The Units that are the subjects of this permit renewal request/application are described in Unit-specific modules.

Regulated Unit: A surface impoundment, waste pile, land treatment unit, or landfill that received hazardous waste after July 26, 1982.

SANDIA NATIONAL LABORATORIES/NEW MEXICO GENERAL PART B PERMIT RENEWAL REQUEST/APPLICATION

This "Sandia National Laboratories/New Mexico (SNL/NM) General Part B Permit Renewal Request/Application," hereinafter referred to as the SNL/NM General Part B, is submitted by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, to address requirements applicable to Resource Conservation and Recovery Act (RCRA)-regulated waste storage and treatment operations at SNL/NM RCRA-regulated waste management units (Units) (Figure 1). The U.S. Environmental Protection Agency (EPA) Identification Number for SNL/NM is NM5890110518.

Sandia National Laboratories/New Mexico (SNL/NM) is located on Kirtland Air Force Base (KAFB) southeast of Albuquerque, New Mexico. SNL/NM consists of five technical areas (TAs) and several remote testing areas situated on the 80-square-mile KAFB. Sandia generates and manages wastes that are regulated under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act and implementing regulations, specifically the New Mexico Administrative Code (NMAC) Title 20, Chapter 4. In this Part B permit request, these wastes are referred to as RCRA-regulated wastes (i.e., wastes that meet the regulatory definition of hazardous or mixed wastes). RCRA-regulated wastes are generated during SNL/NM operations and ongoing corrective actions for solid waste management units (SWMUs). The corrective actions are conducted under the SNL/NM Environmental Restoration (ER) Project.

There are 15 RCRA-regulated waste management units included in this comprehensive Part B permit request. Twelve of the units (listed in Table 1) are used for management of wastes from ongoing operations and from the ER project. These units are addressed in this part (Part 2) of the comprehensive Part B permit request. The remaining three units are corrective action units used exclusively for management of remediation wastes generated through the ER project. They are addressed in Part 5 of the comprehensive Part B permit request.

The information in Part 2 is separated into site-wide and Unit-specific information to minimize redundancy. Part 2 information for the Units listed in Table 1 includes:

- General information (General Part B) that serves as an "umbrella" document addressing the general requirements of the New Mexico Hazardous Waste Act and implementing regulations, specifically the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00]. 20 NMAC 4.1.500 and .900 adopt, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

- Unit-specific Part B modules addressing Unit-specific requirements of 20 NMAC 4.1.500 and .900/40 CFR 264 and 270 [6-14-00]. There is one module for the set of seven Manzano Storage Bunkers, and one module for each of the other five Units listed in Table 1. For clarity and consistency, the information in each Unit-specific Part B module is arranged in the same general order as the information in the General Part B.

Table 1
Resource Conservation and Recovery Act – Regulated Waste Management Units Included in Part 2 of Comprehensive Part B Permit Request

Name	Acronym	Location, Size	Types of Operations	Types of Waste	Operating Status	Permit Status
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II. 1.35 acres	Storage, Repackaging	All wastes listed in General Part A	Existing, operational	Permit expired August 6, 2002. Submitted renewal request February 6, 2002. Requesting that permit be updated and renewed for continued operation.
Thermal Treatment Facility	TTF	Northern part of TA-III. 196 square feet	Treatment	Ignitable, reactive, toxic, and listed wastes	Existing, on standby	Permit expires November 4, 2004. Requesting that permit be updated and renewed for continued operation.
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III. 3.11 acres	Storage, Treatment, Repackaging	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.
High Bay Waste Storage Facility	HBWSF	TA-V. 5670 square feet	Storage	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.
Auxiliary Hot Cell Facility	AHCF	TA-V. 5578 square feet	Storage, Treatment, Repackaging	All wastes listed in General Part A	Existing, expected to start operations in 2003	Added under interim status. Requesting that permit be issued using information provided in this application.
Manzano Storage Bunkers (set of 7 Units)	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 7 bunkers (approximately 1600 to 2100 square feet in each bunker)	Storage	All wastes listed in General Part A	Existing, operational	Interim status. Requesting that permit be issued using updated information provided in this application.

Together, the information in this general Part B and each Unit-specific Part B module address the applicable regulatory requirements for that Unit.

The information in this General Part B and in the Unit-specific modules is arranged as follows:

- General Unit operations, including preparedness and prevention – Section 1
- Site description, including features, security, and access control – Section 2 and Appendix A
- Waste analysis – Section 3 and Appendix B
- Inspections – Section 4 and Appendix C
- Training – Section 5 and Appendix D
- Emergency response and contingency plan – Section 6 and Appendix E
- Closure – Section 7 and Appendix F
- Treatment – Section 8 and Appendix G
- Recordkeeping – Section 9

Sandia/DOE are also submitting a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," hereinafter referred to as the SNL/NM General Part A (SNL/NM, 2002), with this SNL/NM General Part B. The SNL/NM General Part A consolidated information from previous SNL/NM Part A submittals into one comprehensive document, identifying all Units at SNL/NM as of January 31, 2002, that are or will be subject to 20 NMAC 4.1.500/40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00]. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to this SNL/NM General Part B.

In both the SNL/NM General Part A (SNL/NM, 2002) and this SNL/NM General Part B submittal, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., the Hazardous Waste Management Facility). The term "facility," as it appears in this context, is used only to denote building or Unit names and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

Table 2 provides a list of regulatory references and the corresponding section locations in this SNL/NM General Part B.

Table 2
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§270.14(b)(1)	General facility description	Appendix A[a]
§270.14(b)(2)	Chemical and physical analyses	Appendix B[a]
§270.14(b)(3)	Waste analysis plan	Appendix B[a]
§264.13(b)	Written waste analysis plan	Appendix B[a]
§264.13(c)	Off-site waste analysis requirements	Appendix B[a]
§270.14(b)(4)	Security procedures and equipment	Appendix A[a]
§264.14	Security	Appendix A[a]
§270.14(b)(5)	General inspection schedule	Appendix C[a]
§264.15(b)	Written inspection schedule	Appendix C[a]
§264.174	Containers	1.2, Appendix C[a]
§264.602	Miscellaneous units	Appendix C[a]
§264.1086	Standards: Containers	1.2, Appendix C
§264.1088	Inspection and monitoring requirements	4.0, Appendix C[a]
§270.14(b)(6)	Request for waiver from preparedness and prevention requirements of Part 264, Subpart C	NA
§270.14(b)(7)	Contingency plan	Appendix E[a]
§270.14(b)(8)	Preparedness and prevention requirements	1.1.3[a], 1.1.4[a]
§270.14(b)(8)(i)	Preventing hazards in unloading operations	1.1.4.1[a]
§270.14(b)(8)(ii)	Preventing runoff/flooding	1.1.4.2[a]
§270.14(b)(8)(iii)	Preventing contamination of water supplies	1.1.4.3[a]
§270.14(b)(8)(iv)	Mitigating effects of equipment failure and power outages	1.1.4.4[a]
§270.14(b)(8)(v)	Preventing undue exposure of personnel	1.1.4.5[a]
§270.14(b)(8)(vi)	Preventing releases to the atmosphere	1.1.4.6[a]
§270.14(b)(9)	Preventing accidental ignition or reaction	1.1.2.1[a]
§264.17	General requirements for ignitable, reactive, or incompatible wastes	1.1.2[a]
§270.14(b)(10)	Traffic pattern, volume, and controls	Appendix A[a]
§270.14(b)(11)	Facility/unit location information	Appendix A[a]
§270.14(b)(11)(i)	Seismic standard applicability [264.18(a)]	Appendix A[a]
§264.18(a)	Seismic considerations	Appendix A
§270.14(b)(11)(ii)	Seismic standard requirements	Appendix A[a]
§264 Appendix VI	Political jurisdictions requiring compliance with 264.18(a)	Appendix A
§270.14(b)(11)(ii)(A)	No fault within 3,000 feet (ft) with displacement in Holocene time	Appendix A[a]
§270.14(b)(11)(iii)	100-year floodplain standard	Appendix A
§270.14(b)(11)(iv)	Floodplain requirements	NA
§270.14(b)(11)(v)	Plan to show how the facility will be brought into compliance with 264.18(b)	NA
§270.14(b)(12)	Personnel training program	Appendix D[a]
§264.16	Personnel training	Appendix D[a]
§270.14(b)(13)	Closure and post-closure plans	Appendix F[a]

Refer to footnotes at end of table.

Table 2 (Continued)
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§264.112	Closure plan	Appendix F[a]
§264.118	Post-closure plan	Appendix F[a]
§264.178	Closure—containers	Appendix F[a]
§264.601	Environmental performance standards—miscellaneous units	Appendix G[a]
§264.603	Post-closure care—miscellaneous units	Appendix F
§270.14(b)(14)	Post-closure notices (264.119)	Appendix F
§264.119	Post-closure notices	Appendix F
§270.14(b)(15)	Closure cost estimate (264.142)	Appendix F
	Financial assurance (264.143)	Appendix F
§264.142	Cost estimate for closure	Appendix F
§264.143	Financial assurance for closure	Appendix F
§270.14(b)(16)	Post-closure cost estimate (264.144)	Appendix F
	Post-closure care financial assurance (264.145)	Appendix F
§264.144	Cost estimate for post-closure care	Appendix F
§264.145	Financial assurance for post-closure care	Appendix F
§270.14(b)(17)	Liability insurance (264.147)	Appendix F
§264.147	Liability requirements	Appendix F
§270.14(b)(18)	Proof of financial coverage (264.149-150)	Appendix F
§270.14(b)(19)	Topographic map requirements	Appendix A
§270.14(b)(19)(i)	Map scale and date	Appendix A
§270.14(b)(19)(ii)	100-year floodplain area	Appendix A
§270.14(b)(19)(iii)	Surface waters	Appendix A
§270.14(b)(19)(iv)	Surrounding land uses	Appendix A
§270.14(b)(19)(v)	Wind rose	Appendix A
§270.14(b)(19)(vi)	Map orientation/north arrow	Appendix A
§270.14(b)(19)(vii)	Legal boundaries	Appendix A
§270.14(b)(19)(viii)	Access controls	Appendix A[a]
§270.14(b)(19)(ix)	Wells (injection and withdrawal)	Appendix A
§270.14(b)(19)(x)	Buildings or other structures	Appendix A
§270.14(b)(19)(xi)	Barriers—drainage or flood control	Appendix A[a]
§270.14(b)(19)(xii)	Location of operational units	Appendix A
§270.14(b)(20)	Other federal laws (270.3)	10.0
§270.14(b)(21)	Notice of extension approval for land disposal facilities	NA
§270.14(b)(22)	Summary of pre-application meeting	NA
§270.14(c)	Groundwater monitoring requirements	Appendix A[b]
§264.90(b)	Exemptions from regulation of releases	NA
§270.14(d)	Information requirements for solid waste management units	11.0[c]
§270.15	Specific information requirements—containers	1.2[a]
§264.170	Subpart I applicability	1.1[a]
§264.175	Containment	1.1, 1.2[a]
§264.176	Special requirements for ignitable or reactive waste	1.1.2[a]

Refer to footnotes at end of table.

Table 2 (Concluded)
Regulatory References and Corresponding Permit Renewal Request/Application Location

Regulatory Citation(s)	Description of Requirement	Location in this Document
§264.177	Special requirements for incompatible waste	1.1[a]
§264.17	General requirements for ignitable, reactive, or incompatible wastes	1.1[a]
§270.23	Specific information requirements—miscellaneous units	8.0[a]
§264.600	Subpart X applicability	Appendix G[a], Module II
§264.601	Environmental performance standards	Appendix G[a], Module II
§264.602	Monitoring analysis, inspection, response, reporting, and corrective action	Appendix G[a], Module II
§270.27	Specific information requirements—air emission controls for tanks, surface impoundments, and containers	1.1, 1.2[a]
§264 Subpart AA	Air emission standards for process vents	1.1.4.6
§264 Subpart BB	Air emission standards for equipment leaks	1.1.4.6
§264 Subpart CC	Air emission standards for tanks, surface impoundments, and containers	1.1.4.6

[a] Unit-specific information is provided in Unit-specific modules.
[b] Groundwater monitoring for regulated units is addressed in Part 3 of this comprehensive Part B permit request package.
[c] Corrective action is addressed in Parts 4 and 5 of this comprehensive Part B permit request package. Solid waste management units are discussed in Part 4. Operation of the waste management units associated with corrective action is addressed in Part 5.
NA = not applicable

1.0 GENERAL SITE OPERATIONS

This section provides an overview of RCRA-regulated waste management operations at the Units addressed in this SNL/NM General Part B.

The SNL/NM Units are used to store and/or treat RCRA-regulated wastes bearing EPA Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002). Unless otherwise specified in a Unit-specific module, any of the wastes listed in the SNL/NM General Part A may be managed at any Unit.

The following general information applicable to the Units addressed in this SNL/NM General Part B is provided in this section::

- General Unit operations ; containment systems; requirements for ignitable, reactive, and incompatible wastes; ; preparedness and prevention; hazards prevention; and

- Container storage practices, including air emission controls. Sandia/DOE do not manage RCRA-regulated wastes in tanks at any Unit.

The general information provided in this section, together with the Unit-specific information provided in Modules I through VI, address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14, 270.15, and 270.23 [6-14-00].

1.1 General Unit Operations

The following sections provide an overview of the general Unit operations applicable to the Units addressed in this SNL/NM General Part B. General Unit operations include ; containment systems; requirements for ignitable, reactive, and incompatible wastes; ; preparedness and prevention; and hazards prevention.

1.1.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15;20 NMAC 4.1.500/40 CFR 264.175[b][5])

20 NMAC 4.1.500/40 CFR 264.175[b][1] [6-14-00] requires that containment systems be maintained in leak proof and fully operable conditions. 20 NMAC 4.1.500/40 CFR 264.175(b)(2) and (3) [6-14-00], respectively, require that secondary containment systems be designed to 1) contain at least 10 percent of the volume of potential liquid-bearing containers or the volume of the largest container, whichever is greater, and 2) prevent contact between containers and spilled material. Containment systems at each Unit are described in Section 1 of each Unit-specific module.

Liquids that might accumulate at an SNL/NM Unit are contained within a secondary containment system that is sufficiently impervious to contain leaks, spills, or accumulated precipitation until the liquid is removed, as described in each Unit-specific module. Unit

personnel begin taking action to evaluate and remove accumulated liquids upon discovery (20 NMAC 4.1.500/40 CFR 264.175[b][5] [6-14-00]).

Accumulated liquids from precipitation or snowmelt, for which there is no evidence of a release, will be discharged to the ground or to the sanitary sewer after sampling (as needed) and approval, as needed. Accumulated liquids or waters generated during fire suppression activities may be characterized as a newly-generated waste using acceptable knowledge or may be analyzed, as applicable, for RCRA-regulated waste constituents known to be components of the source. If the accumulated liquids are from other than an identifiable source, the resulting material will be characterized as described in Appendix B of this SNL/NM General Part B. Containers of collected liquids are also stored with adequate secondary containment. This method of removal and analysis of accumulated liquids fulfills the requirements of 20 NMAC 4.1.900/40 CFR 270.15(a)(5) [6-14-00], for the prevention of overflow.

1.1.2 Requirements for Ignitable, Reactive, and Incompatible Waste (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[d]; 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

20 NMAC 4.1.900/40 CFR 270.14(b)(9) [6-14-00], requires a description of precautions taken to prevent accidental ignition or reaction of ignitable, reactive, or incompatible RCRA-regulated wastes as required to demonstrate compliance with 20 NMAC 4.1.500/40 CFR 264.17(c) [6-14-00]. 20 NMAC 4.1.900/40 CFR 270.15(d) [6-14-00], requires a description of procedures used to ensure compliance with 20 NMAC 4.1.500/40 CFR 264.17(b) and (c) [6-14-00], and 264.176 and 264.177..

1.1.2.1 Measures to Prevent Accidental Ignition or Reaction (20 NMAC 4.1.500/ 40 CFR 264.17[a])

At SNL/NM, appropriate measures are taken to prevent accidental ignition or reaction of ignitable and reactive RCRA-regulated wastes, as described below.

All containers are kept closed unless wastes are being added, removed, inspected, sampled, repackaged, or treated as noted in Section 1.2.2.

Ignitable and reactive wastes are labeled and separated from other wastes. Such wastes may be stored in designated WMAs at each Unit, as described in the Unit-specific modules. Open flames and welding activities are prohibited in the vicinity of ignitable or reactive wastes at all Units. If the wastes cannot be removed from the area before such activities take place, the wastes are protected by a non-combustible barrier before and during work. Hot surfaces, frictional heat, sources of sparks, and radiant heat (e.g., heat-generating wastes) are also prohibited in the vicinity of ignitable and reactive wastes. Unit personnel are not allowed to operate forklifts or other motorized equipment in the vicinity of open containers of ignitable or reactive wastes unless such equipment is designed for use in flammable environments. Ignitable and reactive wastes are stored under controlled conditions to prevent spontaneous combustion.

Spark-proof tools may be used to open and close containers holding ignitable or reactive wastes. When large quantities of flammable or reactive liquids are transferred from one container to another, grounding procedures are typically used. During such operations, each container is connected to a grounding cable that remains in place during liquid transfer to dissipate static charge created by liquid flow.

Smoking is not allowed within any Unit. "No Smoking" signs are conspicuously placed at the entrance to each Unit, as required by 20 NMAC 4.1.500/40 CFR 264.17(a) [6-14-00].

Water-reactive wastes are not stored in WMAs equipped with automatic water sprinkler systems. When water-reactive wastes are present in such WMAs (e.g. for treatment or temporary staging), Unit personnel will keep water from coming into contact with the waste.

1.1.2.2 Precautions to Prevent Uncontrolled Reactions (20 NMAC 4.1.500/40 CFR 264.17[b,c], 40 CFR 264.176, 40 CFR 264.177 and 40 CFR 264.17[b])

Unit personnel rarely mix incompatible wastes together or with other materials. Personnel perform treatment of ignitable and reactive wastes at the TTF, RMWMF, and AHCF. As described in Section B.5 (Appendix B of the General Part B), Unit personnel plan such activities carefully to prevent reactions that could:

- Generate extreme heat or pressure, fire or explosions, or violent reaction;
- Produce uncontrolled toxic mists, fumes, dusts, or gases;
- Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- Damage the structural integrity of the device or Unit;
- Through other like means threaten human health or the environment.

In general, Unit personnel use characterization information for each waste (as described in Section B.5) and published data regarding chemical properties of RCRA-regulated constituents in the wastes (e.g., material safety data sheets, NIOSH Pocket Guide to Chemical Hazards, Bretherick's Handbook of Handbook of Reactive Chemical Hazards) to identify potential consequences of treatment or other mixing activities. Additional information is included in each Unit-specific module.

Incompatible wastes are kept separated from each other during storage to meet the requirements of 20 NMAC 4.1.500/40 CFR 264.177(c) [6-14-00]. Incompatible wastes are not packed in the same container, and no waste is placed in a container that previously held an incompatible waste (i.e., only new and/or clean containers are used to hold RCRA-regulated wastes), as required by 20 NMAC 4.1.500/40 CFR 264.177(a) and (b) [6-14-00], 20 NMAC 4.1.500/40 CFR 264.17(b), and 20 NMAC 4.1.900/ 40 CFR 270.15(d) [6-14-00]. Additional information is included in the Unit-specific modules.

Compatibility is determined in accordance with 20 NMAC 4.1.500/40 CFR 264, Appendix V [6-14-00], or equivalent information (e.g., NIOSH Pocket Guide to Chemical Hazards).

Containers holding ignitable or reactive wastes are located at least 50 feet from the SNL/NM facility property line at all times and are protected from sources of ignition or reaction as required by 20 NMAC 4.1.500/40 CFR 264.176 [6-14-00].

1.1.3 Preparedness and Prevention (20 NMAC 4.1.900/40 CFR 270.14(b)(8) and 20 NMAC 4.1.500/40 CFR 264, Subpart C)

20 NMAC 4.1.900/40 CFR 270.14(b)(8) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264, Subpart C [6-14-00], require a description of how Units will comply with preparedness and prevention requirements. The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems.

1.1.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Sandia/DOE maintain required equipment, including internal communications or alarm systems; devices to summon emergency assistance; fire control, spill control, and decontamination equipment; and adequate water volume and pressure for fire suppression equipment at each Unit.

Each Unit (except the Thermal Treatment Facility and Manzano Storage Bunkers) is equipped with fire hydrants and with one or more automatic water sprinkler or dry chemical fire suppression systems. Each fire hydrant meets the requirements of the Appendix B of the International Fire Code, and provides at least 1500 gallons per minute of water at 20 psi, which meets the requirements of 20 NMAC 4.1.500/40 CFR 264.32(d) [6-14-00]. The locations of the hydrants are shown in each Unit-specific module. Building-specific fire suppression systems are described in Section 1.2 of each Unit-specific module.

A list of the required equipment, with the location and capabilities of the equipment, is provided in tables in each Unit-specific module.

1.1.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Sandia/DOE assure that communications and alarm systems and fire protection, spill control, and decontamination equipment are inspected and/or tested according to the inspection plans and schedules detailed in Appendix C of this SNL/NM General Part B and in Section 4 of each Unit-specific module. The frequency of inspection is sufficient to assure proper operation in the event of an emergency. Maintenance, repair, and replacement of emergency equipment are performed as needed.

Sandia personnel test fire suppression equipment on monthly, quarterly, and annual schedules, in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems".

1.1.3.3 Access to Communications or Alarm System (20 NMAC 4.1.500/40 CFR 264.34)

Sandia/DOE assure that whenever waste is being handled at a Unit, personnel involved have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another individual. In the event of an emergency, this communication equipment allows personnel to contact the Unit Emergency Coordinator and/or the Emergency Operations Center (refer to Appendix E of this SNL/NM General Part B). In addition to the communications and alarm systems described in each Unit-specific module, on-site personnel may carry pagers, two-way radios, and/or cellular telephones so that they can contact or be contacted by on-site and SNL/NM emergency support personnel at all times.

Unit personnel typically work in pairs and maintain contact when handling wastes, further enhancing safety.

1.1.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

20 NMAC 4.1.900/40 CFR 270.14(b)(8) [6-14-00], requires that a Unit be designed and operated to prevent hazards. SNL/NM Units are designed and operated to minimize the possibility of fire, explosion, or any unplanned or nonsudden releases of RCRA-regulated waste or constituents to the environment. Specific Unit design and construction information is presented in Section 1.1 of each Unit-specific Part B module. The following sections describe the general procedures, equipment, and structures that are currently used at SNL/NM Units to prevent hazards. These include preventing hazards during unloading of waste containers, preventing runoff and flooding, preventing contamination of water supplies, mitigating the effects of power outages, preventing undue exposure to personnel, and preventing releases to the atmosphere. Any additional information about procedures is included in Section 1.2 of each Unit-specific module.

1.1.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

Only closed waste containers are accepted for transport by vehicle to SNL/NM Units. Prior to transport, containers are inspected to ensure that they are properly closed, labeled, and in suitable condition for transport.

Loading and unloading operations typically occur outdoors in the area immediately in front of a WMA at a Unit to minimize the distance that the waste must be moved. Spills that might occur during loading or unloading operations will be promptly cleaned up in accordance with spill response procedures contained in Appendix E of this SNL/NM General Part B.

Except where noted in Unit-specific modules, all loading and unloading areas are level, and the asphalt or concrete pavement is in good condition. Loading and unloading areas are also typically free of overhead and other obstructions to visibility and operations.

Appropriate vehicles, forklifts, drum dollies, pallet jacks, and other tools for the safe transport and handling of wastes are used during loading and unloading operations. Small containers may be loaded or unloaded manually from waste-transport vehicles. A forklift or hydraulic lift is

typically used to load or unload larger containers. For loads that are moved with a forklift, the containers of waste are typically held together on a pallet with straps or shrink wrap. Fasteners and clamps are typically used with drum dollies. Waste-handling equipment is maintained and operated in accordance with manufacturers' guidance.

Only qualified personnel trained in RCRA-regulated waste management procedures are allowed to handle RCRA-regulated waste at Units, and they typically work in pairs. Personnel are trained to be aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts.

1.1.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

Run-on of surface water from surrounding areas and runoff of waste is prevented at Units by Unit design and operating practices. Unit-specific runon/runoff features and operating precautions are described in each Unit-specific Part B module.

1.1.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Due to the depth to groundwater at SNL/NM and Unit operating procedures, it is not anticipated that there will be any impact to groundwater or other water supplies as a result of RCRA-regulated waste-handling operations at any Unit. Contamination of surface water and groundwater is prevented by Unit operating procedures as well as the spill containment features located within a specific WMA at a Unit. Spills are contained within the buildings or within secondary containment systems, and are cleaned up promptly. Spills occurring outside the buildings will be contained promptly and cleaned up so as not to come into contact with surface water or groundwater. Some units are supplied with potable water that is provided through pressurized underground water supply lines. These water supply lines are designed to withstand industrial activities that are typical of waste management operations, and they are not affected by Unit operations.

1.1.4.4 Mitigating Effects of Equipment Failure and Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

In general, it is possible for Unit personnel to place the affected equipment in a safe state, close or cover open containers of RCRA-regulated wastes that are present, and stop operations until power is restored.

The general types of equipment, utilities, and systems that would be affected by a power or equipment failure are listed below, together with features and activities to mitigate effects of a failure.

- Lights: Fixed battery-operated lights operate in the buildings in each Unit where available.
- Alarms: Fire alarm devices in each Unit (except the MSB) are equipped with emergency power supply.
- Pumps and other equipment: Personnel use portable manually- or pneumatically-operated equipment or wait for power to be restored.
- Container-handling equipment: Unit personnel obtain forklifts and drum-handling equipment from Sandia's transportation department.
- Personal Protective Equipment: Unit personnel replace equipment with supplies in the Unit storage areas.
- Vehicles: Unit personnel obtain replacements for vehicles from Sandia's transportation department.
- Telephone: Unit personnel use cellular telephones or portable radios.
- Fire sprinklers: Unit personnel use portable fire extinguishers.

Additional Unit-specific procedures (where applicable) are included in each Unit-specific module.

1.1.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

Only qualified personnel trained in RCRA-regulated waste management procedures are allowed to handle RCRA-regulated waste at Units. The training that these personnel receive includes use of appropriate equipment and personal protective equipment (PPE) for the RCRA-regulated wastes managed at SNL/NM Units.

Personnel at SNL/NM Units are required to use appropriate PPE to protect themselves from the hazards that are or may be found in the work place under normal conditions. Such hazards may include handling heavy containers, operating waste-handling equipment, weather conditions, and contact with RCRA-regulated wastes and constituents.

Operations at SNL/NM Units typically require that personnel handling closed containers of RCRA-regulated wastes wear PPE that includes safety shoes and appropriate gloves (e.g., heavy abrasion-resistant gloves with or without chemical-resistant outer gloves. Depending on the work performed, they may also wear safety glasses or goggles, coveralls, and hard hats.

During treatment operations or other work that involves opening containers, personnel typically don additional PPE (e.g., safety glasses, face shields, chemical-resistant gloves, and coveralls) to protect themselves from hazards that may be present. Such hazards may include the potential for contact with liquids, particles, or corrosive materials.

Increased PPE (e.g., respiratory protection) may also be required during an emergency or unusual hazardous situation.

1.1.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

Sandia/DOE do not use any of the processes identified in 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00] for the management of RCRA-regulated wastes. Therefore, Sandia/DOE are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00].

Sandia/DOE do not routinely manage RCRA-regulated wastes with organic concentrations $\geq$ 10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052-.1060 as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f). The equipment use will be noted in the Unit operating log.

Hazardous wastes stored in containers may be subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00], "Air Emission Standards for Tanks, Surface Impoundments, and Containers," based on applicability criteria specified in 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. These standards are not applicable to:

- Containers that held hazardous waste prior to December 6, 1996, and to which no hazardous waste has been added on or after December 6, 1996;
- Containers having a design capacity of less than or equal to 0.1 cubic meter (m^3) or approximately 26 gallons;
- Containers used solely for on-site management of hazardous waste placed in the Unit as a result of implementing remedial activities under corrective action authorities;
- Containers used solely for the management of radioactive mixed waste; or
- Containers equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation (20 NMAC 4.1.500/40 CFR 264.1080[b] [6-14-00].

Furthermore, a container is exempt from the 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] container standards in 20 NMAC 4.1.500/40 CFR 264.1086 [6-14-00] if:

- The hazardous waste in a container has an average volatile organic concentration at the point of waste origin of less than 500 parts per million by weight (ppmw), or
- The organic content of all hazardous waste entering a container has been reduced by an organic destruction or removal process achieving any one of the conditions specified in 20 NMAC 4.1.500/40 CFR 264.1082(c)(2)(i)-(vi) [6-14-00] (20 NMAC 4.1.500/40 CFR 264.1082 [6-14-00]).

To establish 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] applicability for a specific waste stream, a generator may follow the waste determination procedures specified in 20 NMAC 4.1.500/40 CFR 264.1083 [6-14-00] to determine the concentration of volatile organics in the waste stream at the point of generation or assume the waste is subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. If the generator elects to make the determination, the generator documents it for that waste stream, as described in Appendix B of this SNL/NM General Part B. Volatile organic-containing RCRA-regulated waste streams that are documented to contain volatile organic concentrations of less than 500 ppmw are exempt, by regulation, from the following Sandia/DOE container management requirements.

At SNL/NM, RCRA-regulated wastes that are subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements while in SNL/NM RCRA-regulated container storage or treatment Units are managed in primary containers that 1) have a design capacity of less than or equal to 0.1 m^3 or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for access for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c) (1)-(5) [6-14-00].

WMAs used "solely" for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" are not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements. If hazardous waste and radioactive mixed waste/remediation waste are managed in the same Unit, the wastes are segregated into separate WMAs or process areas, if possible. WMA(s) and process areas used solely for "radioactive mixed waste" or "remediation waste" management are not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements while the WMA(s) and process area(s) used for hazardous waste management are subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements. If waste types cannot be segregated into separate WMAs or process areas, all of the waste containers within a WMA or process area are managed as though they are subject to 20 NMAC 4.1.500/ 40 CFR 264, Subpart CC [6-14-00] requirements.

Releases to the atmosphere are not anticipated at any of the container storage Units because containers are kept closed during storage. The only exceptions to this practice are when, upon inspection, it is determined that a container currently in storage needs to be overpacked or repackaged in a new container, or during waste characterization activities. Overpacking or repackaging may be performed within a storage structure or in a modular containment system. A modular containment system can be equipped with an air filtration system to prevent the release of particulates. During normal RCRA-regulated waste storage operations at SNL/NM, there are no sources of air emissions.

Additional Unit-specific information is provided in Section 1.0 of each Unit-specific Part B module.

1.2 Container Storage

The information provided in this section is submitted to address the applicable container storage requirements of 20 NMAC 4.1.900/40 CFR 270.15 [6-14-00], and 20 NMAC 4.1.500/ 40 CFR 264, Subpart I (6-14-00). The following sections provide brief descriptions of waste

management practices applicable to all Units used for container storage of RCRA-regulated wastes at SNL/NM.

Additional Unit-specific information is provided in Section 1.0 of each Unit-specific Part B module.

1.2.1 Container Types and Labeling

Containers that may be used to store RCRA-regulated waste stored at Units qualify as "containers" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. That is, they are "portable devices in which a material is stored, transported, disposed of, or otherwise handled."

A number of container types are used for RCRA-regulated waste storage, depending on the type of waste and the ultimate disposition of the waste. Waste containers that may be stored at the SNL/NM Units include, but are not limited to, 30-, 55-, 83-, 85-, and 110-gallon steel, polyethylene, and fiber drums; fiberglass-reinforced plastic or plywood boxes; various steel boxes; metal overpack boxes; cardboard shipping containers; gas cylinders; roll-off bins; labpack containers; various small containers (e.g., 1-, 2-, 5-, 10-, and 20-gallon drums or pails); bags; and some oversized, irregularly-shaped containers.

RCRA-regulated waste containers are clearly labeled with the words "hazardous waste" and a description of container contents (i.e., hazardous constituents). The accumulation start date is clearly marked on each container holding RCRA-regulated waste.

1.2.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

As required by 20 NMAC 4.1.500/40 CFR 264.173(b) [6-14-00], RCRA-regulated waste containers at SNL/NM are handled in a manner that will not cause them to rupture or leak. As required by 20 NMAC 4.1.500/40 CFR 264.173(a) [6-14-00], stored containers at SNL/NM are kept closed during storage except when waste is added to or removed from a container, the contents of a container need to be repackaged, or waste is being inspected or sampled.

Waste-handling equipment is maintained and operated in accordance with manufacturers' guidance.

1.2.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

Prior to transportation or storage, additional containment is provided for each container that is not in good condition (e.g., severe rusting, apparent structural defects). The container may be overpacked or the waste may be repackaged in containers that are in good condition (20 NMAC 4.1.500/40 CFR 264.171 [6-14-00]).

Containers are handled with care, maintained in good condition, and inspected according to the schedule outlined in Appendix C and Section 4 of each Unit-specific module. During storage, if a container holding RCRA-regulated waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, Unit personnel begin taking action to

remediate the situation upon discovery. Remedial actions include transferring the RCRA-regulated waste from that container to a container that is in good condition or overpacking the container. Unit personnel begin taking action to remediate containers not in good condition upon discovery.

1.2.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

Storage configuration of containers depends upon the type of container, its size, and its weight restrictions as well as the load-bearing and/or secondary containment capacity of the specific Unit. Aisle space is maintained to enable the unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency (20 NMAC 4.1.500/40 CFR 264.35 [6-14-00]). Additional information is provided in Unit-specific modules.

1.2.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

As required by 20 NMAC 4.1.500/40 CFR 264.172 [6-14-00], only containers made of or lined with materials that will not react with and are otherwise compatible with the RCRA-regulated waste stored in them are managed at SNL/NM Units. Unit personnel will evaluate the compatibility of the waste to the container by considering one or more of the following as appropriate:

- Physical properties of the waste.
- Chemical properties of the original raw material(s) or commercial chemical product(s) used in the activity that generated the waste (obtained through material safety data sheets or other published information)
- Physical and chemical similarities between the waste and the original material.
- Features of the container(s) used for the original material(s), and compatibility of those features with the physical and chemical properties of the waste.
- Chemical properties of the waste (obtained through knowledge of generating processes, material safety data sheets, and/or published information)
- Data from waste characterization activities as described in Appendix B of the General Part B.
- Information about the containers being considered (supplied by manufacturers of containers).
- US DOT hazardous materials information and packaging specifications (49 CFR 172.101).

Any additional Unit-specific information is included in Section 1.3 of each Unit-specific module.

2.0 SITE DESCRIPTION

SNL/NM is located on Kirtland Air Force Base immediately southeast of Albuquerque, New Mexico. General information about the SNL/NM site is included "Site-Wide Description for Sandia National Laboratories/New Mexico" in Appendix A of this SNL/NM General Part B. Additional Unit-specific information is included in Section 2.0 of each Unit-specific module.

The information in Appendix A includes: site description, security procedures, traffic patterns, location information for compliance with seismic and floodplain standards, a topographic map, and groundwater protection information.

3.0 WASTE ANALYSIS PLAN

RCRA-regulated wastes are stored and/or treated at Sandia waste management Units. Information about waste analysis at SNL/NM is included in "Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico" in Appendix B of this SNL/NM General Part B.

The information in Appendix B includes: descriptions of waste streams, waste analysis parameters, characterization procedures, waste acceptance procedures, and special requirements.

4.0 INSPECTION PLAN

Sandia personnel inspect Unit waste management areas and associated systems on a regular basis to assure their integrity, maintenance, and safe operation. The inspection program is described in "Site-Wide Inspection Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" in Appendix C to this SNL/NM General Part B.

The information in Appendix C includes: daily inspection forms, weekly/monthly inspection forms, and requirements for inspection of various types of units. Unit-specific inspection plans are included in Section 4.0 of each module.

5.0 PERSONNEL TRAINING PLAN

Sandia Unit personnel receive training relevant to their positions. The training program is described in "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico" in Appendix D to this SNL/NM General Part B. Any additional Unit-specific information is included in Section 5.0 of each Unit-specific module.

The information in Appendix D includes: training content, frequency, techniques, and requirements for various waste management and Unit personnel.

6.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN

Sandia/DOE have developed emergency response and contingency measures in accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart D. The plan is described in "Site-Wide Contingency Plan for Sandia National Laboratories/New Mexico" in Appendix E to this SNL/NM General Part B. Unit-specific information is included in Section 6.0 of each Unit-specific module.

The information in Appendix E includes: description of Sandia/DOE emergency response system, general procedures to be followed by Unit personnel in the event of an emergency, and post-emergency actions. Unit-specific information that is included in Section 6.0 of each module includes: description of the Unit, description and location of emergency equipment, and emergency coordinators.

7.0 CLOSURE PLAN

Sandia/DOE have developed closure information and plans in accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart G. The closure plan is described in "Site-Wide Closure Plan for Sandia National Laboratories/New Mexico" in Appendix F to this SNL/NM General Part B. Additional Unit-specific information is included in Section 7.0 of each Unit-specific module.

Closure information provided in Appendix F is applicable to partial closure rather than final closure of the entire SNL/NM facility. Partial closure is defined as closure of one or more Units while leaving other Units in operation. Partial closure will include removal of RCRA-regulated waste from the Unit to be closed, and decontamination or removal of structures and equipment that have been contaminated by waste materials. Such Unit closures will minimize the need for further maintenance, preclude the release of RCRA-regulated waste or constituents to environmental media, and be protective of human health.

Final closure will occur when all SNL/NM Units are closed either by waste removal and decontamination or by disposal of contaminated structures and equipment.

8.0 TREATMENT

Sandia/DOE perform and plan to perform limited RCRA-regulated waste treatment at some SNL/NM Units (i.e., TTF, RMWMF, AHCF). Treatment will be performed to render RCRA-regulated wastes nonhazardous and/or safer to manage on site and/or dispose of off site. Treatment operations requiring a permit are described in Appendix G of this SNL/NM General Part B. Additional Unit-specific information is included in Section 8.0 of the Unit-specific module for each Unit where treatment is performed.

Handling and Treatment of Unstable Wastes

Because of the nature of Sandia/DOE activities, there are a number of chemicals that are used in various laboratories that, with age or improper storage, may become explosive, unstable, or dangerous to handle. Examples of such chemicals include unknown or damaged compressed gas or liquid cylinders; or expired, sensitized chemicals, such as picric acid, crystallized ether, tetrahydrofuran, heavy metal azides, or organic peroxides. Unit personnel may be required to handle and dispose of unstable chemicals.

If the material has deteriorated such that handling the chemical would pose an imminent and substantial threat of a release that could be harmful to human health or the environment, on-site stabilization may be performed to render the material nonhazardous. Treatment may include venting of known, nonhazardous gas cylinders or stabilizing (e.g., rehydrating) the chemical. Unknown gas cylinders are not vented to the atmosphere; however, a sample of the gas may be taken and analyzed to characterize the gas. According to 20 NMAC 4.1.500/ 40 CFR 264.1(g)(8) [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.1(c)(3)(i) [6-14-00], treatment of this type is exempt from permitting requirements and from 20 NMAC 4.1.500/40 CFR 264. Once the material has been stabilized and is safe to handle, it will be disposed of according to normal procedures through the appropriate Unit.

9.0 RECORDKEEPING

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.500/40 CFR 264 Subpart E, [6-14-00]. The following Unit-specific records are maintained by Sandia/DOE at each Unit unless specified otherwise in each Unit-specific Part B module.

- A current copy of sections of SNL/NM General Part B permit renewal request/application (or permit upon issuance) that govern Unit operations, including the site-wide waste analysis (Appendix B), inspection (Appendix C), training (Appendix D), contingency (Appendix E), and treatment (Appendix G) plans;
- A written operating record that describes:
  - the type and quantity of each RCRA-regulated waste received
  - the location of RCRA-regulated wastes and the quantity at each location
  - the method(s) and dates of storage and/or treatment of the RCRA-regulated waste
  - records and results of RCRA-regulated waste analyses and determinations
  - reports of any incidents that required activation of the Contingency Plan
  - inspection forms for the last three years
  - monitoring, testing, or analytical data and records of corrective actions taken (in the previous or current calendar year) to prevent or mitigate releases of RCRA-regulated waste to the environment
  - treatment notice and certification (as specified in 20 NMAC 4.1.800/40 CFR 268.7(b), (d), and (e) or 268.9(d) [6-14-00])
- Training records for current personnel;
- Written inspection schedule; and
- Air emissions records (as specified in 20 NMAC 4.1.500/40 CFR 264.1064 and 264.1089 [6-14-00]).

The following records are maintained at the SNL/NM Records Center, currently located in Building 869:

- A copy of the SNL/NM General Part B permit renewal request/application (or permit upon issuance);
- Correspondence and other documents from government agencies;

- Notices to off-site generators (as specified in 20 NMAC 4.1.500/40 CFR 264.12[b] [6-14-00]);
- Waste minimization certification;
- Training records for former employees (maintained for a minimum of three years from the date the employee last worked at a Unit);
- Manifest documents for RCRA-regulated waste shipped off site;
- A copy of the Hazardous Waste Report (Biennial Report);
- Copies of unmanifested waste reports;
- Certification and documentation that the Unit and any associated closed-vent system, control system, and containers meet the specifications of 20 NMAC 4.1.500/40 CFR 264.1089 [6-14-00]; and
- Superseded versions of the SNL/NM General Part B permit renewal request/application, the permit, Contingency Plan, Inspection Plan, Waste Analysis Plan, Treatment Plan, and Training Plan.

9.1 Hazardous Waste Report (Biennial Report; 20 NMAC 4.1.500/40 CFR 264.75 and 20 NMAC 4.1.300/40 CFR 262.41)

Sandia/DOE will prepare and submit a hazardous waste report (biennial report) to the New Mexico Environment Department (NMED) by March 1 of each even-numbered year as required by 20 NMAC 4.1.500/40 CFR 264.75 and 20 NMAC 4.1.300/40 CFR 262.41 [6-14-00]. The hazardous waste report (biennial report) will be submitted to the NMED on U.S. Environmental Protection Agency (EPA) Form 8700-13A/B (revised June 2000 or update) unless directed otherwise. The report will cover SNL/NM Unit activities during the previous calendar year and will include:

- The EPA identification number, name, and address of the facility;
- The calendar year(s) covered by the report;
- A description and the quantity of each RCRA-regulated waste received at each unit during the year;
- The method of treatment, storage, or disposal for each RCRA-regulated waste;
- For generators who treat, store, or dispose of RCRA-regulated waste on site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;

- For generators who treat, store, or dispose of RCRA-regulated waste on site, a description in the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and

- The certification signed by Sandia/DOE or an authorized representative.

9.2 Unmanifested Waste Report (20 NMAC 4.1.500/40 CFR 264.76)

Waste from off-site sources may be accepted at SNL/NM, provided that such waste is properly characterized and manifested and meets the requirements listed in Section B.5 of Appendix B of this permit renewal request/application. If Sandia/DOE accepts any wastes for treatment or storage from an off-site facility without an accompanying manifest, or without an accompanying shipping paper as described in 20 NMAC 4.1.500/40 CFR 264.76 [6-14-00], Sandia/DOE will prepare and submit an Unmanifested Waste Report (EPA Form 8700-13B) to the NMED within fifteen days after receiving the waste. The report will include the following:

- The EPA identification number, name, and address of the facility;

- The date the Unit received the waste;

- The EPA identification number, name, and address of the generator and transporter, if available;

- A description and the quantity of each unmanifested RCRA-regulated waste and facility received;

- The method of treatment, storage, or disposal for each RCRA-regulated waste;

- The certification signed by Sandia/DOE or an authorized representative; and

- A brief explanation of why the waste was unmanifested, if known.

9.3 Additional Reports (20 NMAC 4.1.500/40 CFR 264.77)

In accordance with the requirements of 20 NMAC 4.1.500/40 CFR 264.77 [6-14-00], SNL/NM will also report the following to the NMED:

- Releases, fires, and explosions as specified in 20 NMAC 4.1.500/40 CFR 264.56(j) [6-14-00];

- Unit closures specified in 20 NMAC 4.1.500/40 CFR 264.115 [6-14-00];

- Manifest discrepancies that cannot be resolved within 15 days after receiving the waste as required by 20 NMAC 4.1.500/40 CFR 264.72(b) [6-14-00];

- Occurrence(s), if any, when RCRA-regulated waste is placed in a container in noncompliance with conditions specified in 20 NMAC 4.1.500/40 CFR 264.1090[a] [6-14-00] (20 NMAC 4.1.500/40 CFR 264.1082[c][1] or [2] [6-14-00]); and

- As otherwise required by 20 NMAC 4.1.500/40 CFR 264, Subparts F, BB, and CC [6-14-00].

10.0 OTHER FEDERAL LAWS

The following federal laws are required under 20 NMAC 4.1.900/40 CFR 270.3 and 270.14(b)(20) [6-14-00], to be given consideration when applying for a hazardous waste facility permit. When any of these laws is applicable, its procedures must be followed. Requirements and applicability of each law are briefly summarized.

1. *The Wild and Scenic Rivers Act (16 United States Code [USC] 1273 et seq.).* This act provides for a national wild and scenic rivers system and prohibits construction of water resources projects that would have a direct adverse impact on wild and scenic river values. The Rio Grande, the closest river to SNL/NM Units at a distance of approximately 7 miles, is designated as a wild and scenic river. SNL/NM Unit operations do not involve any water resources project construction or development. Therefore, the Wild and Scenic Rivers Act does not apply.

2. *The National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq.).* This act establishes a program for the preservation of the nation's cultural resources including historic properties. Cultural resource investigations have recorded approximately 37 eligible and potentially eligible cultural properties in areas used by Sandia/DOE on Kirtland Air Force Base (KAFB) (Table 3). In addition, some Sandia/DOE structures on KAFB land could have Cold War significance or are approaching 50 years of age; these are in the process of being evaluated for potential inclusion in the National Register.

Table 3
Cultural Properties Used by Sandia/DOE on Kirtland Air Force Base

Land Jurisdiction	Cultural Properties		
	Eligible	Potentially Eligible	Total
USAF/USFS withdrawn: Sandia/DOE joint use	8	9	17
USAF: Sandia/DOE/Others joint use	15	5	20
Total	23	14	37

DOE = U.S. Department of Energy
Sandia = Sandia Corporation
USAF = U.S. Air Force
USFS = U.S. Forest Service

The NHPA has been amended by the Archeological and Historic Preservation Act *(16 USC 469a et seq.)*, which directs federal agencies to recover and preserve historic and archeological data that would otherwise be lost as a result of federal construction or other activities. It has also been amended by the Archeological Resources Protection Act (ARPA) (*16 USC 470aa et seq.*), which requires a permit from the U.S. Department of the Interior (DOI) for excavation or removal of archeological resources from public or pueblo lands. Both of these statutes apply to known or future cultural properties recorded on KAFB land used by Sandia/DOE. Any excavations conducted on, or removal of archaeological resources from, KAFB land used by Sandia/DOE require an ARPA permit obtained through the DOI, National Park Service.

3. *The Endangered Species Act of 1973 (16 USC 1531 et seq.).* This act provides for the protection of endangered and threatened species of flora and fauna. The act prohibits any action that would jeopardize the continued existence of any endangered or threatened species or its critical habitat. There are no federally-listed threatened or endangered species in the vicinity of SNL/NM Units. Consequently, neither formal consultation nor biological opinion processes have been required for SNL/NM Unit operations by the U.S. Fish and Wildlife Service under Section 7 of the Act.

4. *The Coastal Zone Management Act of 1972 (16 USC 1451 et seq.).* This act establishes national policy for the management, use, protection, and development of land and water resources of the nation's coastal zones. Section 307(c) of the act and implementing regulations prohibit the EPA from issuing a permit for activity affecting coastal zone land or water without the certification from the applicant that the activity is in compliance with the state Coastal Zone Management Program. As an inland state, New Mexico does not have a State Coastal Zone Management Program with which Sandia/DOE must comply. None of the SNL/NM Units are located in an affected area (i.e., a coastal zone); therefore, the act does not apply.

5. *The Fish and Wildlife Coordination Act of 1934, as amended (16 USC 661-666c).* This act provides for the protection of fish and wildlife resources potentially affected by development projects that modify any stream or other body of water 10 acres or greater in size. Because there are no natural bodies of surface water proposed for modification by SNL/NM Unit activities, the Fish and Wildlife Coordination Act does not apply.

Consideration will be given to Executive Orders, issued by the President, that are relevant to RCRA-regulated waste management activities at SNL/NM.

11.0 CORRECTIVE ACTION

In accordance with 20 NMAC 4.1.900/40 CFR 270.14(d) [6-14-00], information on solid waste management units is presented in Part 4 of this comprehensive Part B permit request. Solid waste management units are shown on Figure 1 in Part 4.

12.0 CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Donald H. Blanton
Vice President, Human Resources and Protection Services
Sandia Corporation
Albuquerque, New Mexico
Co-Operator

Date Signed

Karen L. Boardman Date Signed
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Albuquerque, New Mexico
Owner and Co-Operator

13.0 REFERENCES

Bretherick's Handbook of Handbook of Reactive Chemical Hazards, 5th Edition, 1995. P.G. Urben, Editor. Butterworth-Heinemann

Hoagland, S.R., 1991, "A Cultural Resources Survey Conducted in the Vicinity of the Sandia National Laboratories Burn Site, KAFB, New Mexico," CGI Project No. 8067 AF.CR, Chambers Group, Inc., Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/ New Mexico General Part A Permit Renewal Request/Application, Revision 3.0," Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. US Department of Health and Human Services, National Institute for Occupational Safety and Health.

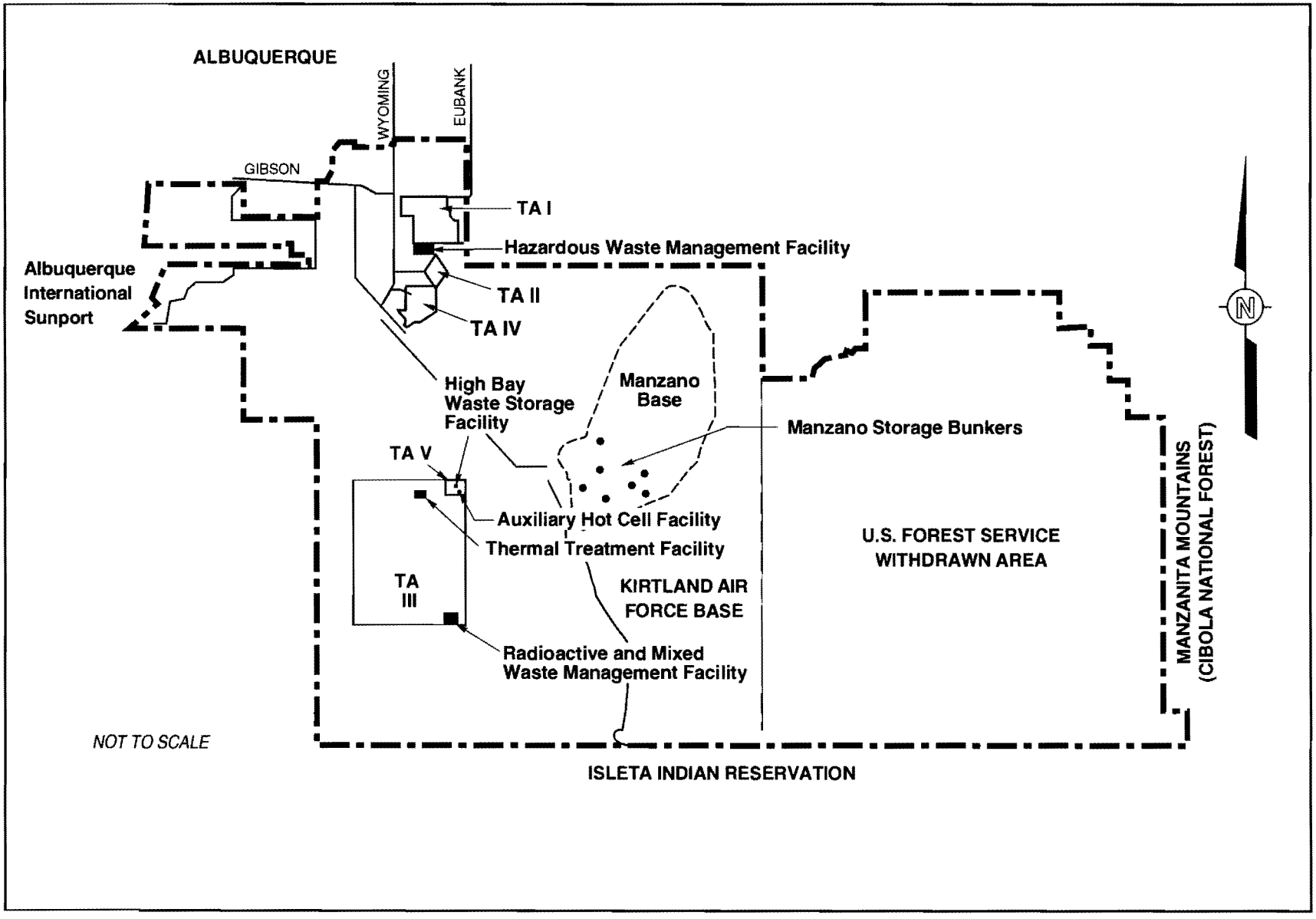


Figure 1

Sandia National Laboratories/New Mexico
Technical Areas (TAs) and Resource Conservation and Recovery Act-Regulated Waste Management Units in Relation to Kirtland Air Force Base

APPENDIX A

SITE-WIDE DESCRIPTION FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-A-ii
LIST OF FIGURES ..... SW-A-iii
ACRONYMS AND ABBREVIATIONS ..... SW-A-iv
A.1 GENERAL SITE DESCRIPTION SW-A-1
A.2 SECURITY PROCEDURES AND EQUIPMENT SW-A-2
A.2.1 Barriers and Means to Control Entry SW-A-2
A.2.2 Warning Signs SW-A-3
A.3 TRAFFIC PATTERNS, VOLUMES, AND CONTROLS SW-A-3
A.3.1 Traffic Patterns SW-A-4
A.3.2 Traffic Volumes SW-A-4
A.3.3 Traffic Control Signals SW-A-4
A.4 SITE LOCATION INFORMATION SW-A-4
A.4.1 Geologic Setting SW-A-4
A.4.2 Seismic Standard SW-A-5
A.4.3 Floodplain Standard SW-A-5
A.5 TOPOGRAPHIC MAPS SW-A-6
A.5.1 Wells SW-A-6
A.5.2 Wind Rose SW-A-6
A.5.3 Surrounding Land Use SW-A-7
A.5.4 Drainage Control Features SW-A-8
A.5.5 Waste Management Areas SW-A-8
A.6 GROUNDWATER MONITORING SW-A-8
A.7 OTHER PERMIT ACTIVITIES SW-A-9
REFERENCES SW-A-10

LIST OF TABLES

Table No.	Title
A-1	Location of RCRA-Regulated Waste Management Units

LIST OF FIGURES

Figure No.	Title
A-1	Site Location Map, Albuquerque and Kirtland Air Force Base (KAFB)
A-2	Unit Location Map, Sandia National Laboratories/New Mexico
A-3	Sandia National Laboratories/New Mexico Technical Areas (TAs) in Relation to Kirtland Air Force Base
A-4	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes, Sandia National Laboratories/New Mexico
A-5	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes Around Technical Area I
A-6	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes in Technical Areas III and V
A-7	Resource Conservation and Recovery Act-Regulated Waste Transportation Routes at Manzano Base
A-8	Land Uses Adjacent to and Within Kirtland Air Force Base (including Sandia National Laboratories/New Mexico)
A-9	Geologic Features in Relation to Sandia National Laboratories/New Mexico

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
AHCF	Auxiliary Hot Cell Facility
DOE	U.S. Department of Energy
ft	foot/feet
HBWSF	High Bay Waste Storage Facility
HWMF	Hazardous Waste Management Facility
KAFB	Kirtland Air Force Base
MSB	Manzano Storage Bunkers
RCRA	Resource Conservation and Recovery Act
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
TA	Technical Area
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
USFS	U.S. Forest Service

SITE-WIDE DESCRIPTION FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

The information provided in this appendix is submitted in accordance with the applicable requirements of 20 NMAC 4.1.100–.900 [6-14-00] 40 CFR 260–266, 268, and 270. The following subject areas are addressed in this appendix or in Section 2 of each Unit-specific module.

- A general description of the Sandia National Laboratories/New Mexico (SNL/NM) site (20 NMAC 4.1.900/40 CFR 270.14[b][1] [6-14-00]);
- Site-wide security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Site-wide traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Site location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Site-wide topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]).
- Site-wide groundwater monitoring and protection information (20 NMAC 4.1.900/40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]); and
- Other permit activities.

Together, the information in this appendix and in each Unit-specific Part B module meets the applicable regulatory requirements. Individual Units are listed in Table A-1.

For the purposes of this permit renewal request/application, SNL/NM (the facility) is owned by DOE and co-operated by Sandia and DOE.

A.1 GENERAL SITE DESCRIPTION (20 NMAC 4.1.900/40 CFR 270.14[b][1])

SNL/NM is located on Kirtland Air Force Base (KAFB) immediately southeast of the Albuquerque city limits in Bernalillo County, New Mexico. SNL/NM occupies an area of approximately 2,842 acres within the 80-square-mile KAFB (Figure A-1).

SNL/NM (U.S. Environmental Protection Agency Identification Number NM5890110518) is a multidisciplinary laboratory engaged in research and development of weapons and alternative energy sources. SNL/NM is managed by Sandia, a wholly-owned subsidiary of Lockheed Martin, for the DOE, with work also performed for others. Activities at SNL/NM fall under North American Industry Classification System Numbers 92811 (National Security) and 54171 (Research and Development in the Physical, Engineering, and Life Sciences).

Table A-1
Location of RCRA-Regulated Waste Management Units

Unit Name	Acronym	Location, size	Types of operations	Operating Status
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II. 1.35 acres	Storage, Repackaging	Existing, operational
Thermal Treatment Facility	TTF	Northern part of TA-III. 196 square feet	Treatment	Existing, on standby
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III. 3.11 acres	Storage, Treatment, Repackaging	Existing, operational
High Bay Waste Storage Facility	HBWSF	TA-V. 5670 square feet	Storage	Existing, operational
Auxiliary Hot Cell Facility	AHCF	TA-V. 5578 square feet	Storage, Treatment, Repackaging	Existing, expected to start operations in 2003
Manzano Storage Bunkers (Set of seven Units)	MSB	In Manzano Area on KAFB. 0.4 acres occupied by bunkers (approximately 1600 to 2100 square feet in each bunker)	Storage	Existing, operational

The major Sandia/DOE research and administration functions are located at five Technical Areas (TAs), designated I through V. TAs I, II, and IV are located north of Tijeras Arroyo and Arroyo del Coyote (Figures A-2 and A-3). TAs III and V occupy contiguous tracts of land south of Tijeras Arroyo and west of Arroyo del Coyote.

A.2 SECURITY PROCEDURES AND EQUIPMENT (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

In accordance with 20 NMAC 4.1.500/40 CFR 264.14(a) [6-14-00], an owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of a facility. The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of Units.

A.2.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

20 NMAC 4.1.500/40 CFR 264.14 [6-14-00] and 270.14[b][19][viii] [6-14-00], require that security be provided by 24-hour surveillance which is continuously monitored and controls access to the facility (20 NMAC 4.1.500/40 CFR 264.14[b][1] [6-14-00]), or if that requirement cannot be met, a natural or artificial barrier and means to control entry must be provided (20 NMAC 4.1.500/40 CFR 264.14[b][2] [6-14-00]). The design and operation of the SNL/NM facility fully meet the security requirements of 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The five TAs, Manzano Base, and Units outside TAs are surrounded by fences that prohibit access except through gated entrances. Only personnel with appropriate Sandia-issued access badges

and identification, or escorted visitors, are allowed access to the TAs and all Units. The gates and/or doors to all Units are closed and locked during non-operating hours.

Sandia security personnel periodically monitor the gates of all SNL/NM technical areas and RCRA-regulated waste management Units during non-operational hours. Any additional Unit-specific information on security procedures and access control is provided in each Unit-specific module.

The SNL/NM Units are located within the fenced boundaries of KAFB. Access to KAFB is controlled 24 hours per day, 7 days per week. Entrance is possible only though five gates, staffed by armed military police, upon recognition of identification stickers or passes issued to each vehicle. Visitors must have a base sponsor and sign an entry log prior to entering the base. The gates are shown in Figure A-4.

A.2.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

20 NMAC 4.1.500/40 CFR 264.14(c) [6-14-00], requires that signs meeting the requirements of that section be posted. Each SNL/NM Unit is posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs in English and Spanish. The signs are legible from a distance of 25 feet and can be seen from any approach to any Unit. The signs and their placement meet the requirements of 20 NMAC 4.1.500/40 CFR 264.14(c) [6-14-00]. Any additional Unit-specific information on warning signs is provided in each Unit-specific module.

A.3 TRAFFIC PATTERNS, VOLUMES, AND CONTROLS (20 NMAC 4.1.900/ 40 CFR 270.14[b][10])

The traffic pattern information presented below is general in nature. More detailed information is provided in Section 2.2 of each Unit-specific module.

RCRA-regulated waste is generated during operations at sites throughout SNL/NM. Because RCRA-regulated waste may be generated throughout SNL/NM, waste transport may occur on nearly all roads within KAFB. Off-site wastes may be received at SNL/NM (see Appendix B of this SNL/NM General Part B). The Units included in this permit application can be reached from the KAFB entrance gates at Wyoming Boulevard, Truman Avenue, Gibson Boulevard, or Eubank Boulevard (Figure A-4). KAFB may restrict hazardous material traffic to one or more gates.

A system of interior roads, as shown in Figures A-4, A-5, A-6, and A-7, is maintained at SNL/NM. About 78 total miles of roadway exist; 33 of those miles are paved. The paved roads present at SNL/NM are generally built in conformance to the New Mexico State Highway Standards or the "City of Albuquerque Development Process Manual, Standards for Residential Streets" (City of Albuquerque, 1983 and amendments). These standards conform to specifications prepared by the American Association of State Highway Transportation Officials. Paved roads at SNL/NM are generally designed and constructed to accommodate light to moderate volumes of truck traffic, including 30- to 40-ton vehicles. The roads typically consist of a 1.5 - to 4-inch layer of asphaltic pavement over a 4- to-6 inch base course (not always present) and 8- to 12-inch compacted subgrade.

A.3.1 Traffic Patterns

Information addressing current Unit-specific travel routes is presented in Section 2.2 of each Unit-specific module. Traffic patterns are subject to change in response to KAFB security requirements.

A.3.2 Traffic Volumes

During the last official traffic study conducted at KAFB in 1984, the average number of vehicles passing through the continuously guarded KAFB gates during normal workday hours from Monday through Friday was estimated to be (Meyers, 1991):

- Carlisle-Gibson gate—5,200 vehicles
- Truman-Gibson gate—10,200 vehicles
- Louisiana-Gibson gate—18,000 vehicles
- Wyoming gate—21,600 vehicles
- Eubank gate—12,200 vehicles.

The majority of the 67,200 total vehicles consisted of commuting employees in personal automobiles and light-duty trucks. At the time of the traffic study, about 8,400 people were employed at SNL/NM (including Sandia personnel and contractors) and an estimated additional 21,000 people were employed at adjoining KAFB and DOE facilities (Jackson, 1991). SNL/NM currently employs about 6,450 people and an additional 17,000 are employed at KAFB and DOE facilities (Francis, 2001). The KAFB Security Forces squadron estimates that 40,000 to 50,000 vehicles currently pass through KAFB gates daily (Francis, 2001).

Therefore, Sandia/DOE believes the 1984 traffic data slightly overestimate the traffic volume for 2001.

A.3.3 Traffic Control Signals

Site wide traffic flow on KAFB is controlled by traffic lights, stop signs, yield signs, and one-way streets. Traffic lights are in place at major intersections on KAFB. Traffic signs are used at "T" intersections throughout KAFB, including SNL/NM. Any additional Unit-specific information addressing traffic control is presented in Section 2.2 of each Unit-specific module.

A.4 SITE LOCATION INFORMATION (20 NMAC 4.1.900/40 CFR 270.14[b][11])

A.4.1 Geologic Setting (20 NMAC 4.1.500/40 CFR 264.18[a] and 20 NMAC 4.1.900/40 CFR 270.14[b][11])

SNL/NM is located along the east-central edge of the Albuquerque Basin, one of a north-south-trending series of basins that make up the Rio Grande Rift. The Sandia, Manzanita, and Manzano Mountains, which are uplifted fault blocks, form the eastern boundary of the basin. The Lucero

uplift bounds the west side of the basin, the Ladron Mountains bound the south side, and there is limited topographic relief on the northwest side of the basin. The basin is approximately 100 miles long and 20 to 40 miles wide (Figure A-9).

The eastern section of the Albuquerque Basin shows major faulting (Figures A-2 and A-9). The Hubbell Springs, Sandia, and Tijeras faults form a series of down-dropped blocks to the west (SAIC, 1985; Machette, 1982; Grant, 1981; Kelley, 1977).

The Tijeras Fault zone trends northeast from SNL/NM through Tijeras Canyon. The fault zone consists of several subparallel faults with near-vertical dips and show normal and left lateral displacement (Maynard et al., 1991; Lisenbee et al., 1979).

Within the boundaries of KAFB, the Albuquerque Basin rocks are Precambrian to Holocene in age. The upper part of the basin fill within KAFB is comprised of the Ceja Member of the Tertiary Santa Fe Group, which is a complex sequence of gravel, sand, silt, clay, and caliche deposits. Quaternary and Holocene deposits, which include alluvium, landslide deposits, eolian deposits, caliche, and gravel pediments, also comprise Albuquerque Basin sediments within KAFB (Kelley, 1977).

A.4.2 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

SNL/NM is located in Bernalillo County, New Mexico, which is listed in Appendix VI of 20 NMAC 4.1.500/40 CFR 264 [6-14-00]. None of the SNL/NM Units are located within 3,000 feet (ft) of any fault with Holocene displacements (Machette, 1982). Therefore, all SNL/NM Units are compliant with the seismic standards in 20 NMAC 4.1.500/40 CFR 264.18(a) [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(11)(ii) [6-14-00].

A.4.3 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii through v]; 20 NMAC 4.1.500/40 CFR 264.18[b])

SNL/NM is located near the middle of the upper Rio Grande basin that originates in southern Colorado. SNL/NM occupies generally flat, gently west-sloping mesa land located between the Rio Grande Valley to the west and the Manzano and Manzanita Mountains to the east. The nearest surface water body is the Rio Grande, located about 7 miles west of SNL/NM.

The locations of the 100-year floodplains of Tijeras Arroyo and Arroyo del Coyote are shown in Figure A-2. 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. None of the SNL/NM Units are located within a 100-year floodplain, as defined in 20 NMAC 4.1.500/40 CFR 264.18(b)(2)(i) [6-14-00], and as regulated under 20 NMAC 4.1.500/40 CFR 264.18(b)(1) [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(11)(iv) [6-14-00]. Therefore, all SNL/NM Units are compliant with the floodplain standards.

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

Figure A-2 is provided to meet the requirements of the 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Figure A-2 is a topographic map of KAFB that shows the SNL/NM TAs and includes the following:

- Map scale and date
- The 100-year floodplain area
- Surface water bodies, including intermittent streams
- Wind roses
- Map orientation (north arrow)
- Legal boundaries of the SNL/NM facility
- Access control features (i.e., fences and gates)
- Groundwater monitoring, withdrawal, and water supply wells both on site and off site at KAFB and SNL/NM in the vicinity of the Units
- Buildings and other structures (e.g., access and internal roads)
- Locations of the HWMF, TTF, RMWMF, HBWSF, AHCF, and MSB.
- Areas of residential land use within KAFB.

These items are also shown on topographic maps in the Unit-specific modules. The Unit-specific maps show Unit features and the area surrounding each Unit in greater detail.

A.5.1 Wells (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix])

There are no injection wells at SNL/NM. Groundwater monitoring wells and withdrawal wells located at SNL/NM are shown in Figure A-2. None of the wells shown in Figure A-2 are expected to be influenced by activities at any SNL/NM RCRA-regulated waste management Unit because waste management activities occur in contained areas. KAFB water-supply wells, City of Albuquerque wells, and other wells located within 1,000 ft of the KAFB boundaries are shown on Figure A-2.

A.5.2 Wind Rose (20 NMAC 4.1.900/40 CFR 270.14[b][19][v])

A network of meteorological towers is used to monitor weather conditions at SNL/NM. Data indicate that the prevailing winds at SNL/NM are from the east, except that winter winds at the

100-ft elevation are from the north. Rapid night time ground cooling after sunset on cloudless or near-cloudless nights produces strong temperature inversions in which temperature increases with elevation (an atmospheric condition resulting from a reversal of the normal temperature lapse rate). This rapid cooling effect generates drainage winds (i.e., katabatic winds) out of the mountains, which are strongest at the mouths of the larger canyons. It also appears that Tijeras Arroyo diverts surface air flow between TAs III and V on the south and TAs I, II, and IV, and Albuquerque on the north. The channeling of wind through Tijeras Canyon can be seen by comparing the wind roses from these two areas. Figure A-2 shows wind roses that summarize wind speeds and directions for TA-II (near the HWMF), the southeast corner of TA-III (near the RMWMF), and the northeast corner of TA-III (near the HBWSF, AHCF, and TTF). Wind roses are also shown on the Unit-specific topographic maps.

A.5.3 Surrounding Land Use (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv])

Albuquerque is the largest population center in Bernalillo County and also the closest population center to KAFB and SNL/NM. According to Census 2000 data, the total population of the Albuquerque metropolitan area is 448,607 (U.S. Census Bureau, 2000). This population includes permanent residents of KAFB living in the KAFB housing areas. An additional 108,071 people live outside the Albuquerque metropolitan area but within Bernalillo County (U.S. Census Bureau, 2000).

SNL/NM is essentially surrounded by KAFB, with co-use agreements on some portions of KAFB. An additional 22,500-acre area to the east of KAFB has been withdrawn from the U.S. Forest Service (USFS) for the exclusive use of KAFB. High explosive tests, explosives storage, and other operations are buffered and barricaded by the mountainous terrain toward the eastern edge of this withdrawal area. Areas to the west and south, by agreements with the State of New Mexico and Isleta Pueblo, serve as buffer zones for other test operations.

Land use in the vicinity of SNL/NM and KAFB is urban to the northwest, north, and northeast. Undeveloped grazing land of Isleta Pueblo is located to the south. Undeveloped public grazing land lies to the west and southwest of KAFB and the buffer zones.

The urbanized area immediately northeast, north, and northwest of SNL/NM is predominantly residential, with commercial development along more heavily-traveled streets. Military (i.e., KAFB) housing is located north of F Street (adjacent to the northern edge of SNL/NM TA-I). Additional military housing is located west of Pennsylvania Avenue, north of Hardin Blvd (west of SNL/NM TA-1), as shown on Figure A-2. Albuquerque International Sunport is located west of the northern part of KAFB. Figure A-8 shows land uses for the areas adjacent to and within KAFB boundaries.

The SNL/NM facility is comprised of five TAs and several additional test areas spread over 17,845 acres, which are under diverse land ownership. SNL/NM occupies 2,842 acres owned by the DOE and an additional 15,003 acres that have been made available through a series of land-use agreements or permits among DOE-Albuquerque Operations, DOE Transportation Safeguards Division, KAFB, USFS, Bureau of Land Management, State of New Mexico, Phillips Laboratory (a private contractor), DOE Central Training Academy, and Isleta Pueblo.

The HWMF is approximately 2 miles south of Interstate 40 and 6 miles east of Interstate 25 and downtown Albuquerque. At their nearest points, the HBWSF, the AHCF, and the TTF are approximately 3 miles south of Interstate 40 and 6.5 miles east of Interstate 25 and downtown Albuquerque. The MSB are approximately 5 miles south of Interstate 40 and 7.5 miles east of Interstate 25 and downtown Albuquerque. The RMWMF is approximately 5.5 miles south of Interstate 40 and 6.5 miles east of Interstate 25 and downtown Albuquerque. Land use in the vicinity of each RCRA-regulated Unit is predominantly or completely industrial. There are no residential areas within 1 mile of any of the SNL/NM Units. The closest residences are in Zia Park, a KAFB residential area located approximately 1 mile west of TA-I and approximately 3.9 miles north-northwest of TA-V.

A.5.4 Drainage Control Features (20 NMAC 4.1.900/40 CFR 270.14(b)(8)(ii)

Drainage control features (e.g., run-on/runoff, drainage barriers, storm water discharge) are shown on figures provided in each Unit-specific module.

A.5.5 Waste Management Areas

Locations of the waste management areas at each SNL/NM Unit are shown on figures provided in each Unit-specific module.

A.6 GROUNDWATER MONITORING (20 NMAC 4.1.900/40 CFR 270.14[c] and 20 NMAC 4.1.500/40 CFR 264.90[a])

The 12 SNL/NM Units included in Part 2 of this Sandia/DOE comprehensive Part B permit request are storage and/or treatment Units that are subject to 20 NMAC 4.1.500/40 CFR 264.101 [6-14-00] which requires that operators of treatment, storage, or disposal facilities develop and implement corrective actions as necessary to protect human health and the environment from past, present, or future releases of RCRA-regulated wastes. None of the 12 storage and/or treatment Units addressed in Part 2 have released RCRA-regulated wastes in the past.

The 12 Units are not subject to the groundwater protection and monitoring requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart F [6-14-00] because they are not regulated units or solid waste management units.

SNL/NM currently has one regulated unit (the Chemical Waste Landfill) that is subject to the groundwater protection and monitoring requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart F [6-14-00]. Chemical Waste Landfill groundwater monitoring is addressed in Part 3 of this Sandia/DOE comprehensive Part B permit request.

A.7 OTHER PERMIT ACTIVITIES

Sandia/DOE hold numerous environmental permits issued by various agencies. Current permits, including RCRA permits, are listed in Appendix A of the General Part A included in Part 1 of this comprehensive Part B renewal request.

REFERENCES

City of Albuquerque, 1983 and amendments, "Development Process Manual," Albuquerque, New Mexico.

COE, see U.S. Army Corps of Engineers.

Francis, R. L., 2001, Kirtland Air Force Base, Public Affairs, Albuquerque, New Mexico, Personal Communication to K. L. Peters, IT Corporation, Albuquerque, New Mexico.

Grant, P. R., 1981, "Geothermal Potential on Kirtland Air Force Base Lands, Bernalillo County, New Mexico," SAND81-7141, Sandia National Laboratories, Albuquerque, New Mexico.

Jackson, M., 1991, Kirtland Air Force Base, Public Affairs, Albuquerque, New Mexico, Personal Communication to B. A. Sladek, IT Corporation, Albuquerque, New Mexico.

Kelley, V. C., 1977, "Geology of the Albuquerque Basin, New Mexico," Memoir 33, New Mexico Bureau of Mines and Mineral Resources, Socorro, New Mexico.

Lisenbee, A. L., L. A. Woodward, and J. R. Connolly, 1979, "Tijeras-Canoncito Fault System—A Major Zone of Recurrent Movement in North-Central New Mexico," New Mexico Geological Society Guidebook 30, pp. 89–99.

Machette, M. N., 1982, "Quaternary and Pliocene Faults in the La Jencia and Southern Part of the Albuquerque-Belen Basins, New Mexico: Evidence of Fault History from Fault-Scarp Morphology and Quaternary Geology," New Mexico Geological Society Guidebook, 33rd Field Conference, Albuquerque Country II, pp. 161-169.

Maynard, S. R., L. A. Woodward, and D. L. Giles, 1991, "Tectonics, Intrusive Rocks, and Mineralization of the San Pedro-Ortiz Porphyry Belt, North-Central New Mexico," New Mexico Bureau of Mines and Mineral Resources Bulletin 137, pp. 57–69, Socorro, New Mexico.

Meyers, L., 1991, Kirtland Air Force Base, Construction and Engineering Department, Albuquerque, New Mexico, Personal Communication to B. A. Sladek, IT Corporation, Albuquerque, New Mexico.

SAIC, see Science Applications International Corporation.

Science Applications International Corporation (SAIC), 1985, "Installation Restoration Program Phase II, Confirmation/Quantification Stage I," Report 2-827-06-351-33, prepared for Sandia National Laboratories, Albuquerque, New Mexico.

U.S. Army Corps of Engineers (COE), 1979, "Special Flood Hazard Information Tijeras Arroyo and Arroyo del Coyote, KAFB, New Mexico," U.S. Army Corps of Engineers, Albuquerque, New Mexico.

U.S. Census Bureau, 2000, American FactFinder Census 2000 Summary File, U.S. Census Bureau, Washington, D.C.

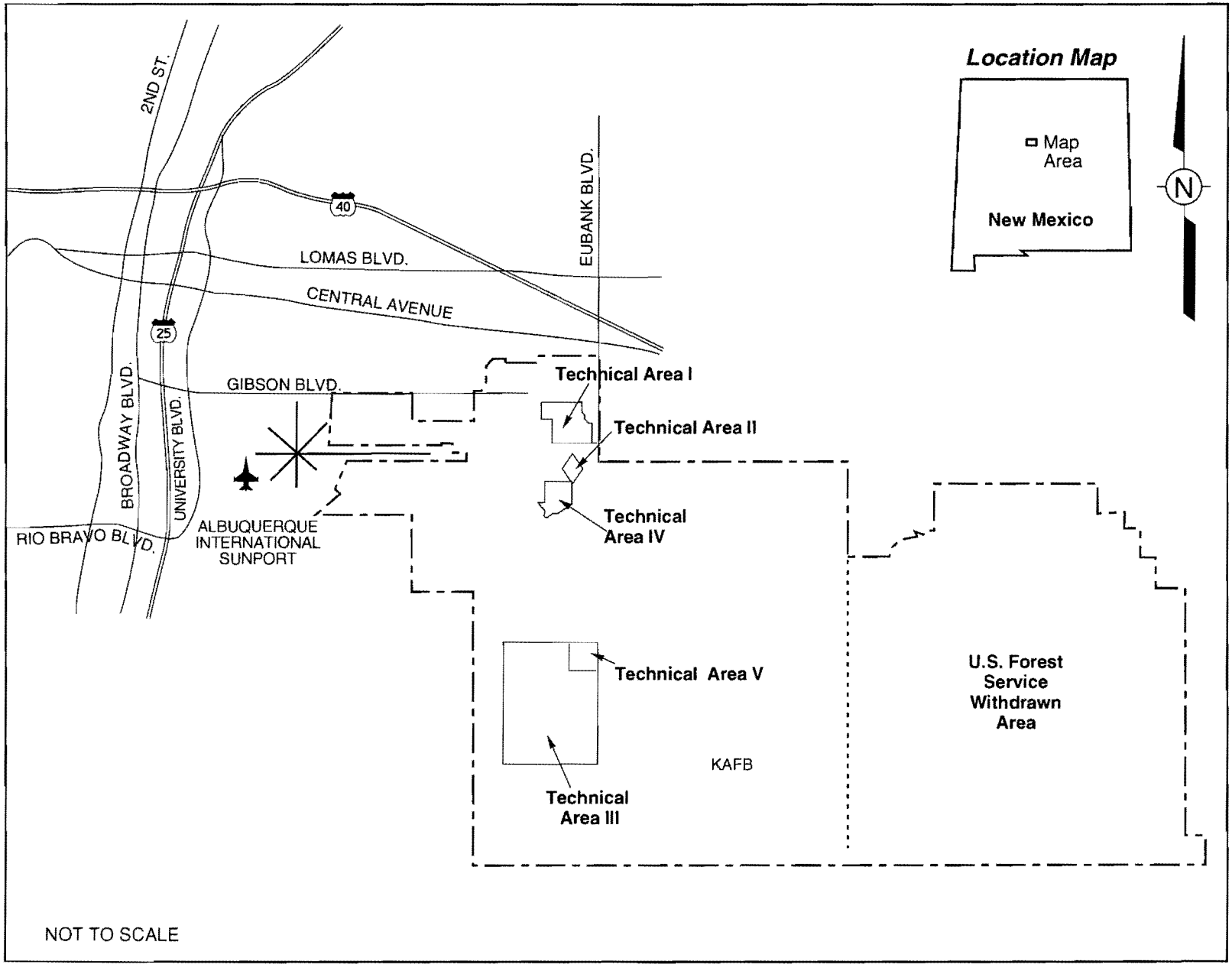


Figure A-1
Site Location Map, Albuquerque and Kirtland Air Force Base (KAFB)

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

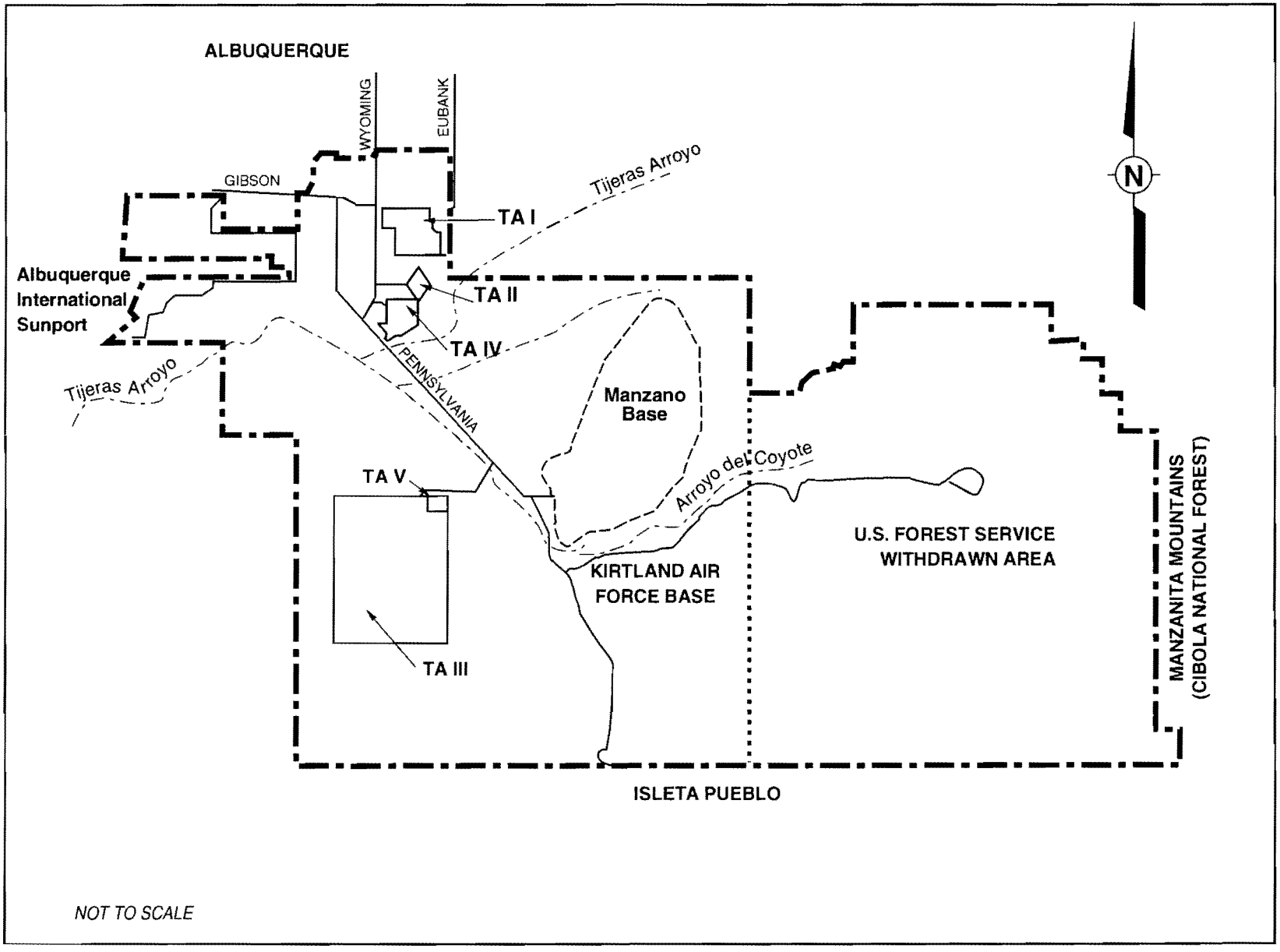


Figure A-3
Sandia National Laboratories/New Mexico
Technical Areas (TAs) in Relation to Kirtland Air Force Base

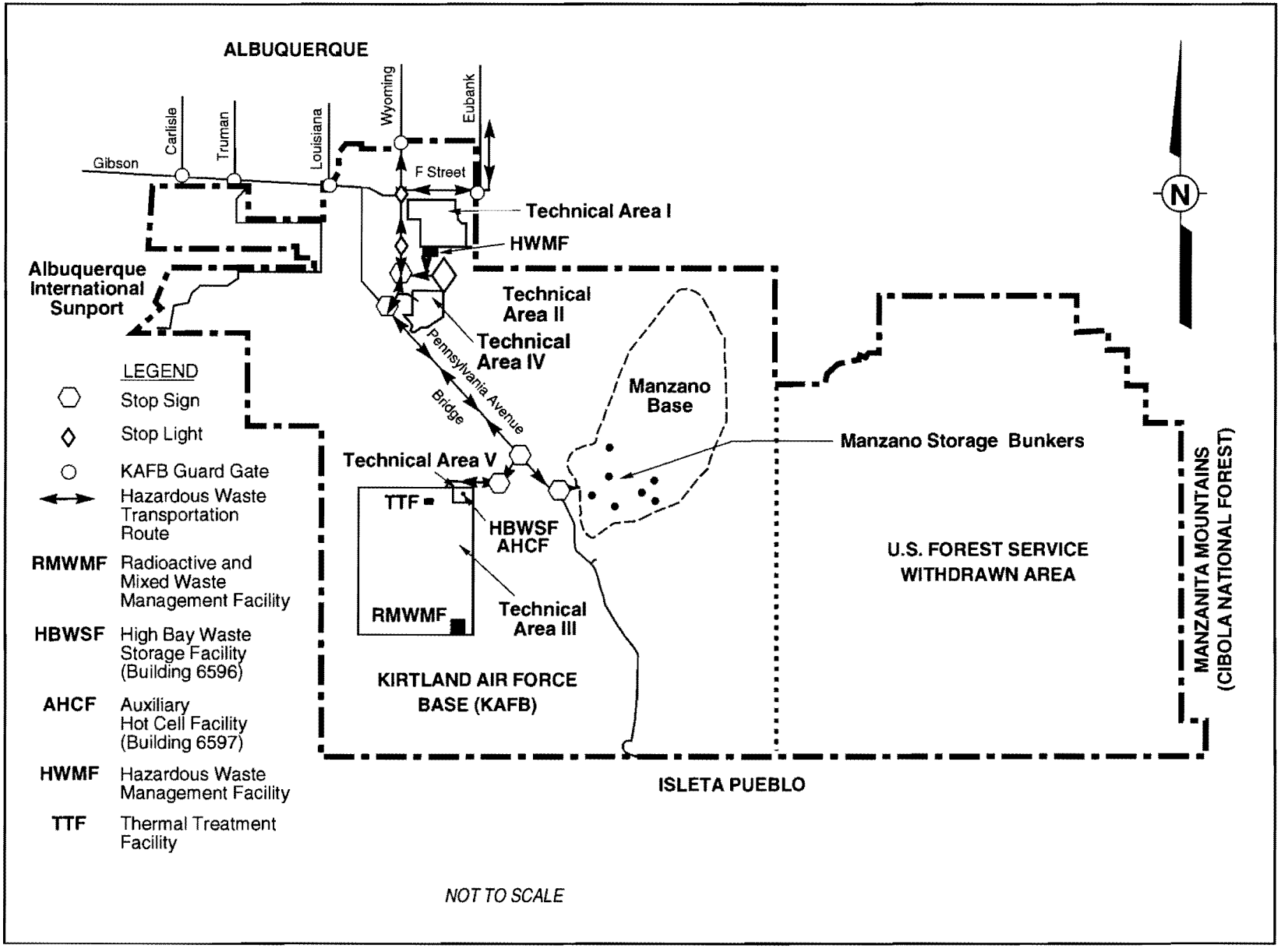


Figure A-4
Resource Conservation and Recovery Act-Regulated Waste Transportation Routes, Sandia National Laboratories/New Mexico

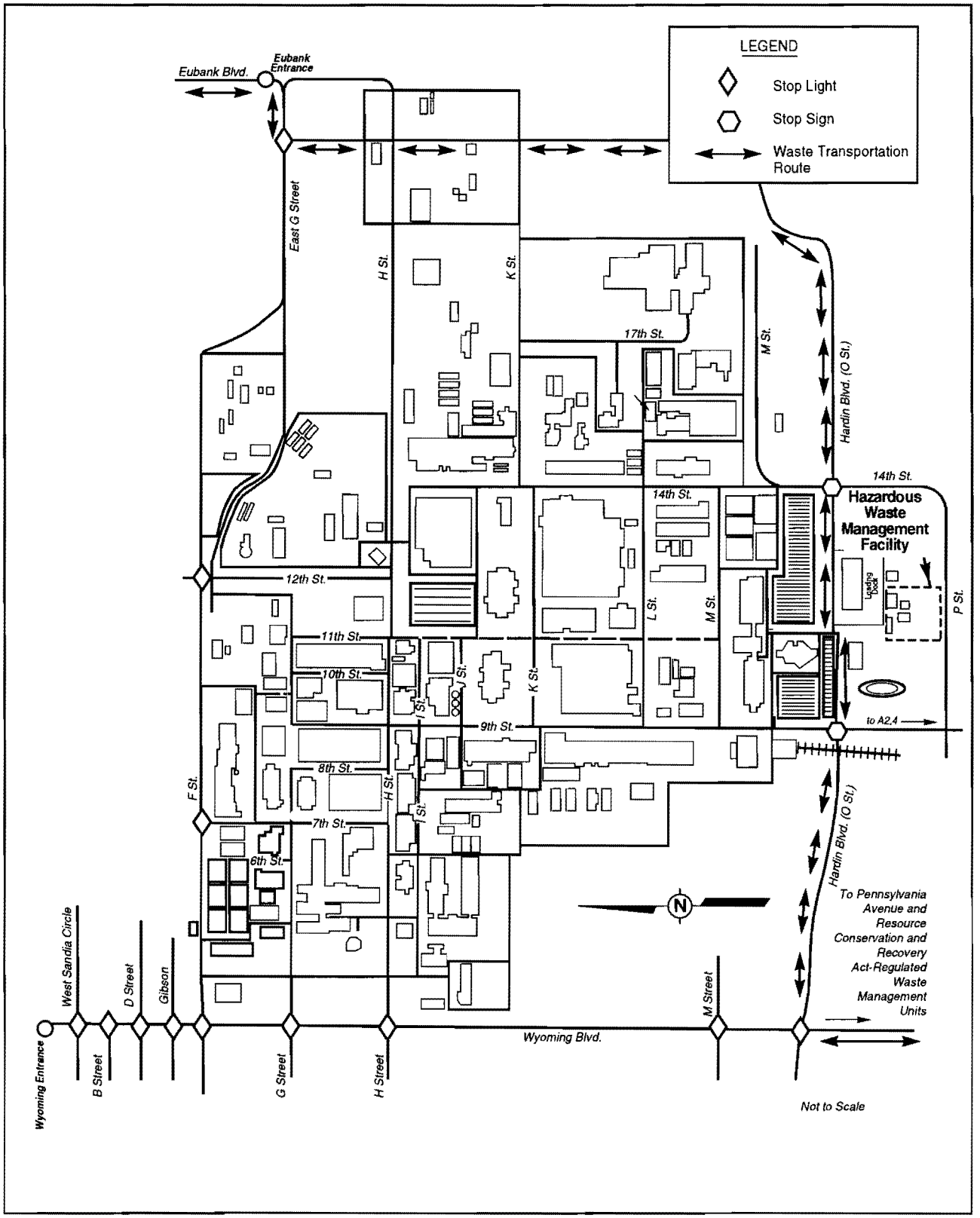


Figure A-5
Resource Conservation and Recovery Act-Regulated Waste Transportation Routes Around Technical Area I

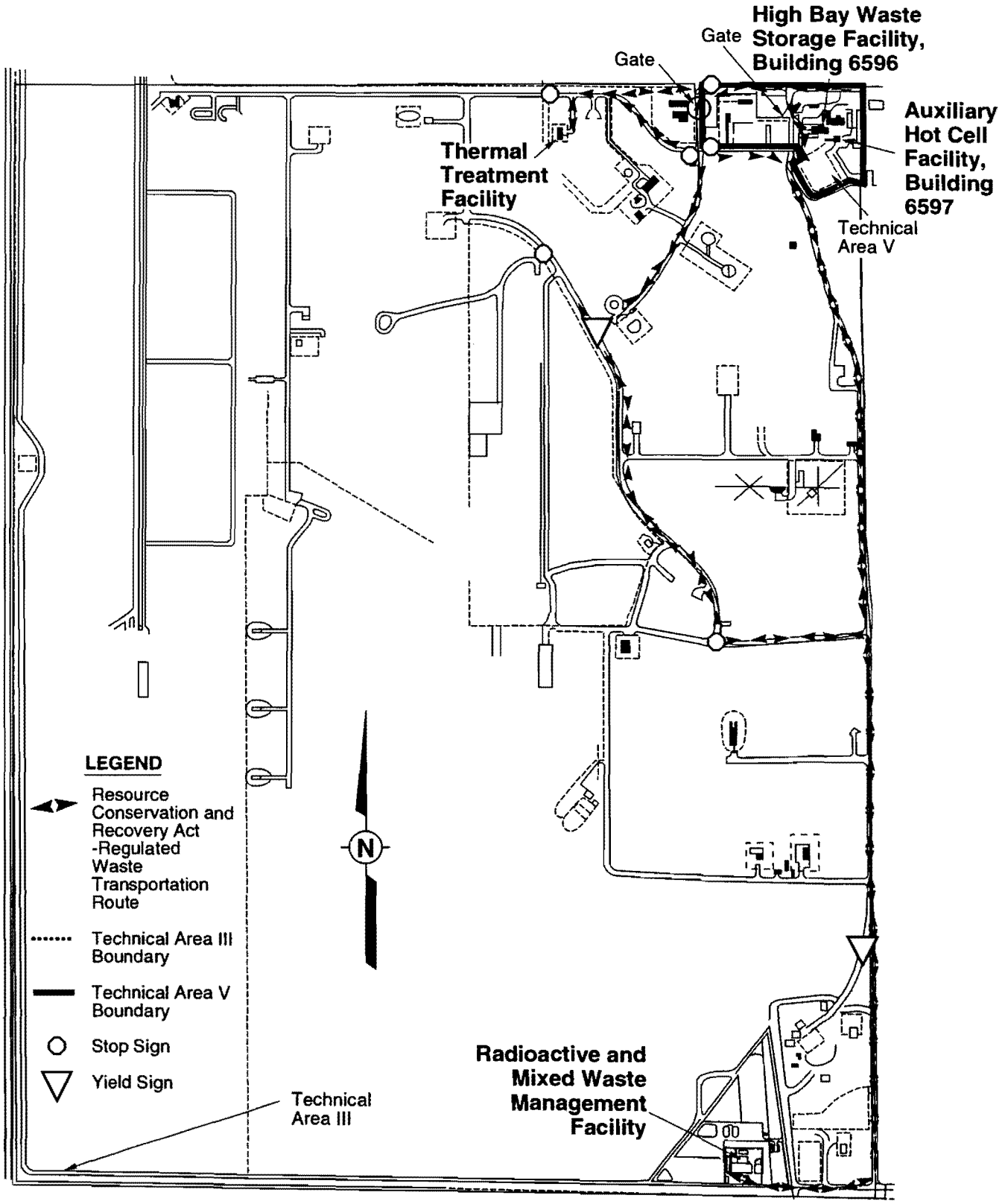


Figure A-6
Resource Conservation and Recovery Act-Regulated Waste Transportation Routes in Technical Areas III and V

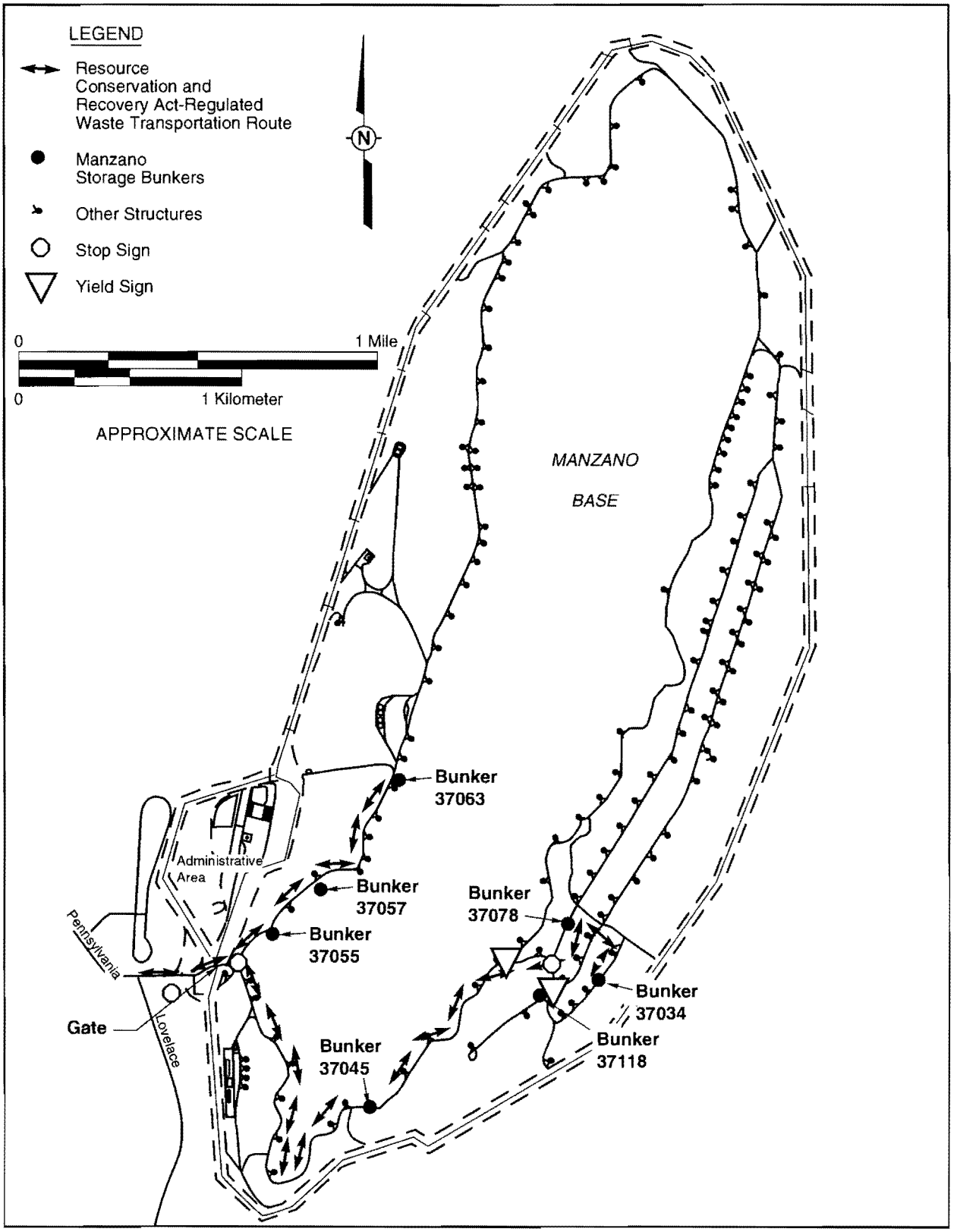


Figure A-7

Resource Conservation and Recovery Act-Regulated Waste Transportation Routes at Manzano Base

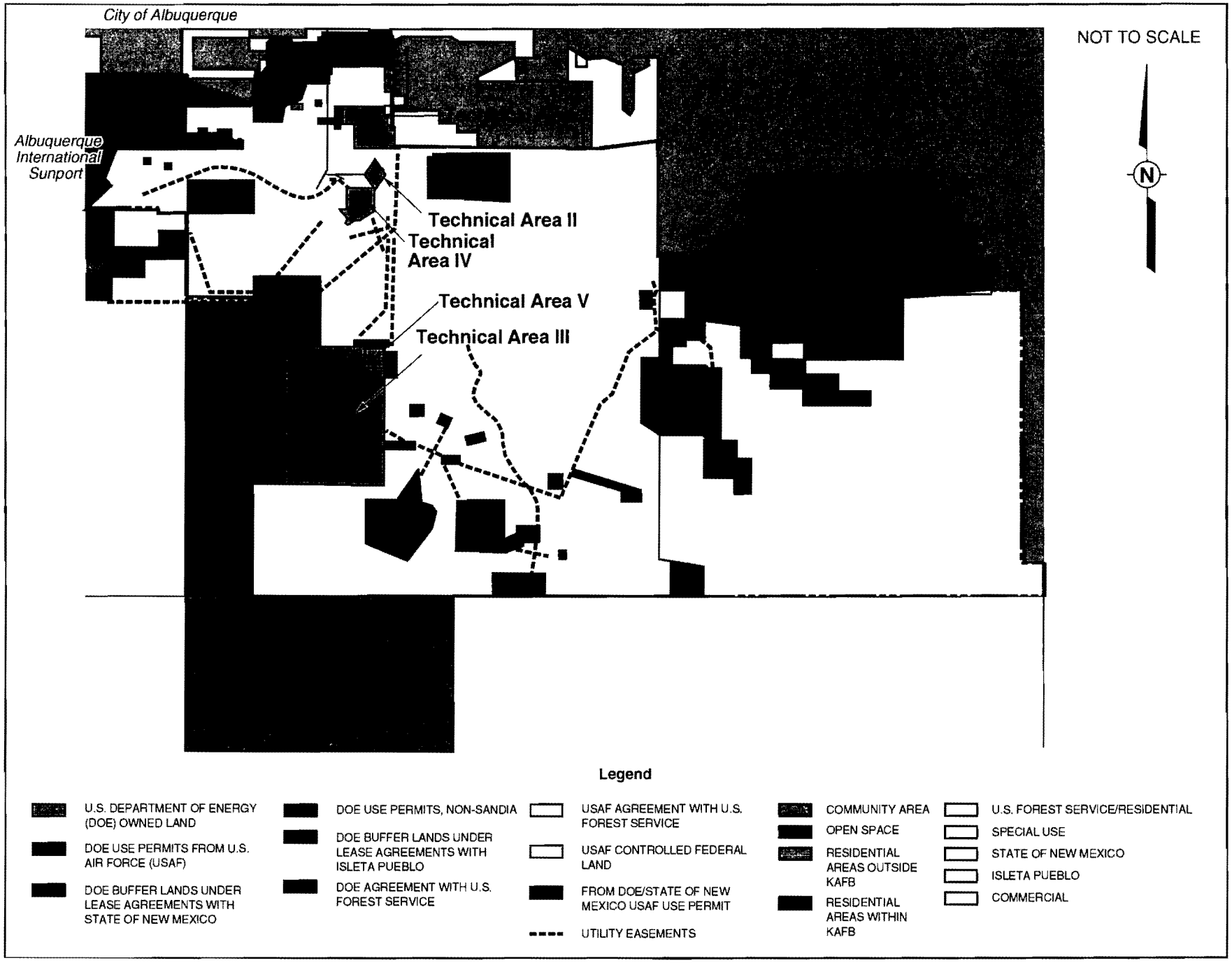


Figure A-8

Land Uses Adjacent to and Within Sandia National Laboratories/New Mexico and Kirtland Air Force Base

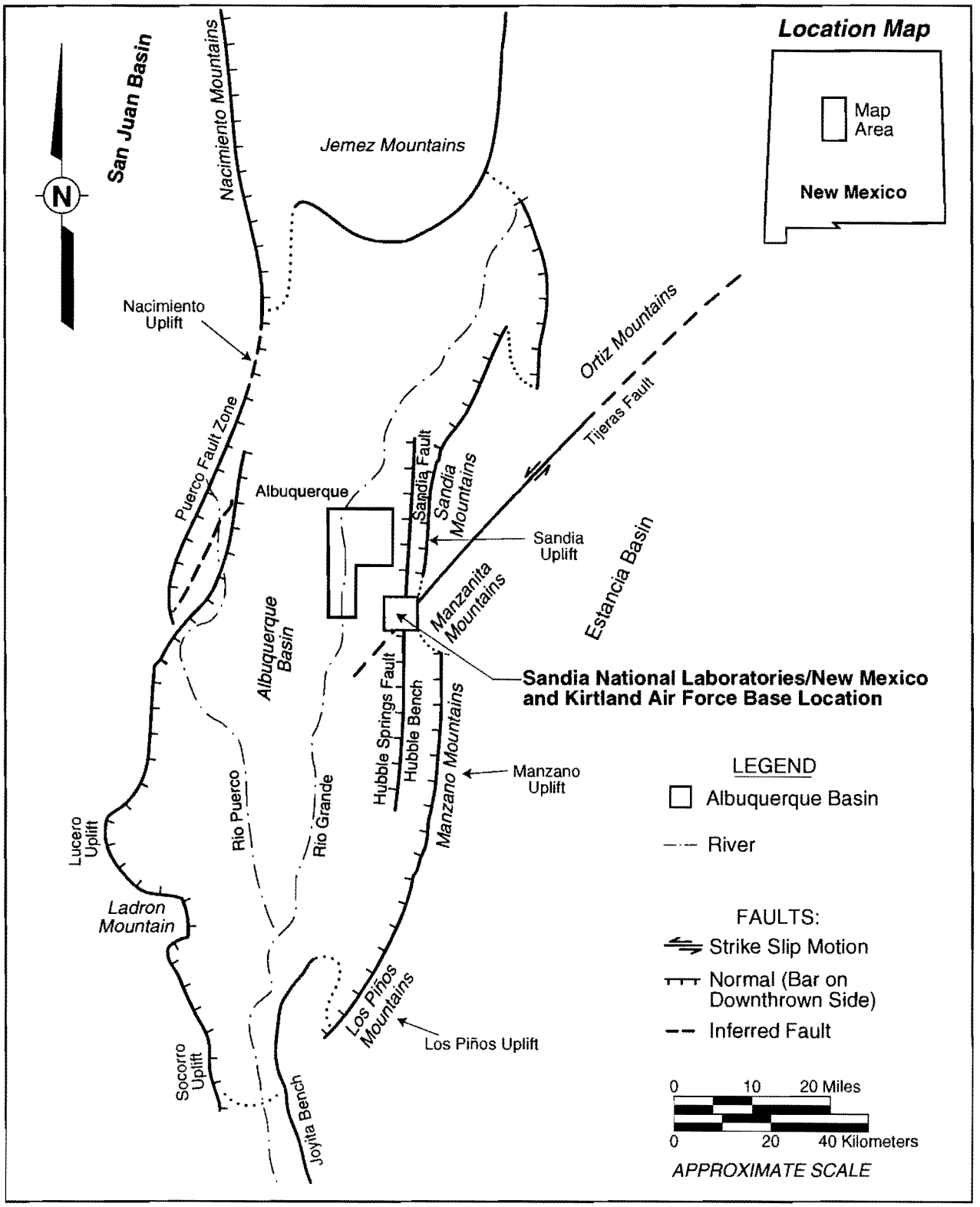


Figure A-9
Geologic Features in Relation to Sandia National Laboratories/New Mexico

APPENDIX C

SITE-WIDE INSPECTION PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF FIGURES ..... SW-C-ii
ACRONYMS AND ABBREVIATIONS ..... SW-C-iii
C.1 INSPECTION REQUIREMENTS FOR UNITS SW-C-1
C.1.1 Inspection Records SW-C-1
C.1.2 Remedial Action SW-C-2
C.2 TYPICAL INSPECTION SCHEDULE AND REQUIREMENTS FOR UNITS SW-C-2
C.2.1 Daily SW-C-3
C.2.2 Weekly SW-C-3
C.2.3 Monthly SW-C-3
C.3 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART AA REQUIREMENTS SW-C-3
C.4 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART BB REQUIREMENTS SW-C-4
C.5 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART CC REQUIREMENTS SW-C-4

LIST OF FIGURES

Figure No.	Title
C-1	Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit, Daily Inspection Form – Example
C-2	Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit, Weekly/Monthly Inspection Form – Example

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management unit
WMA	waste management area

SITE-WIDE INSPECTION PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart IX (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.14(b)(5) (40 CFR 270.14[b][5]), and 20 NMAC 4.1.500/40 CFR 264.15, "General Inspection Requirements," revised June 14, 2000 [6-14-00], this appendix presents site-wide inspection requirements applicable to the Resource Conservation and Recovery Act (RCRA)-regulated waste management units (Units) at Sandia National Laboratories/New Mexico (SNL/NM), co-operated by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE).

Pursuant to 20 NMAC 4.1.500/40 CFR 264.15(a) [6-14-00], inspection schedules for the Units have been developed to identify equipment malfunctions and deterioration, operator errors, and discharges that might cause or lead to a release of RCRA-regulated waste and pose a threat to human health and the environment. This inspection plan, which presents general inspection schedules, is being submitted as required by 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00]. Unit-specific inspection requirements, if any, for SNL/NM Units are provided in Section 4.0 of each Unit-specific module. Together, information in this appendix and each Unit-specific module meets the applicable regulatory requirements.

C.1 INSPECTION REQUIREMENTS FOR UNITS [20 NMAC 4.1.900/40 CFR 270.14(b)(5), and 20 NMAC 4.1.500/40 CFR 264.15, 264.174, and 264.602]

In accordance with the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.15(b)(1), 264.174, and 264.602 [6-14-00], SNL/NM Units are inspected for malfunctions and deterioration, operator errors, and discharges which may be causing, or may lead to, a release of hazardous waste constituents to the environment or a threat to human health. Inspections include monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, and responding to environmental or human health hazards caused by RCRA-regulated waste. Containers of RCRA-regulated waste stored at a Unit are also routinely inspected to assess container integrity, closure, labeling, secondary containment, location with respect to incompatible wastes, and waste and container compatibility. Additional detail about specific items and areas is included in each Unit-specific module.

A copy of this Appendix, which includes relevant inspection schedules, is maintained at each Unit, together with the Unit-specific inspection plan, unless specified otherwise in Section 4 of each Unit-specific module, as required in 20 NMAC 4.1.500/40 CFR 264.15(b)(2) [6-14-00].

C.1.1 Inspection Records [20 NMAC 4.1.500/40 CFR 264.15(d)]

Unit personnel are assigned to conduct inspections and record the information on inspection forms. Figures C-1 and C-2 are representative of the inspection forms completed by personnel inspecting SNL/NM Units. Figures C-1 and C-2 are provided for informational purposes only;

the forms are subject to change. Any forms used will be functionally equivalent to the ones shown as Figures C-1 and C-2. The inspection forms identify the items to be inspected and the potential problems that may occur (20 NMAC 4.1.500/40 CFR 264.15(b)(3) [6-14-00]). Additional detail is included in each Unit-specific inspection plan. The following information is recorded on the inspection forms.

- Name of inspector
- Date and time of inspection
- Notation of observations and results of the inspection
- Date and nature of any repairs or remedial action.

For each Unit, inspection records are maintained for a minimum of three years from the date of inspection. Current calendar year records are maintained at the Unit. Previous calendar year records may be maintained at the Unit, SNL/NM Records Center, or as noted in Section 4 of each Unit-specific module.

C.1.2 Remedial Action [20 NMAC 4.1.500/40 CFR 264.15(c)]

For every item requiring inspection, a response indicating the condition of each item must be entered in the appropriate column on the form. If any defects, deterioration, damage, or potential hazards are discovered during an inspection, Unit personnel begin taking corrective action upon discovery to ensure that the problem does not lead to an environmental or human health hazard. Appropriate action may include evaluation and removal of accumulated liquids from secondary containment, transfer of waste from a defective container to an appropriate container in good condition, or repair or replacement of nonfunctioning equipment and/or systems. If an inspection reveals that a nonemergency problem has developed, corrective action including repairs, maintenance, and replacement will be completed as soon as practical to preclude further damage and reduce the need for emergency repairs.

Corrective action(s) taken in response to conditions discovered during an inspection are noted on the inspection forms. The corrective action(s) taken (along with time, date, and other pertinent information) are recorded in the appropriate section of the inspection form on which the corrective action was first noted or the first weekly inspection form completed following implementation of the corrective action.

C.2 TYPICAL INSPECTION SCHEDULE AND REQUIREMENTS FOR UNITS [20 NMAC 4.1.500/40 CFR 264.15(b)(4), 264.174, and 264.602]

The schedules described in this Section are followed for the inspection of the items and areas noted in Section C.1. Inspections may be conducted at any time during the applicable time period (e.g., day, week, month) specified in the inspection schedule.

The U.S. Air Force, which operates Kirtland Air Force Base, may, for security or other reasons, deny access to Sandia/DOE personnel performing periodic Unit inspections. In such cases, Unit personnel will resume inspections as soon as possible after access is granted, and will document the missed inspections and reasons on the next inspection report.

SNL/NM Units are typically inspected according to the schedule provided below. Inspection frequencies have been developed based on the deterioration rates of equipment/systems and likelihood of failure, and the probability of harm to human health or the environment if: 1) the equipment/system fails between inspections; or 2) operator error goes undetected between inspections. Equipment and systems most likely to fail and those whose failure could lead to severe consequences are inspected most frequently.

The inspection frequencies for specific equipment and areas of operation at each Unit are listed in Section 4 of each Unit-specific module. Those detailed schedules are consistent with the general schedule described here.

C.2.1 Daily

A daily Unit inspection is conducted during each day that RCRA-regulated waste handling occurs at that Unit. Waste handling includes when RCRA-regulated waste is received at, moved or opened within, treated at, or removed from a WMA. An example of a daily inspection form (Figure C-1) lists the items typically addressed. A detailed list of items is included in Section 4 of each Unit-specific module.

C.2.2 Weekly

A weekly Unit inspection is conducted at least once during each week that RCRA-regulated waste is stored at that Unit. The example of a weekly inspection form (Figure C-2) lists the items typically addressed (included in Item 10 on the form). A detailed list of items is included in Section 4 of each Unit-specific module. For the purposes of inspections, weekly is defined as Sunday through the following Saturday.

C.2.3 Monthly

Safety and emergency equipment, security devices, and Unit operating and structural equipment are inspected on a monthly schedule at each active and inactive Unit. Monthly inspections are conducted at WMAs not currently in use for RCRA-regulated waste management. Items 7, 8, and 9 on the monthly inspection form (Figure C-2) identify the items to be inspected at active and inactive WMAs. A detailed list of items is included in Section 4 of each Unit-specific module.

C.3 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART AA REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART AA]

Sandia/DOE do not manage RCRA-regulated wastes with organic concentrations ≥10 percent by weight using process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations. Therefore, Sandia/DOE are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart AA [6-14-00].

C.4 INSPECTION AND MONITORING FOR UNITS SUBJECT TO SUBPART BB REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART BB]

Sandia/DOE do not routinely manage RCRA-regulated wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 264.1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 1050(f) [6-14-00]. The equipment use will be noted in the Unit operating log.

C.5 INSPECTION and MONITORING FOR UNITS SUBJECT TO SUBPART CC REQUIREMENTS [20 NMAC 4.1.500/40 CFR 264, SUBPART CC]

Containers are visually inspected either at the time of pickup from a generator site or within 24 hours of acceptance at a Unit. The visual inspection assures that there are no cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. Containers holding RCRA-regulated wastes managed in accordance with 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] air emission standards are also subject to an inspection and monitoring plan as required by 20 NMAC 4.1.500/40 CFR 264.1088(b) [6-14-00].

Figure C-1
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Daily Inspection Form – Example

1. Area(s) Inspected (i.e., Loading/Unloading Area, Treatment Area) _____
2. Structure(s) Inspected (i.e., HWMF, TTF, RMWMF, HBWSF, AHCF, MSB Bunker #)
3. Inspection Date _____
4. Inspection Time _____ am/pm
5. Inspector Name (print) _____

5. Loading/ Unloading Area(s)[a]	Inspection Criteria	Yes	No	NA ( ) load	Corrective Action Issue	Corrective Action Taken and Closure Date
Loading/Unloading Area[c]	Good condition, safe working surface, no spills					
Waste Handling Equipment[c]	Good condition, operational					
Container(s) Loaded/ Unloaded	Good condition					

6. Treatment Area(s)[b,c]	Inspection Criteria	Yes	No	NA ( ) treat	Corrective Action Issue	Corrective Action Taken and Closure Date
Treatment Area	Good condition					
Treatment Unit	Good condition (i.e., no releases or corrosion), maintains established parameters					
Monitoring Equipment	Good condition, operational					

7. Comments and Notes Comment on deficiencies by referencing section and question.

Inspector Signature: _____

Immediately file the completed inspection form in the Unit operating record.

[a] Required on days RCRA-regulated waste loading/unloading operations are conducted.
[b] Required on days RCRA-regulated waste treatment operations are conducted.
[c] Required monthly with facility operating and structural equipment if RCRA-regulated wastes are not managed at Unit during the month.

Figure C-2
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Weekly/Monthly Inspection Form – Example

1. Structure(s) Inspected (i.e., HWMF, TTF, RMWMF, HBWSF, AHCF, MSB Bunker #) _____
2. Inspection Date _____ 5. Monthly ☐
3. Inspection Time _____ am/pm Weekly ☐
4. Inspector Name (print) _____

6. Storage Status[a]	Inspection Criteria	Yes	No
RCRA-Regulated Waste Currently Stored at Structure	Storage status (Yes–waste present, No–waste not present)		

7. Safety & Emergency Equipment[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Spill Control Equipment	Present, good condition					
Fire Extinguisher(s)	Present, good condition, charged					
Decontamination Equipment	Present, good condition					
External Communication System	Present, operational					
Internal Communication and Alarm System	Present, operational					
Fire Suppression System (e.g., Water, Dry Chemical)	Present					

8. Security Devices[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Facility Fence	Good condition					
Gate(s) and Door(s)	Operational					
Warning Sign(s)	Present, legible					
Lock(s) and Tamper Indication Device(s)	Present, good condition					

9. Facility Operating & Structural Equipment[b]	Inspection Criteria	Yes	No	NA ( ) weekly	Corrective Action Issue	Corrective Action Taken and Closure Date
Floor, Walls, Ceiling	Good condition					
Lighting	Operational					

Refer to footnotes at end of form.

Figure C-2 (Concluded)
Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Weekly/Monthly Inspection Form – Example

10. Container Storage[c]	Inspection Criteria	Yes	No	NA ( ) monthly	Corrective Action Issue	Corrective Action Taken and Closure Date
Container Placement	Correct aisle space, correct stacking					
Container Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)					
Container Sealing	Correct lid/cover placement (i.e., closed)					
Container Labeling	Correct information, correct location, legible					
Storage Area (i.e., floor, walls) Condition	Good condition					
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition					
Storage Conditions	Waste compatibility, container compatibility					

11. Comments and Notes Comment on deficiencies by referencing section and question.

Inspector Signature: _____

Immediately file the completed inspection form in the facility operating record.

[a] Weekly inspection criteria are not applicable if RCRA-regulated waste is not stored at structure. Monthly inspection criteria are still applicable.
[b] Required during a monthly inspection. Criteria are not applicable during weekly (only) inspection.
[c] Required during a weekly inspection. Criteria are not applicable during monthly (only) inspection.

Inspector Name (signature) _____

APPENDIX D

SITE-WIDE PERSONNEL TRAINING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-D-ii
LIST OF FIGURES ..... SW-D-iii
ACRONYMS AND ABBREVIATIONS ..... SW-D-iv
D.1 RCRA-REGULATED WASTE MANAGEMENT RESPONSIBILITIES SW-D-1
D.2 JOB TITLE/JOB DESCRIPTION SW-D-1
D.3 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES SW-D-2
D.4 TRAINING DIRECTOR SW-D-2
D.5 EMERGENCY TRAINING SW-D-7
D.6 IMPLEMENTATION OF TRAINING PROGRAMS SW-D-7

LIST OF TABLES

Table No.	Title
D-1	Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Training Content
D-2	Training for Each Job Title

LIST OF FIGURES

Figure No.	Title
D-1	Job Title, Description, And Qualifications RCRA Training Director
D-2	Job Title, Description, And Qualifications RCRA Project Leader
D-3	Job Title, Description, And Qualifications RCRA Emergency Coordinator
D-4	Job Title, Description, And Qualifications RCRA Chemist
D-5	Job Title, Description, And Qualifications RCRA Field Technician
D-6	Job Title, Description, And Qualifications RCRA Special Project Staff
D-7	Job Title, Description, And Qualifications RCRA Inspector
D-8	Job Title, Description, And Qualifications RCRA Transportation Manager
D-9	Job Title, Description, And Qualifications RCRA Unit Operations Support Staff

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
RCRA	Resource Conservation and Recovery Act
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management Unit

SITE-WIDE PERSONNEL TRAINING PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

This appendix describes site-wide personnel training requirements for Sandia National Laboratories/New Mexico (SNL/NM) Resource Conservation and Recovery Act (RCRA)-regulated waste management unit (Unit) workers. Unit-specific training requirements, if any, for SNL/NM Unit workers are provided in Attachment D of each Unit-specific module. Together, information in this appendix and in each Unit-specific module meets the applicable regulatory requirements.

Training requirements for Unit personnel are specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V, (20 NMAC 4.1.500), adopting by reference the Code of Federal Regulations, Title 40, Part 264 including Section 264.16 (40 CFR 264.16), revised June 14, 2000 [6-14-00], "Personnel Training." The primary objective of the training program is to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste, in accordance with 20 NMAC 4.1.500/40 CFR 264 [6-14-00]. This training program applies to all employees of the U.S. Department of Energy, Sandia Corporation, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at SNL/NM Units included in this SNL/NM General Part B. The degree of training varies with the job duties.

D.1 RCRA-REGULATED WASTE MANAGEMENT RESPONSIBILITIES

This program provides employees with training relevant to their positions. Unit personnel are given, at a minimum, a basic understanding of the RCRA regulatory requirements for waste management, emergency procedures, and operating procedures. Some employees receive additional classroom and on-the-job training designed for specific duties. Employees who have not received training or are unable to provide relevant and appropriate training documentation receive the required training within six months of assignment to RCRA-regulated waste management activities and prior to managing RCRA-regulated waste without supervision.

D.2 JOB TITLE/JOB DESCRIPTION [20 NMAC 4.1.900/40 CFR 270.14(b)(12) and 20 NMAC 4.1.500/40 CFR 264.16(d)(1), (2) and (3)

Job titles and descriptions are provided in Figures D-1 through D-9. The job descriptions include requisite skills, education, and/or other qualifications as well as RCRA-regulated waste management job duties. The required training for each job title is found in Table D-2.

A file of all Unit personnel, including their job titles and job descriptions, is maintained at each Unit unless specified differently in Section 5 of each Unit-specific module. For each job title, the file contains information on the minimum activities performed by employees, requisite qualifications, and training records.

D.3 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES [20 NMAC 4.1.900/40 CFR 270.14(b)(12), and 20 NMAC 4.1.500/ 40 CFR 264.16]

This program provides employees with training relevant to their positions and specific to the safe performance of assigned tasks. For example, personnel who are directly involved in RCRA-regulated hazardous waste handling are informed of the potential hazards associated with waste management activities, procedures for safe handling of wastes, and emergency procedures. Individuals in supervisory or decision-making positions receive a comprehensive overview of all aspects of RCRA-regulated hazardous waste management. Personnel with specific or short-term assignments, such as visitors or temporary contractors, may only receive training on the contingency plan and emergency response procedures. Hands-on RCRA-regulated waste management personnel receive training commensurate with their assigned duties.

The training program includes a combination of classroom instruction, reviews of written documents, and on-the-job training exercises. Training information is provided according to training topics (e.g., Contingency Plan), frequency (e.g., initial or refresher), and methods (e.g., classroom instruction, procedure review, on-the-job exercises). Training course content includes, at a minimum, the topics shown in Table D-1. As regulatory compliance requirements change, training courses are evaluated and modified, as necessary. The content is reviewed annually. Some training is standardized and given to all employees. Job-specific training appropriate to job function is given to Unit employees. Training is provided at the frequencies shown on Table D-1. Training that may be applicable to each job title is provided in Table D-2.

D.4 TRAINING DIRECTOR [20 NMAC 4.1.500/40 CFR 264.16(a)(2)]

The Unit-specific Department Manager or designee will function as the Training Director. The Manager maintains responsibility for ensuring that all Unit-specific required training is obtained. The Manager/Training Director is knowledgeable about the applicable RCRA-regulated waste management regulations and specific RCRA-regulated waste management operations employed at a Unit. The Manager/Training Director determines the exact content and duration of training required for individual employees.

The Manager/Training Director may perform or delegate training to qualified trainers. Trainers are qualified on the basis of attainment of one or more of the following, as applicable:

- Certification in the subject matter addressed by the training;
- Demonstration of knowledge and competence in the training subject; and/or
- Previous on-the-job and/or classroom training in the topics covered.

Table D-1
Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act (RCRA)-Regulated Waste Management Unit Training Content

RCRA Regulation Training

Duration: Variable (Typically 4 hours or more)
Frequency: Initial/Periodic Refresher (Typically annual)
Method: Classroom instruction, on-the-job training, and/or document review

Minimum content may include (as applicable to the specific Unit to which an employee is assigned):

- Identification of RCRA-regulated hazardous waste
- Treatment, storage, and disposal facility requirements
- Generator and transporter requirements

RCRA Contingency Plan and Emergency Procedures

Duration: Variable (Typically 1-4 hours)
Frequency: Initial/Annual Refresher
Method: Classroom instruction, document review, and/or on-the-job exercises

Minimum content must include (as applicable to the specific RCRA-regulated hazardous waste management unit to which an employee is assigned):

- Emergency notification procedures
- Response to emergencies
- Evacuation route and procedure
- Emergency equipment and personal protective equipment
- Emergency Coordinator responsibilities
- Post-emergency actions
- Contingency Plan
- Shutdown procedures (if any)

Table D-1 (Continued)
Sandia National Laboratories/New Mexico
RCRA-Regulated Waste Management Unit
Training Content

Technical Work Documents and Refresher

Duration: Variable (Typically 1 hour or more)
Frequency: Initial/Periodic Refresher
Method: Document review, on-the-job training

Minimum Content: This training is function-specific and may be divided into sections or modules. Each employee must participate in the sections that apply to his or her specific job function. Sections may include, but are not limited to:

- Waste Analysis Plan
- Unit-specific safety practices
- Unit-specific operational procedures (e.g., loading and unloading)
- Unit security, entry, and control
- Operation, maintenance, and inspection of equipment
- Prevention of the ignition/reaction of ignitable/reactive wastes
- Permit conditions
- Emergency response
- Unit tour

Table D-1 (Concluded)
Sandia National Laboratories/New Mexico
RCRA-Regulated Waste Management Unit
Training Content

Hazardous Waste Operations and Emergency Response

Duration: Variable (Typically 24 hours or more with an 8-hour refresher)
Frequency: Initial/Refresher (Typically annual)
Method: Classroom instruction, hands-on exercises

Minimum Content:

- RCRA-regulated hazardous waste management and regulations
- Sources of information
- Compatibility of RCRA-regulated hazardous wastes
- Personnel protection
- Principles of safety
- Emergency procedures

Table D-2
Training for Each Job Title

Required Training	Job Titles								
	Training Director	RCRA Project Leader	Emergency Coordinator	Chemist	Field Technician (Waste Handler)	Special Projects Staff	Inspector	Transportation Manager	Unit Operations Support Staff
Resource Conservation and Recovery Act (RCRA) Regulations (Applicable Modules)	X	X	X	X	X	X	X	X	
RCRA Contingency Plan and Emergency Procedures	X	X	X	X	X	X	X	X	X
Technical Work Documents (Applicable Modules)	X	X		X	X	X	X		
Hazardous Waste Operations and Emergency Response (24- or 40-hour course)	X	X	X	X	X	X	X	X	
Hazardous Waste Operations and Emergency Response (8-hour course)	X	X	X	X	X	X	X	X	

D.5 EMERGENCY TRAINING [20 NMAC 4.1.500/40 CFR 264.16(A)(3) AND (C)]

Appendix E of this permit renewal request/application provides a more detailed discussion of emergency procedures, personnel, and equipment.

Unit employees participate in Unit-specific emergency response training to assure effective emergency response. Emergency response training consists of classroom instruction, document reviews, and/or on-the-job exercises. The content is reviewed annually and revised as needed to incorporate changes in regulatory compliance requirements. Topics covered include at a minimum:

- Emergency notification procedures
- Response to emergencies, including fires, explosions, and releases of RCRA-regulated wastes
- Procedures for using, inspecting, maintaining, and replacing emergency equipment and personal protective equipment
- Procedures for the shutdown of operations (if any)
- Procedures for evacuation (i.e., communications/alarms)
- Responsibilities of the Emergency Coordinator
- Post-emergency reports and actions
- Contingency Plan.

D.6 IMPLEMENTATION OF TRAINING PROGRAMS [20 NMAC 4.1.500/ 40 CFR 264.16(b) and (c)]

The training program is implemented to assure that Unit personnel receive appropriate training in a timely manner. Employees who require training receive the specified training within six months of their date of hire or their transfer to a new position. Personnel do not work unsupervised in RCRA-regulated waste management areas until they successfully complete the indicated training requirements.

Training records are kept to document the type and amount of training received for each Unit employee who manages RCRA-regulated waste. Contents of these records include the following, at a minimum:

- Job title for each position related to RCRA-regulated waste management
- The name of the employee assigned to each job title

- Written job description
- Written training requirements for each job title
- Records that document training received, such as attendance or signature lists, certificates, memoranda of training, or reports from computerized databases of training completion status.

Training records for current and former Unit employees are kept at the Unit to which an employee is/was assigned, unless specified differently in Section 5.0 of each Unit-specific module. Training records for current Unit employees are kept until closure of the Unit. Training records for any former Unit employee are kept for a minimum of three years from the date the employee last worked at the Unit.

Job Title: RCRA Training Director

Job Description:
The RCRA Training Director ensures that all appropriate personnel meet the site-wide personnel training requirements for SNL/NM RCRA-regulated waste management Unit workers, including the Unit-specific RCRA training requirements. RCRA Training Director duties may include, but are not limited to:

- identifying and/or coordinating training required by RCRA regulations and SNL/NM RCRA-regulated waste management worker training requirements.
- ensuring maintenance of training records required by RCRA regulations and demonstrating compliance with SNL/NM RCRA-regulated waste management worker training requirements for all personnel.
- informing personnel when specific training is required.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for the RCRA Training Director is:

- high school diploma or equivalent, or bachelor's degree from an accredited post-secondary institution; or
- three years experience with RCRA waste management regulations

Training:
Initial and refresher training will be as required in Table D-2

FIGURE D-1
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
RCRA TRAINING DIRECTOR

Job Title: RCRA Project Leader

Job Description:
A RCRA Project Leader oversees, supervises, and coordinates collection, storage, and shipment of RCRA-regulated hazardous waste at the Sandia National Laboratories/New Mexico. Duties may include, but are not limited to:

- ensuring operation of the Unit in compliance with applicable RCRA regulations;
- identifying and coordinating training required by RCRA regulations;
- determining training and reading requirements specific to positions, tasks or Unit activities;
- coordinating activities related to management of RCRA regulated hazardous waste at the Unit;
- ensuring maintenance of records required by RCRA regulations, such as training records, inspection records, waste analysis records, and a RCRA Contingency Plan;
- ensuring maintenance of additional records required for the Unit operating record;
- preparing, reviewing, submitting documents on waste management activities;
- ensuring compliance with RCRA regulations for RCRA-regulated hazardous waste shipments; and
- coordinating activities pertaining to RCRA-regulated hazardous waste audits.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a RCRA Project Leader is:

- high school diploma or equivalent, or bachelor's degree from an accredited post-secondary institution; or
- three years experience in managing RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-2
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
RCRA PROJECT LEADER

Job Title: Emergency Coordinator

Job Description:
An Emergency Coordinator evaluates, coordinates, and implements emergency actions in accordance with the RCRA Contingency Plan during an emergency (as defined in the Contingency Plan). As defined in the RCRA Contingency Plan, Emergency Coordinator duties during and after an emergency may include, but are not limited to:

- identifying the character, exact source, amount, and extent of released RCRA-regulated hazardous waste by observation, records reviews, or chemical analysis;
- assessing possible resulting hazards to human health or the environment considering both direct and indirect effects;
- taking all reasonable measures necessary to ensure fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the Unit including stopping processes and operations, collecting and containing released waste, and removing or isolating containers;
- monitoring for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment if the facility stops operations;
- providing for properly treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material;
- ensuring that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
- ensuring that all equipment listed in the Contingency Plan is cleaned and fit for its intended use before resuming operations.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for an Emergency Coordinator is:

- high school diploma or equivalent; or
- three years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-3
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
EMERGENCY COORDINATOR

Job Title: Chemist

Job Description:
A Chemist conducts supporting characterization of RCRA-regulated hazardous waste managed at Sandia National Laboratories/New Mexico. Duties may include, but are not limited to:

- evaluating generator provided characterization data;
- identifying treatment options for RCRA-regulated hazardous waste; and
- segregating RCRA-regulated hazardous waste.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a Chemist is:

- high school diploma or equivalent; or
- two years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-4
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
CHEMIST

Job Title: Field Technician (Waste Handler)

Job Description:
A Waste Handler conducts RCRA-regulated hazardous waste handling, segregating, and storing operations at the Sandia National Laboratories/New Mexico. Waste Handler duties may include, but are not limited to:

- transporting and handling RCRA-regulated hazardous waste;
- conducting daily inspections of waste management Units where RCRA-regulated hazardous waste loading, unloading, or treatment operations occur;
- performing basic maintenance and housekeeping activities;
- segregating RCRA-regulated hazardous waste
- sorting, packaging, marking, labeling, storing, treating, and segregating RCRA-regulated hazardous waste; and
- compiling and entering into a database specific operating record information.

Skill, Education, and Other Qualifications:
At a minimum, the qualification for a Waste Handler is:

- high school diploma or equivalent; or
- two years experience in handling RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-5
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
FIELD TECHNICIAN

Job Title: Special Projects Staff

Job Description:
A Special Projects Staff member performs special project duties at Sandia National Laboratories/New Mexico. Special Projects Staff member duties may include, but are not limited to:

- handling RCRA-regulated hazardous waste during a special project;
- performing special project related maintenance and housekeeping activities;
- operating RCRA-regulated hazardous waste treatment equipment associated with a special project;
- storing, labeling, and segregating RCRA-regulated hazardous waste associated with a special project; and
- identifying and scheduling RCRA-regulated hazardous waste special project activities;
- monitoring RCRA-regulated hazardous waste special project activities for safety and procedural compliance; and
- compiling special project information for the facility operating record.

Required Skill, Education, or Other Qualifications:
At a minimum, the qualification for a Special Projects Staff member is:

- high school diploma or equivalent; or
- two years experience in handling RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-6
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
SPECIAL PROJECT STAFF

Job Title: Inspector

Job Description:
An Inspector conducts inspections of RCRA-regulated hazardous waste and RCRA-regulated waste management Units at the Sandia National Laboratories/New Mexico. Inspector duties may include, but are not limited to:

- inspecting at least daily areas subject to RCRA-regulated hazardous waste spills when these areas are in use;
- inspecting at least weekly containers holding RCRA-regulated hazardous waste, container equipment, and secondary containment;
- inspecting at least monthly emergency equipment, security devices, and structural equipment at RCRA-regulated waste management Units; and
- recording inspection date, time, name, observations, and repairs in an inspection log (in the form of an inspection checklist).

Skill, Education, and Other Qualifications:
At a minimum, the qualification for an Inspector is:

- high school diploma or equivalent; or
- two years experience working with RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-7
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
INSPECTOR

Job Title: Transportation Manager

Job Description:
A Transportation Manager coordinates the shipment of RCRA-regulated hazardous waste from the Sandia National Laboratories/New Mexico. Transportation Manager duties may include, but are not limited to:

- preparing documentation and paperwork for off-site shipments of RCRA-regulated hazardous waste;
- ensuring proper packaging, labeling, marking, and placarding are in place for off-site shipments of RCRA-regulated hazardous waste; and
- coordinating the loading of RCRA-regulated hazardous waste for off-site shipment.

Required Skill, Education, or Other Qualifications:
At a minimum, the qualification for a Transportation Manager is:

- high school diploma or equivalent; or
- two years experience coordinating shipments of RCRA-regulated hazardous waste.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-8
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
TRANSPORTATION MANAGER

Job Title: Unit Operations Support Staff

Job Description:
A Unit Operations Support Staff member has unescorted access to the facility but performs no activities that require contact with RCRA-regulated hazardous waste or waste containers. Unit Operations Support Staff may include, but are not limited to:

- administrative personnel;
- information systems (database) personnel;
- radiation support personnel; and
- generator interface personnel.

Skill, Education, and Other Qualifications:
The Training Supervisor determines the requisite level of experience for each position.

Training:
Initial and refresher training will be as required in Table D-2.

FIGURE D-9
JOB TITLE, DESCRIPTION, and QUALIFICATIONS
UNIT OPERATIONS SUPPORT STAFF

APPENDIX E

SITE-WIDE CONTINGENCY PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO RESOURCE CONSERVATION AND RECOVERY ACT-REGULATED WASTE MANAGEMENT UNITS

TABLE OF CONTENTS

LIST OF TABLES ..... SW-E-ii
LIST OF FIGURES ..... SW-E-iii
ACRONYMS AND ABBREVIATIONS ..... SW-E-iv
DEFINITIONS ..... SW-E-v
E.1 SNL/NM SITE DESCRIPTION SW-E-1
E.1.1 Unit Descriptions SW-E-1
E.1.2 Waste Description SW-E-1
E.1.3 Operating Schedule SW-E-2
E.2 CONTINGENCY PLAN DISTRIBUTION AND AMENDMENTS SW-E-3
E.3 EMERGENCY RESPONSE RESOURCES SW-E-3
E.3.1 Emergency Coordinator and Responsibilities SW-E-3
E.3.2 Emergency Response Groups SW-E-4
E.3.3 Emergency Chain of Command SW-E-5
E.3.4 Support Agreements and Coordination with Outside Agencies SW-E-5
E.4 EMERGENCY EQUIPMENT SW-E-6
E.5 CONTINGENCY PLAN IMPLEMENTATION SW-E-6
E.5.1 Emergencies SW-E-6
E.5.1.1 Fire SW-E-8
E.5.1.2 Explosion SW-E-9
E.5.1.3 Uncontrolled Release SW-E-10
E.5.2 Evacuation SW-E-11
E.5.3 Coordination with Off-Site Parties and Emergency Notification SW-E-12
E.6 POST-EMERGENCY ACTIONS SW-E-13
E.7 EMERGENCY RESPONSE RECORDS AND REPORTS SW-E-13

LIST OF TABLES

Table No.	Title
E-1	RCRA-Regulated Waste Management Units Included in Contingency Plan
E-2	Agreements and Memoranda of Understanding
E-3	Sandia National Laboratories/New Mexico (SNL/NM) Facility Emergency Equipment
E-4	Emergency Response System Notification, Sandia National Laboratories/New Mexico

LIST OF FIGURES

Figure No.	Title
E-1	Sandia National Laboratories/New Mexico, Technical Areas (TAs) Resource Conservation and Recovery Act-Regulated Waste Management Units

ACRONYMS AND ABBREVIATIONS

40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
DOE	U.S. Department of Energy
EC	Emergency Coordinator
EOC	Emergency Operations Center
ERO	Emergency Response Organization
IC	Incident Commander
ICS	Incident Command System
KAFB	Kirtland Air Force Base
NMED	New Mexico Environment Department
OKSO	Office of Kirtland Site Operations
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
Unit	RCRA-regulated waste management unit

DEFINITIONS

Emergency: Any imminent or existing fire or explosion, or unplanned sudden or nonsudden release of Resource Conservation and Recovery Act (RCRA)-regulated waste or constituents to air, soil, or surface water that threatens human health or the environment. Examples of emergencies include but are not limited to:

- A RCRA-regulated waste release within the Unit that cannot be contained with secondary containment or application of absorbents.
- An imminent or existing fire or explosion involving RCRA-regulated waste.
- A structure fire, grass fire, or forest fire that threatens to ignite RCRA-regulated waste.

Facility: A facility is defined by 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], as all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of RCRA-regulated waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them). The U.S. Environmental Protection Agency Identification Number assigned to Sandia National Laboratories/New Mexico is NM5890110518.

Hazardous Waste: A waste that meets the definition of RCRA solid waste, is not exempt from regulation, and exhibits one or more of the characteristics described in 20 NMAC 4.1.200/40 CFR 261, Subpart C [6-14-00], or is listed in 20 NMAC 4.1.200/40 CFR Part 261, Subpart D [6-14-00].

Mixed Waste: Waste that contains both hazardous waste and radioactive materials (including source, special nuclear, or by-product material) subject to the Atomic Energy Act of 1954 *(42 United States Code 2011 et seq.)*.

Radioactive Waste: Solid, liquid, or gaseous waste that contains radionuclides regulated under the Atomic Energy Act of 1954, as amended.

RCRA-Regulated Waste: For the purposes of this site-wide Contingency Plan and the Unit-specific Contingency Plans, a waste that meets the definition of either hazardous waste or mixed waste.

RCRA-Regulated Waste Management Unit (Unit): A specific operational area used for the treatment and/or storage of RCRA-regulated waste.

SITE-WIDE CONTINGENCY PLAN FOR SANDIA NATIONAL LABORATORIES/NEW MEXICO

This appendix presents site-wide contingency measures applicable to all Resource Conservation and Recovery Act (RCRA)–regulated waste management units (Unit) at Sandia National Laboratories/New Mexico (SNL/NM), co-operated by Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE). Unit-specific Contingency Plan information is provided in Section 6 of each Unit-specific module. Together, information in this appendix and in each Unit-specific module meets the applicable regulatory requirements.

This Contingency Plan is intended to meet the requirements specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart V (20 NMAC 4.1.500), adopting by reference the Code of Federal Regulations, Title 40, Part 264 (40 CFR 264), Subpart D, revised June 14, 2000 [6-14-00], "Contingency Plan and Emergency Procedures," and 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00], for RCRA-regulated waste treatment, storage, or disposal facilities.

The provisions of this Contingency Plan will be carried out immediately to minimize hazards whenever there is an emergency, as required by 20 NMAC 4.1.500/40 CFR 264.51(b) [6-14-00].

E.1 SNL/NM SITE DESCRIPTION

SNL/NM is a multidisciplinary laboratory engaged in research and development of weapons and alternative energy sources. SNL/NM is managed by Sandia, a wholly owned subsidiary of Lockheed Martin, for the DOE, with work also performed for others. SNL/NM falls under North American Industry Classification System Numbers 92811 (National Security) and 54171 (Research and Development in the Physical, Engineering, and Life Sciences).

SNL/NM is located on Kirtland Air Force Base (KAFB) immediately southeast of the Albuquerque city limits in Bernalillo County, New Mexico. SNL/NM occupies an area of approximately 2,842 acres (1,150 hectares) within the 80-square-mile KAFB. SNL/NM consists of five Technical Areas, I through V, and remote test areas situated in the eastern half of KAFB (Figure E-1).

E.1.1 Unit Descriptions

The Units subject to 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00] and this Contingency Plan are listed in Table E-1. Additional detail about each Unit is provided in Section 6 of each Unit-specific module.

E.1.2 Waste Description

RCRA-regulated wastes at SNL/NM are generated primarily from laboratory research activities, process operations, and environmental restoration activities. Typical laboratory research waste includes bottles of excess or residual chemical mixtures and solutions and solid laboratory waste

Table E-1
RCRA – Regulated Waste Management Units Included in Contingency Plan

Name	Acronym	Location, size	Types of operations	Operating hours	Staff
Hazardous Waste Management Facility	HWMF	South of TA-I, north of entrance to TA-II. Includes Buildings 958, 959. 1.35 acres	Storage, Repackaging	M-F 8:00 am 4:30 pm	Staffed during operating hours
Thermal Treatment Facility	TTF	Northern part of TA-III, south of Building 6715. 196 square feet	Treatment	M-F 7:00 am 5:00 pm	Staffed only during operations at Unit
Radioactive and Mixed Waste Management Facility	RMWMF	Southeast corner of TA-III. Includes Buildings 6920, 6921, 6925, and 6926. 3.11 acres	Storage, Treatment, Repackaging	M-Th 7:00 am – 5:30 pm	Staffed during operating hours
High Bay Waste Storage Facility	HBWSF	TA-V, Building 6596. 5670 square feet	Storage	M-Th 7:00 am – 5:30 pm	Staffed only during operations at Unit
Auxiliary Hot Cell Facility	AHCF	TA-V, Building 6597. 5578 square feet	Storage, Treatment, Repackaging	M-F 8:00 am – 4:30 pm	Staffed during operating hours
Manzano Storage Bunkers	MSB	In Manzano Area on KAFB. 0.4 acres occupied by 7 bunkers (approximately 1600 to 2400 square feet in each bunker)	Storage	M-Th 7:00 am – 5:30 pm	Staffed only during operations at Unit

such as rags, batteries, and equipment. Typical process waste includes larger volumes (5- to 55-gallon containers) of solvents, oils, and corrosive solutions. Typical environmental restoration activity waste includes contaminated soil cuttings, debris, personal protective equipment, and decontamination fluids.

Because Sandia/DOE research and other activities are subject to change, waste streams and volumes stored at SNL/NM Units vary. The general types of wastes and capacities of each Unit are summarized in Section 6 of each module. The detailed description, location, and quantity of the RCRA-regulated wastes managed are identified in the Operating Record maintained for each Unit.

E.1.3 Operating Schedule

The operating schedules of the RCRA-regulated Units are summarized in Table E-1. Sandia/DOE security personnel check each Unit periodically during the time the Units are closed. If an emergency is discovered during these inspections, the SNL/NM Emergency Operations Center (EOC) and the Unit Emergency Coordinator (EC) (Section E.3.1) will be notified immediately.

E.2 CONTINGENCY PLAN DISTRIBUTION AND AMENDMENTS [20 NMAC 4.1.500/40 CFR 264.53-54]

Copies of the current site-wide Contingency Plan and the applicable Unit-specific information (Section 6.0 of each Unit-specific module) are maintained at the following locations: each Unit, the SNL/NM EOC, and SNL/NM Records Center. Sandia/DOE also provide copies of the Plan and any amendments and updates to the KAFB Fire Department and the New Mexico Environment Department (NMED) for their use.

This site-wide Contingency Plan and the Unit-specific information will be reviewed periodically by the EC(s) and Sandia ERO personnel. The plan(s) will be amended, if necessary, whenever one or more of the following occur:

- Applicable regulations or RCRA permit conditions are revised;
- There is a significant change in facility or Unit design, construction, maintenance, operation, or other circumstance that increases the potential for emergencies or changes the response necessary in an emergency;
- The list of designated emergency coordinators changes;
- The list of required emergency equipment changes significantly; or
- Actual implementation of the plan during an emergency demonstrates inadequacies.

E.3 EMERGENCY RESPONSE RESOURCES [20 NMAC 4.1.500/40 CFR 264.52(c) and 264.53]

Resources are available at each Unit, at SNL/NM, within KAFB, and in Albuquerque as described in this section.

E.3.1 Emergency Coordinator and Responsibilities [20 NMAC 4.1.500/40 CFR 264.52(d), 264.55, and 264.56(a)–(h)]

The Unit-specific EC has thorough familiarity with this Contingency Plan and the applicable Unit-specific attachment(s), Unit layout, operations, the location of records, the locations and characteristics of the RCRA-regulated waste managed at the Unit(s), and the emergency equipment and supplies. The EC has the authority through the Sandia department manager to commit the necessary Unit resources (including personnel, materials, and funds) to respond to an emergency at SNL/NM.

During emergencies at each Unit, or until the SNL/NM emergency response Incident Commander (IC) arrives (E.3.3), the EC has three primary responsibilities:

1. **Assess the Situation.** By observing the scene, interviewing personnel, and/or reviewing records, the EC must gather information relevant to the response, such as the type of

event, quantity and type of released material, and actual or potential hazards to human health or the environment.

2. **Protect Personnel.** The EC should take any reasonable measures to ensure the safety of personnel, such as activating the fire alarm, accounting for Unit personnel, attending to injuries, or coordinating the evacuation of Unit personnel, if necessary. If evacuation is indicated for other personnel, the IC must be informed.

3. **Contain or Mitigate the Hazards.** The EC should take reasonable measures to ensure that fires, explosions, or releases do not occur, recur, or spread.

After emergencies, the EC must ensure that the facility and equipment are cleaned, waste is properly handled and disposed, the Unit is safe to resume operation, and all information necessary for notifications and reports is provided to Sandia/DOE personnel, as outlined in Sections E-6 and E-7.

In the event the EC is not on site or immediately available during an emergency, an alternate EC is contacted. The names, addresses, and phone numbers of the primary and alternate ECs for each SNL/NM Unit are included in each Unit-specific module. A Unit-specific EC or alternate EC is on site or immediately available during the operating hours of each Unit. ECs are also available during non-routine RCRA-regulated waste management operations that may be conducted outside normal operating hours.

E.3.2 Emergency Response Groups

The SNL/NM Emergency Response Organization (ERO) consists of two response groups that respond to an emergency situation: (1) a field response group led by an IC under the Incident Command System (ICS) and (2) an EOC cadre. The ICS also includes Sandia/DOE Security, the KAFB Fire Department, and Sandia/DOE personnel with relevant technical skills. An IC is on site at SNL/NM at all times (24 hours per day, 7 days per week). Sandia/DOE security and the KAFB Fire Department personnel are also available at all times. Sandia/DOE technical personnel are available on site at SNL/NM from 8:00 am – 4:30 pm Monday through Friday and are on call the rest of the time. The SNL/NM EOC staff includes an Emergency Director and a staff of Sandia and DOE personnel who are responsible for the management decisions and notifications to outside parties that are required during an emergency response (Section E.5.3). EOC staff personnel are available on site at SNL/NM from 8:00 am–4:30 pm, Monday through Friday, and are on call the rest of the time.

In the field, the IC maintains overall management and control of response operations at the emergency site. The IC works in a unified command with the KAFB Fire Department and in concert with safety personnel, Unit-specific personnel (e.g., EC), and other emergency responders to develop and execute response plans, including on-site protective actions and recommendations for off-site protective actions. The ICS system is implemented at the time an emergency occurs, is expanded to control the emergency as needs arise, and remains in effect until the need for emergency management no longer exists.

E.3.3 Emergency Chain of Command

When the EC is notified of an incident, he must first determine if procedures for emergencies (Section E-5) should be implemented. The EC manages the emergency response (Section E.3.1) until the IC arrives at the Unit and relinquishes control to the arriving IC. If possible, the EC maintains communication with the IC by telephone or radio before the IC arrives at the Unit. The EC remains at the Unit and assists in emergency response as directed by the IC. The EC advises the IC, as needed, on Unit operations, Unit layout, characteristics of RCRA-regulated waste on site, location of records, radio and cellular communication systems, and other information as necessary to respond to the emergency.

The SNL/NM IC is the liaison for communications with other emergency response organizations and functions, including medical and fire protection support. The EC can request both medical and fire protection services, if necessary, at the same time that he/she notifies the IC of the emergency.

E.3.4 Support Agreements and Coordination with Outside Agencies [20 NMAC 4.1.500/40 CFR 264.37]

Sandia/DOE maintain sufficient response resources to handle most emergencies arising from RCRA-regulated waste management activities as described in this contingency plan. These response resources include personnel, emergency equipment, medical facilities, and communications systems. DOE also has established mutual aid agreements and memoranda of understanding with several off-site agencies and facilities for additional response capabilities for SNL/NM. These agencies and facilities include:

Table E-2
Agreements and Memoranda of Understanding for Emergency Response

Agency or Facility	Type of Service
New Mexico Department of Public Safety	Mutual aid involving an actual or potential emergency, assistance in training and emergency response for local and tribal governments.
377th Air Base Wing, Kirtland Air Force Base	Various categories of support, including fire protection, police services, communications, and utilities.
U.S. Forest Service	Cooperative fire fighting arrangement between the USFS and KAFB for wildland fires.
City of Albuquerque	Mutual support and responsibilities during a potential or actual emergency requiring the combined resources of DOE and the City of Albuquerque.
University of New Mexico Medical Center	Mutual cooperation and assistance in providing timely and effective emergency medical services.
St. Joseph Medical Center	Mutual cooperation and assistance in providing timely and effective emergency medical services.
Lovelace Medical Center	Mutual cooperation and assistance in providing timely and effective emergency medical services.
Presbyterian Health Care Services	Mutual cooperation and assistance in providing timely and effective emergency medical services.

E.4 EMERGENCY EQUIPMENT [20 NMAC 4.1.500/40 CFR 264.32, 264.33, 264.34, and 264.52(e)]

A list of equipment available through the SNL/NM emergency response system is provided in Table E-3. Lists of emergency equipment available for use at each Unit are presented in each Unit-specific module.

E.5 CONTINGENCY PLAN IMPLEMENTATION [20 NMAC 4.1.500/40 CFR 264.56]

Unit personnel who become aware of an incident contact the EC immediately. If the incident is an emergency, personnel implement evacuation procedures identified in Section E.5.2 Personnel also immediately notify the Unit-specific EC or alternate EC of the emergency condition. The EC will then assess the situation and determine the scale of the incident.

If the EC determines that an emergency situation exists at the Unit, he will immediately notify the SNL/NM EOC and activate this Contingency Plan. The methods for contacting emergency response representatives are listed in Table E-4.

E.5.1 Emergencies

In the event of an emergency, the EC, an assignee, or Unit personnel (see note above) will immediately telephone the SNL/NM EOC (911 or 844-0911) or notify them in some other way (see Section E.5). Emergencies require the activation of this Contingency Plan and SNL/NM emergency response resources.

The EC will relinquish authority to the IC upon arrival as described in Section E.3.3. The EC and the IC will:

- Determine the extent of the emergency;
- Identify the character, source, amount, and areal extent of released materials by observation, records reviews, or chemical analysis;
- Assess possible resulting hazards to human health or the environment, considering both direct and indirect effects;
- Take all reasonable measures necessary to ensure fires, explosions, and releases do not occur, recur, or spread to other RCRA-regulated waste at the Unit, including collecting and containing released waste, and removing or isolating containers; and
- Monitor for leaks, pressure buildup, gas generation, and ruptures in equipment.

Table E-3
Sandia National Laboratories/New Mexico (SNL/NM) Facility[a] Emergency Equipment
2-18-2003

Item or Equipment	Description/Telephone
Emergency Vehicles (owned by Sandia/DOE unless noted)	
Emergency Response Vehicle	Mobile Command Post equipped with communications equipment, typically located at SNL/NM EOC[b]. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Ambulance	Typically located at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Security Vehicles	Vans and trucks equipped with communications equipment and utilized for transportation of personnel and equipment, typically located throughout SNL/NM. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Fire Trucks (owned by KAFB Fire Department)	Fire-fighting vehicles outfitted with equipment for fighting fires, typically located at KAFB fire stations. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Medical Supplies (owned by Sandia/DOE)	
Stretchers/Stokes Litter	Equipment for movement of injured personnel. Stokes litter will immobilize personnel so they may be moved vertically. Typically located in ambulance or at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Blankets	Normal blankets, typically located in ambulance or at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Medical Kits	Emergency first-aid supplies, typically located in ambulance or at SNL/NM medical facility. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Safety Supplies (owned by Sandia/DOE)	
Air Packs	Self-contained breathing apparatus for use by personnel entering hazardous atmospheres, typically located in ambulance or response vehicle. SNL/NM Emergency Response System — Call 911 or (505) 844-0911
Monitoring Instruments	Typically located in ambulance or emergency response vehicle. SNL/NM Emergency Response System — Call 911 or (505) 844-0911

[a] Lists of equipment available at each Unit are included in a table in each Unit-specific module.
[b] The SNL/NM EOC is located in TA-I.

Table E-4
Emergency Response System Notification, Sandia National Laboratories/New Mexico

Method	Number
Telephone (at Unit)	911
Mobile Telephone	(505) 844-0911
Portable Radio	NA
Automatic notification of emergency response when smoke detector or pull station is activated and/or water flows in sprinkler system	NA

Note: Any person in any Unit is authorized to implement the evacuation procedures, notify the EC or alternate EC, and/or contact the emergency response representatives in the unlikely event that the EC or alternate EC cannot be contacted or respond in a timely manner.

E.5.1.1 Fire

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing fire.

1. All non-essential Unit personnel should evacuate (Section E.5.2) to an upwind point at least 100 yards away from the fire as directed by the EC. All Unit personnel may evacuate at this time.

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. ONLY if safe to do so, Unit personnel may consider taking action to put out the fire or minimize its spread. These actions may be taken only after the SNL/NM IC and KAFB Fire Department have been notified. Personnel must not jeopardize their own safety or the safety of other personnel.

   - If the fire is small and the fuel source is small, portable fire extinguishers may be used to put out the fire.

   - Fire extinguishers may only be used by personnel trained in their use and in this Contingency Plan, and only for very small fires.

   - Flammable materials should be removed from the area of fire if safe to do so.

   - Only Lith-X fire extinguishers are to be used for water-reactive waste.

4. If the fire spreads or increases in intensity, all remaining personnel must evacuate (see Step 1).

5. The EC should remain near the site, but at a safe distance, so he can advise the personnel responding to the fire of the known hazards.

6. Upon arrival at a fire, the KAFB Fire Department officer-in-charge will be in command of fire fighting. He will accept and evaluate the advice of Sandia/DOE Unit and emergency response personnel, but he retains the responsibility to select the fire-fighting methods and tactics.

7. The IC will be in overall control of Sandia/DOE emergency response efforts until the emergency is terminated.

8. RCRA-regulated wastes involved in a fire can be identified in the following ways: The location of the container may indicate the contents. If the location does not indicate its contents, the label number can be used to identify the material. Records on the contents of each container can be accessed from outside the Unit or in the Unit office. If the label has been burned and the container cannot be identified, the material will be treated as an unknown and analyzed according to methods in the Waste Analysis Plan (Appendix B to the General Part B.)

9. Residues of RCRA-regulated wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

10. If needed, affected surfaces will be cleaned using cleaners appropriate to the chemicals.

11. If possible and safe to do so, responding personnel will take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, personnel will build dikes around storm drains.

12. Any fire-fighting waters collected in the stormwater catchment and retention ponds at the HWMF and RMWMF or the floor trenches at the HBWSF and AHCF will be analyzed to determine an appropriate disposal method.

E.5.1.2 Explosion

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing explosion.

1. Unit personnel will immediately evacuate the area (Section E.5.2).

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. The EC will remain near the site, but at a safe distance, so he can advise the response personnel of the known hazards involved and the degree and location of the explosion and associated fires.

4. Upon arrival at the site, the KAFB fire department officer-in-charge will be in command of fire fighting. He will accept and evaluate the advice of Sandia/DOE personnel and emergency response organization members, but he retains the responsibility to select the fire-fighting methods and tactics.

5. The IC will be in overall control of Sandia/DOE emergency response efforts until the emergency is terminated.

6. Residues of RCRA-regulated wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

7. If needed, affected surfaces will be cleaned using cleaners appropriate to the chemicals.

8. If possible, responding personnel will take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, personnel will build dikes around storm drains.

9. Any fire-fighting waters collected in the stormwater catchment and retention ponds at the HWMF and RMWMF or the floor trenches at the HBWSF and AHCF will be analyzed to determine an appropriate disposal method.

10. The EC will secure all operational units (e.g., process equipment, ventilation equipment) that may be affected directly or indirectly by the explosion once the areas needed to be entered have been determined safe by the IC or a safety officer.

E.5.1.3 Uncontrolled Release

The following steps will be implemented as needed in the event of an emergency involving an imminent or existing release of RCRA-regulated waste or constituents.

1. Evacuate the immediate area (Section E.5.2).

2. The EC (or Unit personnel) must immediately notify the Sandia/DOE ERO and KAFB Fire Department by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

3. Take actions to minimize, contain, and clean up the release only if safe to do so.

4. Review facility records (e.g., waste inventory database) to determine the identity and chemical nature of released material.

5. Don appropriate personal protective equipment for exposure to the material.

6. If possible, secure the source of the release.

7. If necessary and possible, build a dike to contain runoff.

8. Take measures to contain potentially hazardous runoff and keep it away from storm drains and/or sewers. If possible, build dikes around storm drains.

9. Released wastes may be collected and contained by stabilizing or neutralizing the spilled material, as appropriate; pouring an absorbent over the spilled material; and sweeping or shoveling the absorbed material into drums or other appropriate containers.

10. No waste that may be incompatible with the released material will be treated, stored or disposed of until cleanup procedures are complete.

11. After collection of a released material, the release site will be sampled and evaluated. If contamination is found to exist, contaminated materials may be collected, drummed (if appropriate), and removed from the site for disposal at a permitted disposal facility. Depending on the specific conditions, however, Sandia/DOE may choose to implement an alternative decontamination method such as surface cleaning or in situ neutralization or stabilization. Any such alternative will be discussed with the NMED prior to implementation.

E.5.2 Evacuation [20 NMAC 4.1.500/40 CFR 264.52(f)]

During an emergency that threatens the health or safety of personnel within a Unit, the following steps will be taken as needed to facilitate safe, coordinated evacuation:

1. Stop work.

2. If safe to do so, close containers and shut down equipment or otherwise place it in a safe mode.

3. Alert personnel in the affected area by announcing the evacuation by voice command "Evacuate the Area."

4. Activate the available Unit-specific evacuation signal consistent with the internal communications and alarm systems that are listed in Section 6 of each Unit-specific module.

5. Notify the Sandia/DOE ERO by activating a manual pull alarm or by dialing the SNL/NM EOC at 911 or 844-0911. Medical response can also be requested at the same time. The KAFB Fire Department and Sandia/DOE ERO will also be notified by activation of an automatic fire alarm.

6. Check to see whether there is evidence that the designated evacuation route is not safe.

7. If there is no evidence of danger or obstacles, exit the Unit according to the evacuation routes provided in Section 6 of the Unit-specific module.

8. If there is evidence of danger or obstacles, exit the Unit by any safe route available.

9. If safe to do so, check for other personnel in other areas of the Unit.

10. Proceed to the designated assembly area for roll call to be taken by the EC or designee.

11. If the EC and unit personnel are assembling at an alternate location, proceed to that location.

12. Inform the EC or designee about any other people still believed to be inside the Unit.

13. Do not reenter the Unit until the IC or EC determines that is safe to do so.

E.5.3 Coordination with Off-Site Parties and Emergency Notification [20 NMAC 4.1.500/40 CFR 264.56(a) and (b)]

The Sandia EOC notifies DOE of all emergencies at SNL/NM. Sandia/DOE will notify state and local agencies if state or local response resources are required (see Section E.3.4), if human health or the environment are threatened outside the SNL/NM facility, or if areas outside the SNL/NM facility may require protective action. Sandia/DOE will verbally notify the City of Albuquerque or Isleta Pueblo, respectively, as soon as possible in the unlikely event that residents of Albuquerque or Isleta Pueblo outside KAFB are or could be affected. The notification will include available information about the nature and location of the emergency, the materials involved, and the recommended protective actions. The most likely protective actions are expected to include evacuation or sheltering indoors with doors and windows closed and ventilation systems shut off.

In the event of an emergency involving injuries that require medical services from one of the hospitals listed in Table E-2, Sandia/DOE will provide all available information about the event and the materials involved to the responders as soon as possible.

Sandia/DOE will also notify the National Response Center (1-800-424-8802) if human health or the environment are threatened outside the facility. The notification will include the following:

- Name and telephone number
- Facility name and address
- Time and nature of emergency
- Type and quantities of materials involved to the extent known
- Personnel injuries, and
- Potential hazards to human health, or the environment, outside the facility.

Sandia/DOE will also provide this information to the NMED in accordance with regulatory requirements.

E.6 POST-EMERGENCY ACTIONS [20 NMAC 4.1.500/40 CFR 264.56(f-i)]

Immediately after an emergency, the EC (and the IC, when present) will:

- Continue to monitor for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment if the Unit stops operations;
- Provide for properly treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material;
- Ensure that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
- Ensure that all equipment used in responding to the emergency that is listed in either this site-wide plan or the Unit-specific Contingency Plan is cleaned and fit for its intended use before resuming operations.

Prior to resuming operations after an emergency involving RCRA-regulated waste in the affected area(s) of the Unit, Sandia/DOE will notify NMED that incompatible waste will not be managed until cleanup procedures are complete and equipment listed in the Unit-specific Contingency Plan is cleaned and fit for use.

E.7 EMERGENCY RESPONSE RECORDS AND REPORTS [20 NMAC 4.1.500/ 40 CFR 264.56(j)]

The time, date, and details of an emergency involving RCRA-regulated waste that require implementation of this Contingency Plan will be noted in the Operating Record maintained for the affected Unit. Within 15 days after the incident, a written report will be submitted to the NMED identifying:

- Name, address, and telephone number of the facility owner or operator
- Name, address, and telephone number of the facility
- Date, time, and type of incident (e.g., fire, explosion, release)
- Name and quantity of material(s) involved
- Extent of injuries (if any)
- Assessment of actual or potential hazards to human health or the environment, where applicable, and
- Estimated quantity and disposition of recovered material that resulted from the incident.

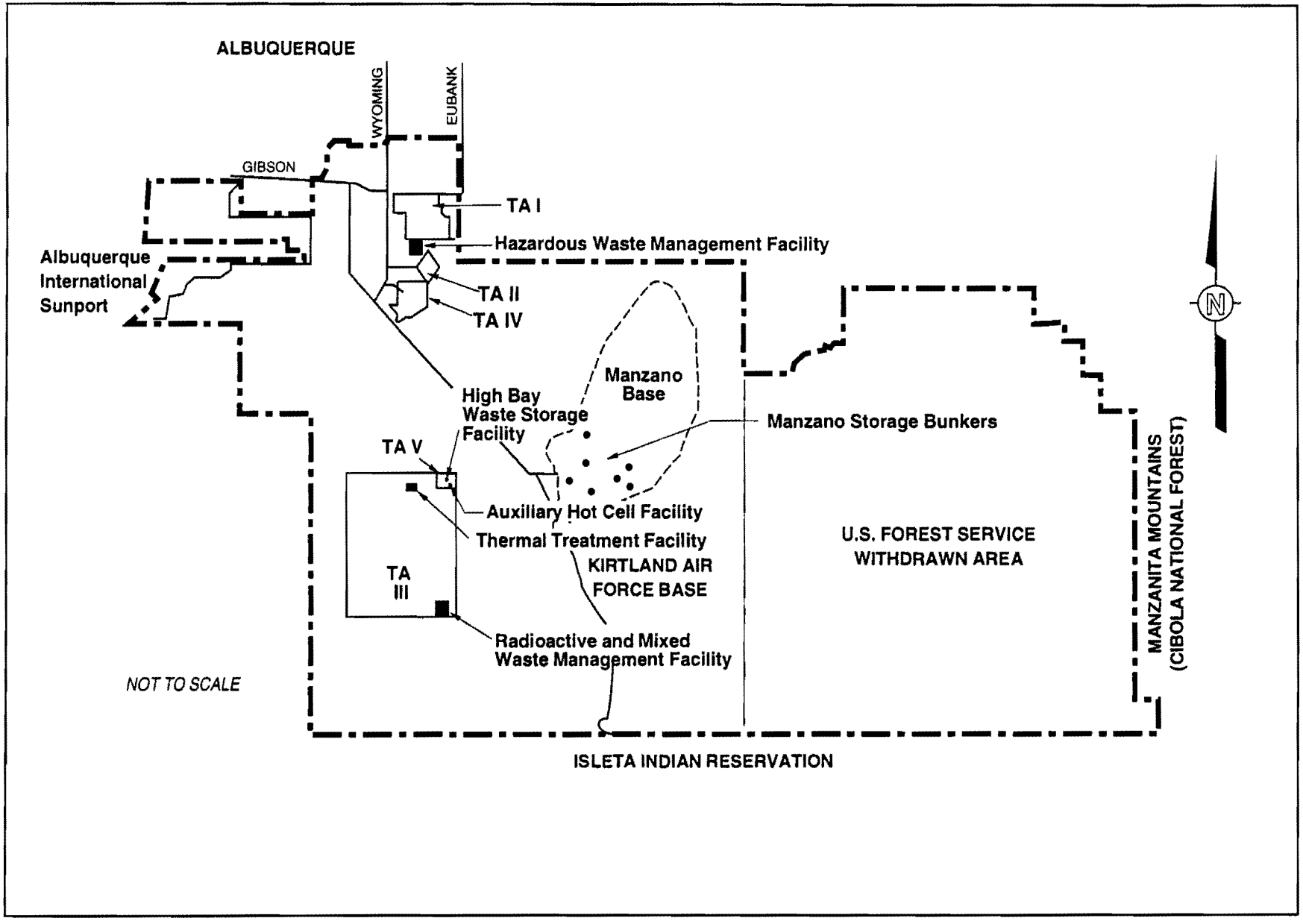


Figure E-1

Sandia National Laboratories/New Mexico, Technical Areas (TAs) and Resource Conservation and Recovery Act-Regulated Waste Management Units

Sandia National Laboratories/New Mexico Hazardous Waste Management Facility Part B Permit Renewal Request

Module I

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... HWMF-iii
LIST OF FIGURES ..... HWMF-iv
ACRONYMS AND ABBREVIATIONS ..... HWMF-v
1.0 GENERAL UNIT OPERATIONS HWMF-7
1.1 Designated Waste Management Areas HWMF-7
1.1.1 Hazardous Waste Packaging Building (Building 959) HWMF-7
1.1.2 Hazardous Waste Storage Building (Building 958) HWMF-8
1.1.3 Modular Storage Buildings (958B and 958C) HWMF-9
1.2 Unit Operations HWMF-9
1.2.1 Operation of Containment Systems HWMF-10
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes HWMF-10
1.2.3 Preparedness and Prevention HWMF-11
1.2.3.1 Required Equipment HWMF-11
1.2.3.2 Testing and Maintenance of Equipment HWMF-12
1.2.3.3 Access to Communications or Alarm Systems HWMF-12
1.2.4 Hazards Prevention HWMF-12
1.2.4.1 Preventing Hazards in Unloading HWMF-12
1.2.4.2 Preventing Runoff or Flooding HWMF-12
1.2.4.3 Preventing Contamination of Water Supplies HWMF-13
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages HWMF-13
1.2.4.5 Preventing Undue Exposure HWMF-13
1.2.4.6 Preventing Releases to the Atmosphere HWMF-13
1.3 Container Storage Practices HWMF-13
1.3.1 Container Types and Labeling HWMF-14
1.3.2 Container Handling HWMF-14
1.3.2.1 Condition of Containers HWMF-14
1.3.2.2 Aisle Space and Storage Configuration HWMF-14
1.3.2.3 Compatibility of Waste with Containers HWMF-14
2.0 UNIT DESCRIPTION AND INFORMATION HWMF-15
2.1 Security Procedures and Equipment HWMF-15
2.1.1 Barriers and Means to Control Entry HWMF-15
2.1.2 Warning Signs HWMF-16
2.2 Traffic Pattern, Volume, and Controls HWMF-16
2.2.1 Traffic Patterns HWMF-16
2.2.2 Traffic Volumes HWMF-16
2.2.3 Traffic Control Signals HWMF-16
2.3 Unit Location Information HWMF-17
2.3.1 Seismic Standard HWMF-17
2.3.2 Floodplain Standard HWMF-17
2.4 Topographic Maps HWMF-17
2.5 Groundwater Monitoring HWMF-18
3.0 WASTE ANALYSIS PLAN HWMF-19
4.0 INSPECTION PLAN HWMF-20

TABLE OF CONTENTS (Concluded)

5.0 PERSONNEL TRAINING HWMF-23
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE HWMF-24
7.0 CLOSURE PLAN HWMF-29
7.1 Estimate of Maximum Waste in Storage HWMF-29
7.2 Closure Conditions HWMF-29
7.3 Closure Schedule HWMF-29
8.0 TREATMENT PLAN HWMF-30
9.0 REFERENCES HWMF-31

LIST OF TABLES

Table No.	Title
1	Secondary Containment Capacity for Building 958
2	Fire Suppression Systems at the Hazardous Waste Management Facility
3	Hazardous Waste Management Facility Inspection Criteria and Frequency
4	Hazardous Waste Management Facility, Emergency Equipment and Locations
5	Hazardous Waste Management Facility, Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location of the Hazardous Waste Management Facility at Sandia National Laboratories/New Mexico
2	Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas
3	Hazardous Waste Packaging Building (Building 959), Floor Plan
4	Hazardous Waste Storage Building (Building 958), Floor Plan
5	Hazardous Waste Management Facility, Traffic Routes and Controls
6	Topographic Map, Hazardous Waste Management Facility
7	Hazardous Waste Management Facility, Access Control Features
8	Hazardous Waste Management Facility, Drainage Control Features
9	Hazardous Waste Management Facility, Evacuation Routes
10	Hazardous Waste Management Facility, Emergency Response and Access Information

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
ft	foot/feet
ft^2	square foot/feet
HWMF	Hazardous Waste Management Facility
HSWA	Hazardous and Solid Waste Amendments
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	Solid Waste Management Unit
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO HAZARDOUS WASTE MANAGEMENT FACILITY PART B PERMIT RENEWAL REQUEST

This Sandia National Laboratories/New Mexico (SNL/NM) Hazardous Waste Management Facility (HWMF) Part B Permit Renewal Request is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the HWMF. 20 NMAC 4.1.500 and .900, adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this HWMF Part B Permit Renewal Request.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Hazardous Waste Management Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The HWMF occupies 1.35 acres on DOE property between TA-I and TA-II. It is a fenced compound with several buildings and waste management areas (WMAs). Operations include storage of RCRA-regulated wastes in containers and repackaging the wastes into suitable containers for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HWMF. Sandia/DOE currently operate the HWMF in accordance with the terms of NMED Permit NM5890110518-1, issued August 6, 1992 (NMED, 1992).

1.0 GENERAL UNIT OPERATIONS

This section provides descriptions of the HWMF WMAs and specific Unit waste management operations. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention; and
- Container storage of RCRA-regulated wastes.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

The location of the HWMF at SNL/NM is shown on Figure 1. The HWMF has three designated WMAs, shown on Figure 2:

- The Hazardous Waste Packaging Building (Building 959),
- The Hazardous Waste Storage Building (Building 958), and
- Two modular storage buildings.

The following sections provide descriptions of the storage structure, location, capacity, and secondary containment of each WMA.

1.1.1 Hazardous Waste Packaging Building (Building 959)

In the Hazardous Waste Packaging Building, lab packs are prepared by placing small containers into larger containers filled with absorbent material.

The Hazardous Waste Packaging Building is the easternmost WMA at the HWMF and provides 1,800 square feet (ft^2) of enclosed floor space (Figures 2 and 3). The building is constructed of precast concrete construction with an eave height of 12 feet (ft). Eight recessed waste-holding cells and a recessed waste packaging area are located in the building. The floors of the cells and packaging area are constructed of reinforced concrete and metal grating. Waste containers are placed on shelves over metal grating over the secondary containment areas. The load-bearing capacities of the reinforced concrete floor and the metal grating are 450 and 2,000 pounds per ft^2, respectively. The entire floor of the building and the bottom seven inches of wall surface in each recessed area are covered with an epoxy-based chemical-resistant coating. The coating forms a continuous protective barrier over the concrete and protects the

floor from the effects of solvents and corrosive chemicals that may be released from the containers.

Secondary containment is provided by the recessed areas. The recessed area in each holding cell is 5 feet by 4.5 feet and 7 inches deep, with a capacity of 71 gallons. The recessed area under the packaging area is 5 feet by 12 feet and 7 inches deep, with a capacity of 188 gallons.

Based on the secondary containment capacity (10% of the stored volume or the volume of the largest container), each of the eight holding cells in the Hazardous Waste Packaging Building can hold a maximum of 13 55-gallon drums, or an equivalent volume. The packaging area can hold a maximum of 34 55-gallon drums, or an equivalent volume. The stacking configuration of waste containers will not exceed the load-bearing capacity of the reinforced concrete or metal grating. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

1.1.2 Hazardous Waste Storage Building (Building 958)

The Hazardous Waste Storage Building (Building 958) is located west of the Hazardous Waste Packaging Building (Figure 2). The Hazardous Waste Storage Building is a 3,250-ft^2 precast concrete building with an eave height of 14 ft. In the Hazardous Waste Storage Building, eight separate and recessed waste storage compartments for segregation of waste groups are contained in the building (Figure 4). The floors of Cells 1, 2, 3, 4, 6, 7, and 8 are constructed of reinforced concrete and metal grating. The floor of Cell 5 is constructed of reinforced concrete. The entire floor (all cells and walkway) is coated with an epoxy-based chemical-resistant coating. The coating protects the concrete from the effects of solvents and corrosive chemicals that may be released on the floor. Waste containers are placed on metal grating over the secondary containment area, or on pallets on the reinforced concrete floor in Cell 5. The load-bearing capacity of the reinforced concrete and metal grating are 450 and 2,000 pounds per ft^2, respectively. The storage compartments vary in size, secondary-containment capacity, and waste-container capacity.

The secondary containment in Bays 1, 2, 3, 4, 6, 7, and 8 is provided by the recessed areas under the grating. The secondary containment capacity in Bay 5 is provided by the volume of the entire recessed area. For example, the recessed area in Bay 1 is 11.75 feet by 14.67 feet by 5 inches deep, with a capacity of 542 gallons. The secondary containment capacity is 10% of the stored volume or the volume of the largest container; thus the storage capacity is 5420 gallons, 98 55-gallon drums, or an equivalent volume. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

Based on the secondary containment capacity, the storage compartments are limited to the following maximum storage capacity of 55-gallon drums, or equivalent volume, as listed in Table 1.

Table 1
Secondary Containment Capacity for Building 958

Bay No.	Maximum Number of 55-Gallon Drums
1	98
2	79
3	79
4	79
5	518[a]
6	79
7	79
8	79

[a]A portion of the secondary containment capacity is taken up by pallets.

The stacking configuration of waste containers will not exceed the load-bearing capacity of the reinforced concrete floor or the metal grating.

1.1.3 Modular Storage Buildings (958B and 958C)

The modular storage buildings are located west of Building 958 (Figure 2) and are used for storage of reactive wastes, including, but not limited to, lithium batteries, gas cylinders, and flammable solids.

The exterior dimensions of each modular storage building are 22 ft long, 8 ft wide, and 8 ft high. The buildings are constructed of welded 10- and 12-gauge steel supported by structural steel sections. Each building has three doors, each with a three-point locking system to provide access and security. Each has a 6-inch-deep integral spill containment reservoir under the entire building; the containment capacity is 500 gallons. The secondary-containment subfloor is constructed of continuously welded 10-gauge steel, which is epoxy-coated to resist chemical attack; the coating is compatible with reactive wastes. The floors are 1-inch-thick epoxy-coated, fire resistant plywood. The load-bearing capacity of the floor for each structure is 250 pounds per square foot. The inside walls and ceiling are also coated with chemical-resistant epoxy. Each building rests on structural supports that elevate it and allow visual inspections of the underside of the spill containment reservoir. The secondary containment capacity is 10% of the stored volume or the contents of the largest container; thus the storage capacity is 5000 gal. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4).

1.2 Unit Operations

The HWMF WMAs are used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002).

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes; preparedness and prevention; and hazards prevention requirements

applicable to the HWMF WMAs are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175[b][5])

The shelves in the holding cells in Building 959 have edges, but the shelves are not used to provide additional containment. Containers are inspected for integrity when the wastes arrive at the HWMF, before they are placed on the shelves. Containers of highly corrosive liquids may be placed within larger containers to capture any releases that may occur. Containers on the shelves are inspected regularly as noted in Appendix C (SNL/NM, 2002c). Released materials are cleaned up as described in Section 1.1 of the General Part B (SNL/NM, 2003a).

Unit personnel begin taking action to evaluate and remove accumulated liquids in the secondary containment area upon discovery. Personnel attempt to identify the source, if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed into containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[c] and [d]; 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HWMF. The general precautions and practices employed by Unit personnel are described in Section 1.1.2 of the General Part B (SNL/NM, 2003a). Additional HWMF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes and stored in the modular storage buildings. They may temporarily be managed in Building 959 after receipt and during repackaging activities.

- Forklifts are not used for waste movement in Building 959 to minimize potential sources of ignition in the building.

- Unit personnel use the process described in Section 1.1.2 to ground containers during transfer of flammable liquids between containers.

- The modular storage buildings are grounded by a 10-ft-long grounding rod and cable and equipped with a dry chemical fire suppression system to assure that water-reactive wastes will not be exposed to water during fire emergencies.

- Wastes are mixed together on a very limited basis during the repackaging operations at the Unit. Ignitable and reactive wastes are only mixed on a case-by-case basis. Unit

personnel will use waste characterization data during repackaging to identify the hazards and potential consequences, as described in Appendix B, Section B.5.

- Containers of wastes are labeled and segregated in different holding cells in Building 959 according to compatibility criteria in 20 NMAC 4.1.500/40 CFR 264 Appendix V. Containers in Building 958 are labeled. They are segregated into different bays according to general DOT hazard classes in 49 CFR 172 and 20 NMAC4.1.500/ 40 CFR 264 Appendix V as appropriate. The holding cells and bays are separated from each other by concrete walls and independent containment systems.

1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarms systems at the HWMF.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

General information about fire hydrants at each Unit is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant at the HWMF is shown in Figure 10.

The modular storage buildings are grounded by a 10-ft-long grounding rod and cable. All buildings at the HWMF are equipped with automatic fire suppression systems, which are summarized in Table 2.

Table 2
Fire Suppression Systems at the Hazardous Waste Management Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
959	13, 30	Special	Automatic sprinkler, wet pipe	GB/FS
958	13, 30	Special	Automatic sprinkler, dry pipe	GB/FS
958B	17	N/A	Dry chemical	
958C	17	N/A	Dry chemical	

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on other required equipment located at the HWMF is provided in Section 6 and Table 4 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the HWMF is provided in Section 1.1.3.2 and in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b), and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the HWMF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the HWMF to prevent hazards. Additional information applicable to the HWMF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

HWMF personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent hazards in unloading. Loading and unloading activities typically take place on the south side of buildings 958 and 959 (Figure 7). The surface is level, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Containers are typically shrink-wrapped to hold them together on a pallet before being loaded onto vehicles by a forklift for off-site shipment. Containers are typically transported within the Unit with drum dollies or pallet jacks.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The land around the HWMF is generally level, sloping gently toward the south and west. The paved areas of the HWMF are higher than the surrounding land on all sides, preventing sheet-flow run-on of surface water from surrounding areas. The western edge of the paved area is also surrounded by a 6-inch high asphalt curb, further preventing runon and runoff from HWMF WMAs.

Within the HWMF, the paved areas are sloped toward a 74,800-gallon catchment pond located at the northwest corner of the Unit. During normal operations, the catchment pond collects only storm water. The catchment pond does not provide secondary containment for RCRA-regulated waste.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the HWMF will affect water supplies, as described in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). The HWMF is equipped with battery-operated lights which will automatically turn on in the event of a power failure. A permanent power transformer can provide emergency power from the SNL/NM emergency power network.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

HWMF personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

HWMF personnel employ the practices described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent releases to the atmosphere.

RCRA-regulated waste containers may be opened to sample waste or transfer waste to another container. These activities are done only in the Hazardous Waste Packaging Building (959). A fume hood and drum vacuum hoods are available if there is a need to open a vapor-generating waste container. Only one category of waste is present in a ventilation system at any time.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

The HWMF is permitted for container storage of RCRA-regulated wastes in accordance with the conditions of "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-1" (NMED, 1992). Container storage practices applicable to the HWMF are presented in the following sections.

1.3.1 Container Types and Labeling

HWMF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

HWMF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the HWMF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

HWMF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 2003a). Aisle width is typically 2.5 feet in all buildings. This is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked in Building 958 are stored on pallets, and are not stacked more than two pallets high. Box-shaped containers may be stacked two high without pallets. Containers may also be stored directly on the floor or on the grating.

Drums stored in the modular buildings are not stacked. Smaller containers may be stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

HWMF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 2003a).

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.100–.900/40 CFR 260–266, 268, and 270). The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the HWMF.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The HWMF is located on DOE property between TA-I and TA-II (Figure 1) The Unit is surrounded by an 8-ft high chain-link fence topped with barbed –wire. A single entrance gate is located on the east side of the HWMF. The gate is locked during nonwork hours. An emergency exit gate is located on the west side of the Unit, as shown in Figures 6 and 7. This gate is locked at all times and can only be opened from the inside by pressing on the handle. All buildings are also kept locked during non-operational hours. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the HWMF gates during non-operational hours.

During work hours, Unit signs instruct personnel and visitors to report to Office Trailer #1 for site entry privileges and instructions. Resident personnel have Sandia-issued badges. Nonresidents are escorted while on site. These procedures limit access to the HWMF RCRA-regulated WMAs, in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

2.1.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fences surrounding the HWMF and the entrance to the HWMF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to the HWMF.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the HWMF include Hardin Boulevard (formerly O Street), Pennsylvania Avenue, Wyoming Boulevard, Eubank Boulevard, and 9th, 14th, and P Streets as shown in Figures A-4 and A-5 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

Waste transport vehicles enter the HWMF from 14th Street (Figure 5). Within the HWMF, waste is transported on paved surfaces.

2.2.2 Traffic Volumes

Traffic volumes on Hardin Boulevard, Wyoming Boulevard, and Eubank Boulevard are generally light to moderate; traffic volumes on Pennsylvania Avenue and 9th, 14th, and P Streets are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

2.2.3 Traffic Control Signals

Traffic on the access road is controlled by a stop sign at each end of the road: one at the intersection with P Street, and a stop sign and speed limit sign posted on the fence adjacent to the HWMF vehicle entrance gate (Figure 5). The speed limit within the HWMF fenced area is 5 miles per hour and no private vehicles are allowed inside the HWMF. Vehicle presence within the fenced HWMF is limited to work and waste transport vehicles (i.e., no personal vehicles). Therefore, signals or signs are not necessary to control traffic within the HWMF fenced area.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11] [i and ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the HWMF are not located within 3,000 ft of any fault with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the HWMF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).

- Surface waters, including intermittent streams, near the HWMF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).

- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the HWMF is occupied by other Sandia-controlled operations (industrial land use). As noted in Appendix A, the nearest residential areas are located west of Pennsylvania Avenue, north of Hardin Blvd (west of SNL/NM TA-1), more than one mile away from the HWMF.

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the HWMF) are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the HWMF (e.g., fences, gates) are shown on Figures 6 and 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the HWMF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][ix] [6-14-00]).

- The location of the HWMF and associated WMAs and structures, loading and unloading areas, roads, and sanitary sewers are shown on Figure 7 of this module (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][x] [6-14-00]).

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).

- Locations of the HWMF and HWMF WMAs are shown on Figures 1, 2, and 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the HWMF. As provided for in 20 NMAC 4.1.900/ 40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to NMED at these scales and contour intervals due to the size of the HWMF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The HWMF is not a regulated Unit. There have been no releases of RCRA-regulated waste in the past, nor is the HWMF likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

In accordance with 20 NMAC 4.1.900/40 CFR 270.14[b][2]; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," [6-14-00], waste analysis requirements applicable to all Units, including the HWMF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that waste management areas (WMAs) and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as" Appendix C of the SNL/NM General Part B (SNL/NM, 2003b). HWMF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 3, which includes the inspection criteria and frequency. The items listed in the table are inspected in each HWMF WMA.

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

Automatic fire suppression systems are included in Table 3. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained at the HWMF. Inspection records for previous calendar years are maintained at the HWMF or the SNL/NM Records Center.

Table 3
Hazardous Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Recovery drums and containers	Present and in good condition	Monthly
Self-contained breathing apparatus	Present and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Secondary containment	Free of liquids, good condition (i.e., no cracks, excessive wear)	Daily when wastes are managed. Weekly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Monitoring equipment	Instruments in good condition, operational, calibrated	Daily when wastes are managed. Monthly otherwise.
Waste transfer pump	Present, operational, and in good condition	Prior to use. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present and in good condition	Monthly
Gates and doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly

Table 3 (Concluded)
Hazardous Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (2 maximum)	Daily for individual containers that were handled. Weekly otherwise.

5.0 PERSONNEL TRAINING

Training requirements for Unit personnel are specified in 20 NMAC 4.1.900/40 CFR 270.14[b][12], and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training."

The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the HWMF.

HWMF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

Training records for HWMF personnel are maintained at the HWMF.

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental HWMF-specific information is included in this section, in Figures 9 and 10, and in Tables 4 and 5 of this module.

The HWMF is located at the curve of 14th and P Streets (approximately 1,000 feet (ft) north of the entrance to Technical Area II) at SNL/NM and is used to repackage and store RCRA-regulated wastes. The RCRA-regulated WMAs at the HWMF include Building 958, Building 959, and the two modular storage buildings. The HWMF WMAs are located within a single area surrounded by a fence.

- Building 959 is an 1,800-square-foot precast concrete building with an eave height of 12 feet. Inside the building are eight waste holding cells, a repackaging area, a restroom, a general use area, an office area, and an area for packing materials. The floor is coated with an epoxy finish. A 1,200-square-foot covered outdoor area extends immediately to the west of Building 959. Small containers of wastes (typically less than 55 gallons) are stored in this building. Containers of incompatible wastes are segregated into different holding cells. The containers are repackaged into larger containers for shipment to off-site facilities. Up to 7,590 gallons of waste may be stored in this building.

- Building 958 (west of Building 959) is a 3,520-square-foot precast concrete building with an eave height of 14 feet. The building includes eight separate and recessed waste storage compartments for segregation of waste groups according to compatibility. Containers of wastes are stored in this building. Up to 99,950 gallons of waste may be stored in this building.

- Buildings 958B and 958C are relocatable, prefabricated safety storage structures used for the storage of reactive and ignitable wastes. Each structure is constructed of welded 10- and 12-gauge steel with supporting structural steel sections, and each has three doors. The 500-gallon containment reservoirs within each building, the walls, and the ceilings are coated with chemical-resistant epoxy. The reservoirs are lined with polypropylene, which is compatible with reactive wastes. The floors are epoxy-coated, fire-resistant plywood. Up to 5,005 gallons of waste may be stored in each building.
- Storage of reactive wastes, lithium batteries, gas cylinders and flammable solids is restricted to these two buildings except for temporary storage that may occur in Building 959 following acceptance of the waste at the HWMF.

Figure 9 presents the evacuation routes for the HWMF. Figure 10 presents emergency response and access information for the HWMF. Table 4 lists the emergency equipment typically available at the HWMF. Table 5 lists the emergency coordinators for the HWMF.

Current copies of the Site-Wide Contingency Plan and this supplemental information are maintained at the HWMF and at the SNL/NM Emergency Operations Center.

Table 4
Hazardous Waste Management Facility, Emergency Equipment and Locations

Building 958

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Fixed shower / eyewash	Near south entrance
	Recovery drums and containers	At south entrance
	SCBA	At south entrance
	Miscellaneous personal protective equipment (protective suits, goggles, gloves)	At south entrance
Internal Communication and Alarm System	Voice command	
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	One each on the exterior and interior walls near north and south personnel doors
	Audible fire alarms	
External Communication System	Telephones – unlimited employee access	One on the interior walls near the north and south entrances
	Fire alarm pull stations (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	One each on the exterior and interior walls near north and south personnel doors
Fire Extinguishers	Portable (A-B-C)	One at both the north and south entrances
Fire Suppression	Automatic wet-pipe water sprinkler system, with heat-actuated sprinklers	Coverage throughout the building
	Water supplied by fire hydrants	One hydrant, location shown in Figure 10

KAFB = Kirtland Air Force Base.
SCBA = Self-contained breathing apparatus.

Table 4 (Continued)
Hazardous Waste Management Facility, Emergency Equipment and Locations

Building 959

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Fixed shower/eyewash	Near south entrance
	Recovery drums and containers	Near south entrance
	SCBA	Near south entrance
	Miscellaneous personal protective equipment (protective suits, goggles, gloves)	Near south entrance
	First aid kit	One in the bathroom
Internal Communication and Alarm System	Voice command	
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers).	One each on the exterior and interior walls near each personnel door
	Audible fire alarms	
External Communication System	Telephones – unlimited employee access	One in the office
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers).	One each on the exterior and interior walls near each personnel door
Fire Extinguishers	Portable (A-B-C)	One at both the north and south entrances
	Lith-X	One in the general use area One in the office
Fire Suppression	Automatic wet-pipe water sprinkler system, heat-actuated sprinklers	Coverage throughout the building
	Water supplied by fire hydrants	One hydrant, location shown in Figure 10

KAFB = Kirtland Air Force Base.

Table 4 (Concluded)
Hazardous Waste Management Facility, Emergency Equipment and Locations

Modular Storage Buildings

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Personal protective equipment Recovery drums and containers	Buildings 958 and 959
Internal Communication and Alarm System	Voice command	
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system). Audible fire alarms	Buildings 958 and 959
External Communication System	Telephones – unlimited employee access	Buildings 958 and 959
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system)	Buildings 958 and 959
Fire Suppression	Ansul automatic dry chemical system	Coverage throughout the building

KAFB = Kirtland Air Force Base.

Table 5
Hazardous Waste Management Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Charles Roma Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 844-0590 (office) (505) 263-7714 (cellular) (505) 540-4333 (pager)	(505) 271-5368
First Alternate	Mark Miller Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 845-8887 (office) (505) 681-4920 (cellular)	(505) 839-4187
Second Alternate	David Castillo Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-4192 (office) (505) 540-9375 (pager)	(505) 899-1956

One or more of these personnel are routinely available during operating hours (8:00 am to 4:30 pm, Monday through Friday)

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/40 CFR 270.14[b][13], and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I, [6-14-00]. General closure information applicable to all RCRA-regulated Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b). The general closure information includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the HWMF is estimated at 69,740 gallons of liquids and/or solids (including lab packs that contain substantial quantities of absorbent).

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), partial closure activities specified in this plan assume the following conditions were met during the operational life of the HWMF:

- RCRA-regulated waste handling activities involving the opening of waste containers were confined to the interiors of HWMF RCRA-regulated waste management areas (WMAs). If contamination occurred, it would have been confined to these areas; and

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures, and breaches of protective coatings did not occur.

7.3 Closure Schedule

8.0 TREATMENT PLAN

Sandia /DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the HWMF.

9.0 REFERENCES

National Fire Protection Association (NFPA), 2000, "Flammable and Combustible Liquids Code," NFPA 30, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, " Standard for Dry Chemical Extinguishing Systems," NFPA 17, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A-F in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.
SNL/NM, see Sandia National Laboratories/New Mexico.

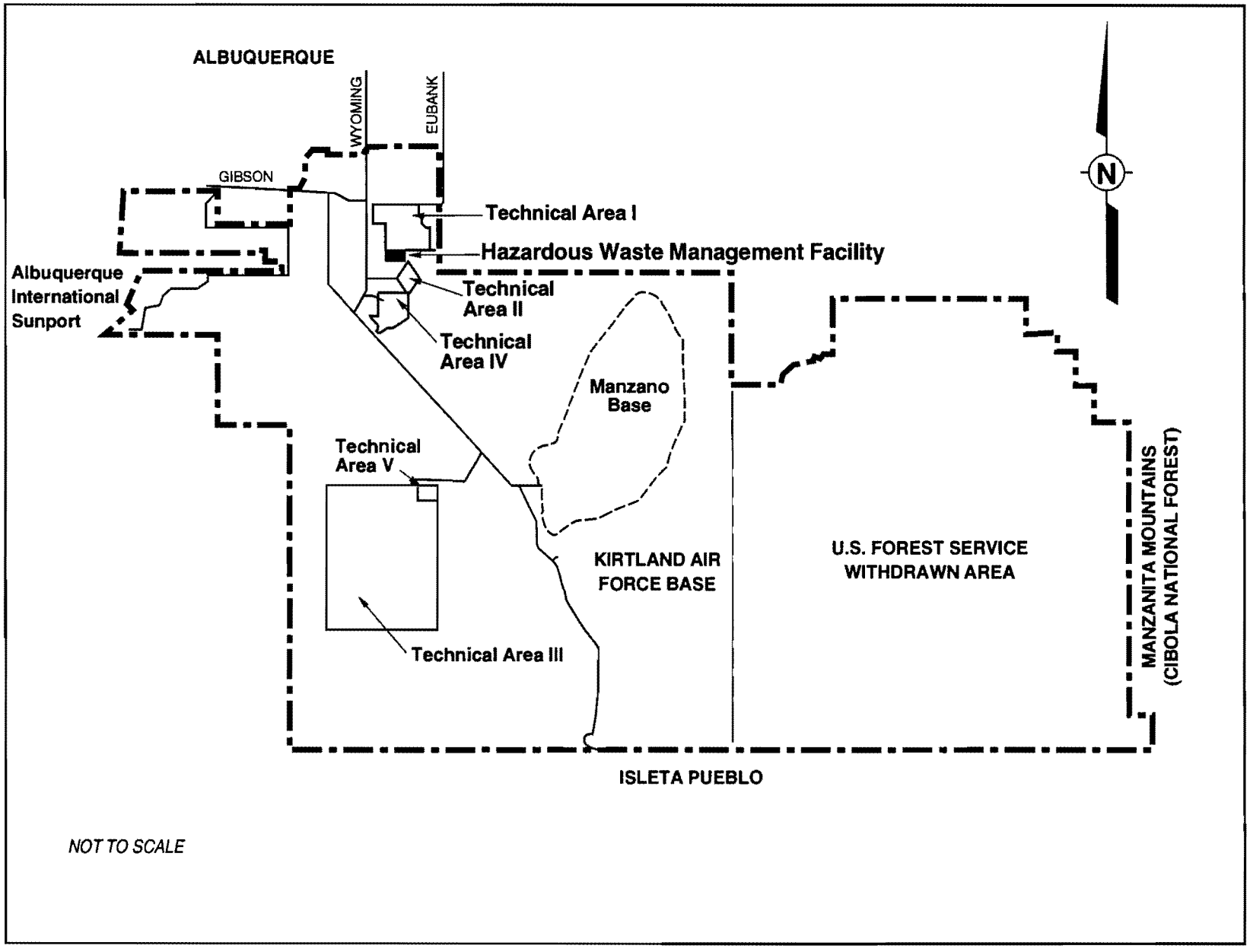


Figure 1
Location of the Hazardous Waste Management Facility at Sandia National Laboratories/New Mexico

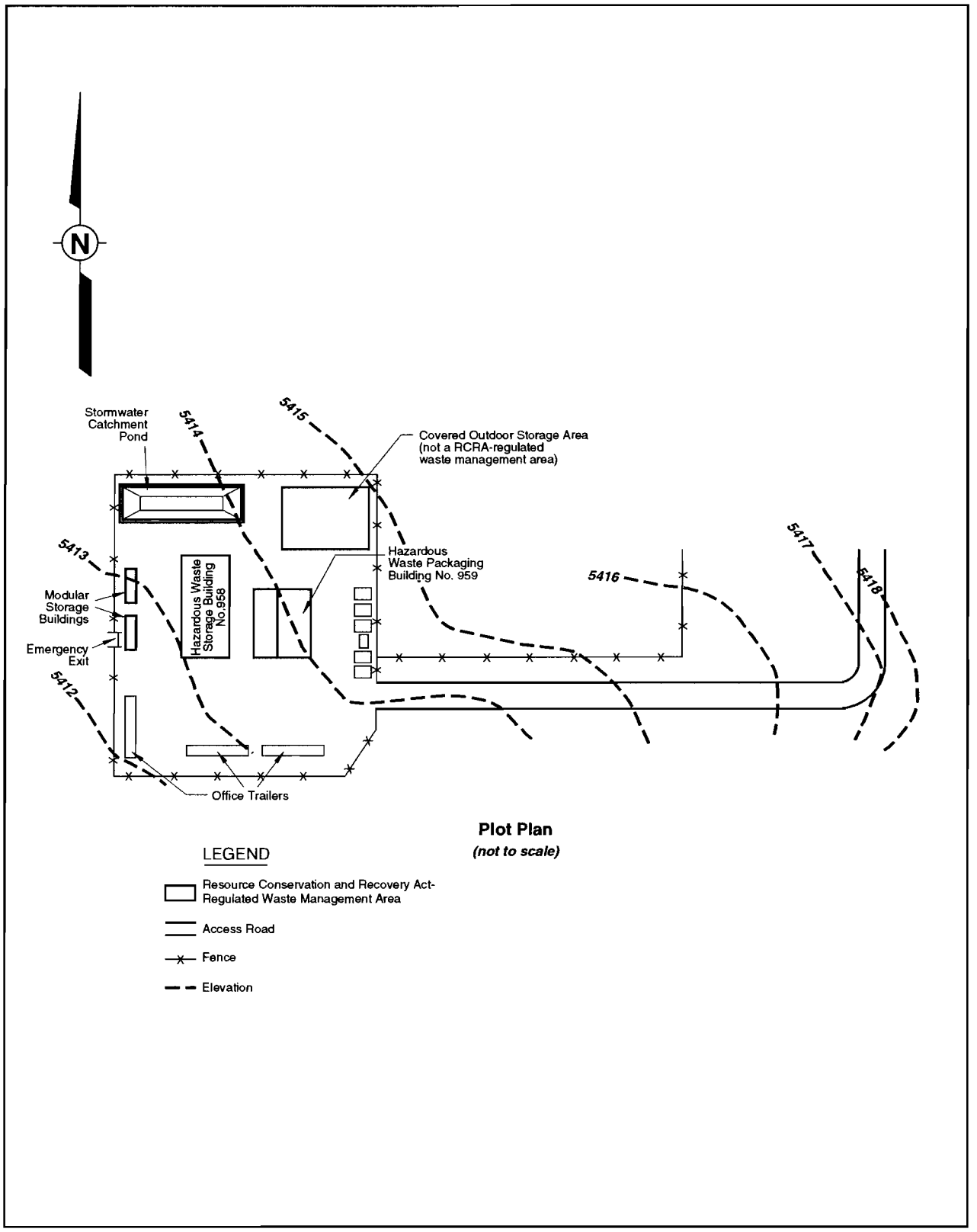


Figure 2
Hazardous Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

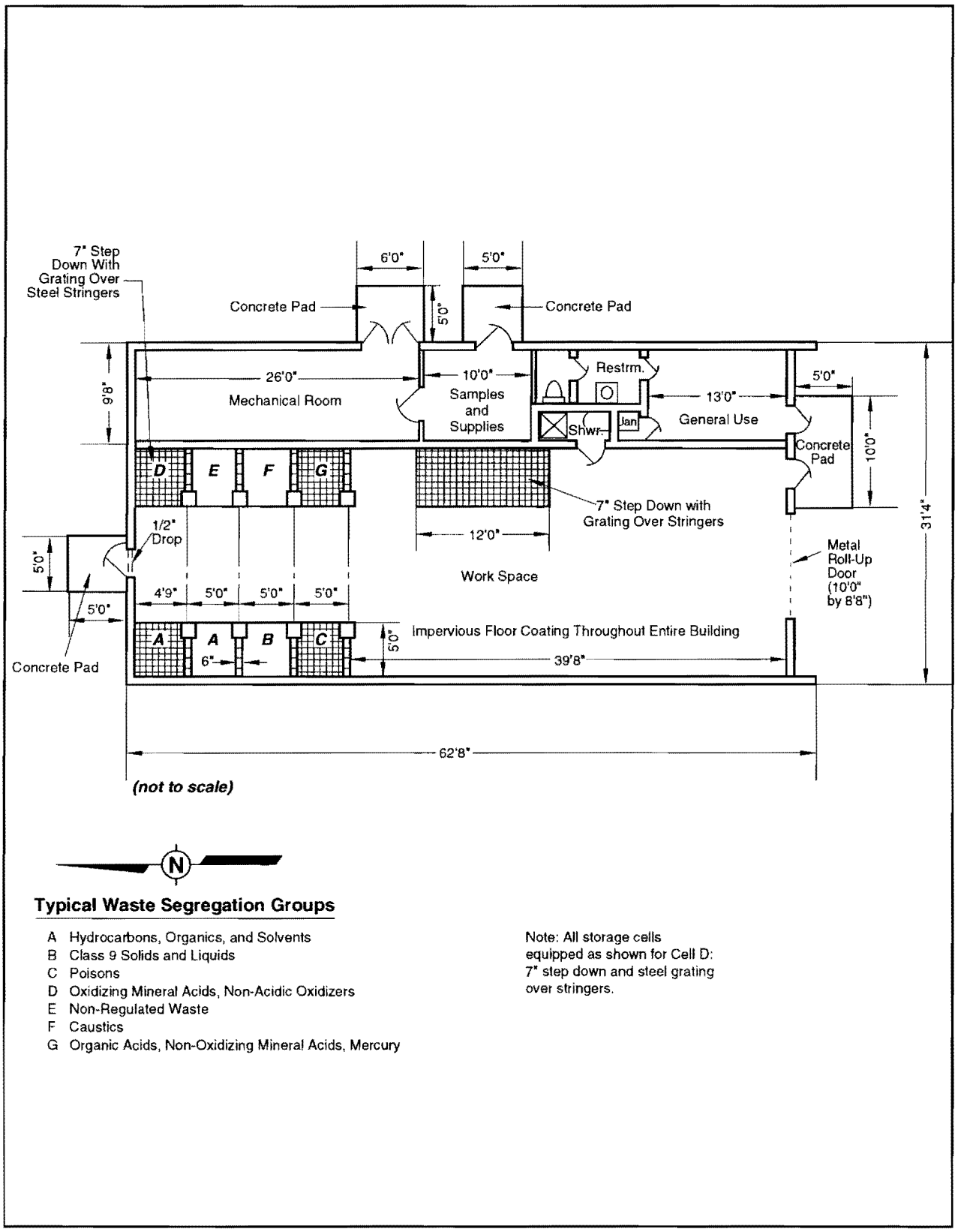
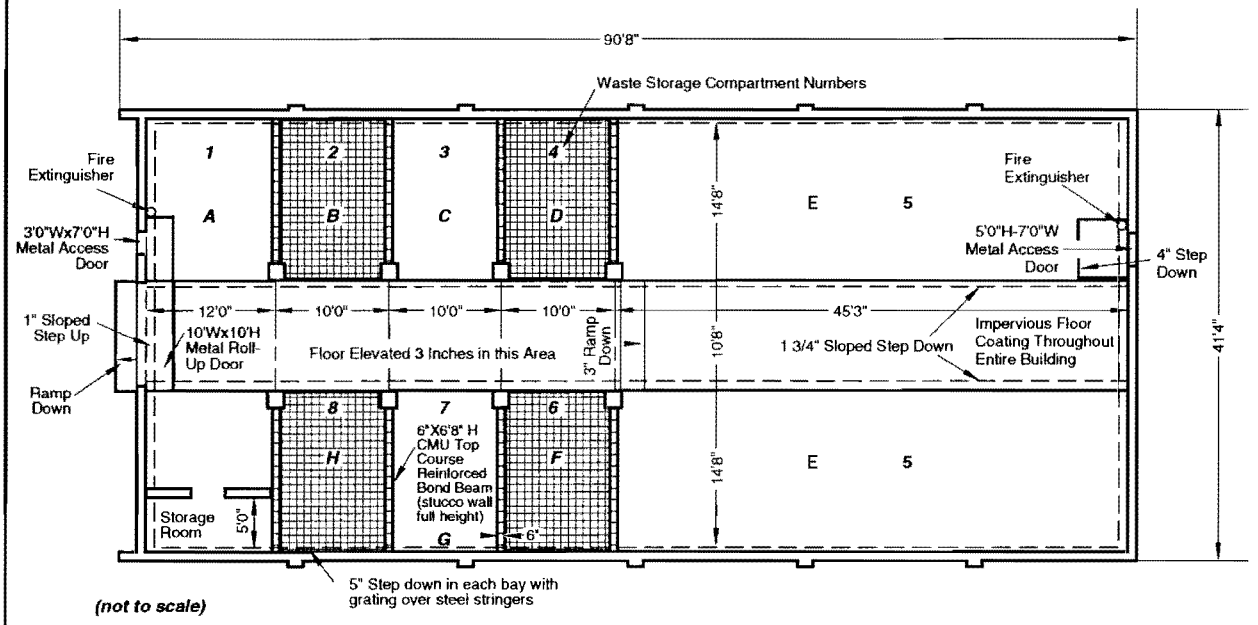


Figure 3
Hazardous Waste Packaging Building (Building 959), Floor Plan



Typical Waste Segregation Groups

- A Holding Bay
- B Poisons
- C Flammables
- D Oxidizers
- E Hydrocarbons, Organics, Solvents, Non-Regulated Wastes
- F Corrosives (caustics)
- G Corrosives (acids or caustics)
- H Corrosives (acids)

Note: Cells 1-4 and 6-8 are constructed with a 5" step down and grating over steel stringers. Cell 5 is not equipped with grating.

Figure 4
Hazardous Waste Storage Building (Building 958), Floor Plan

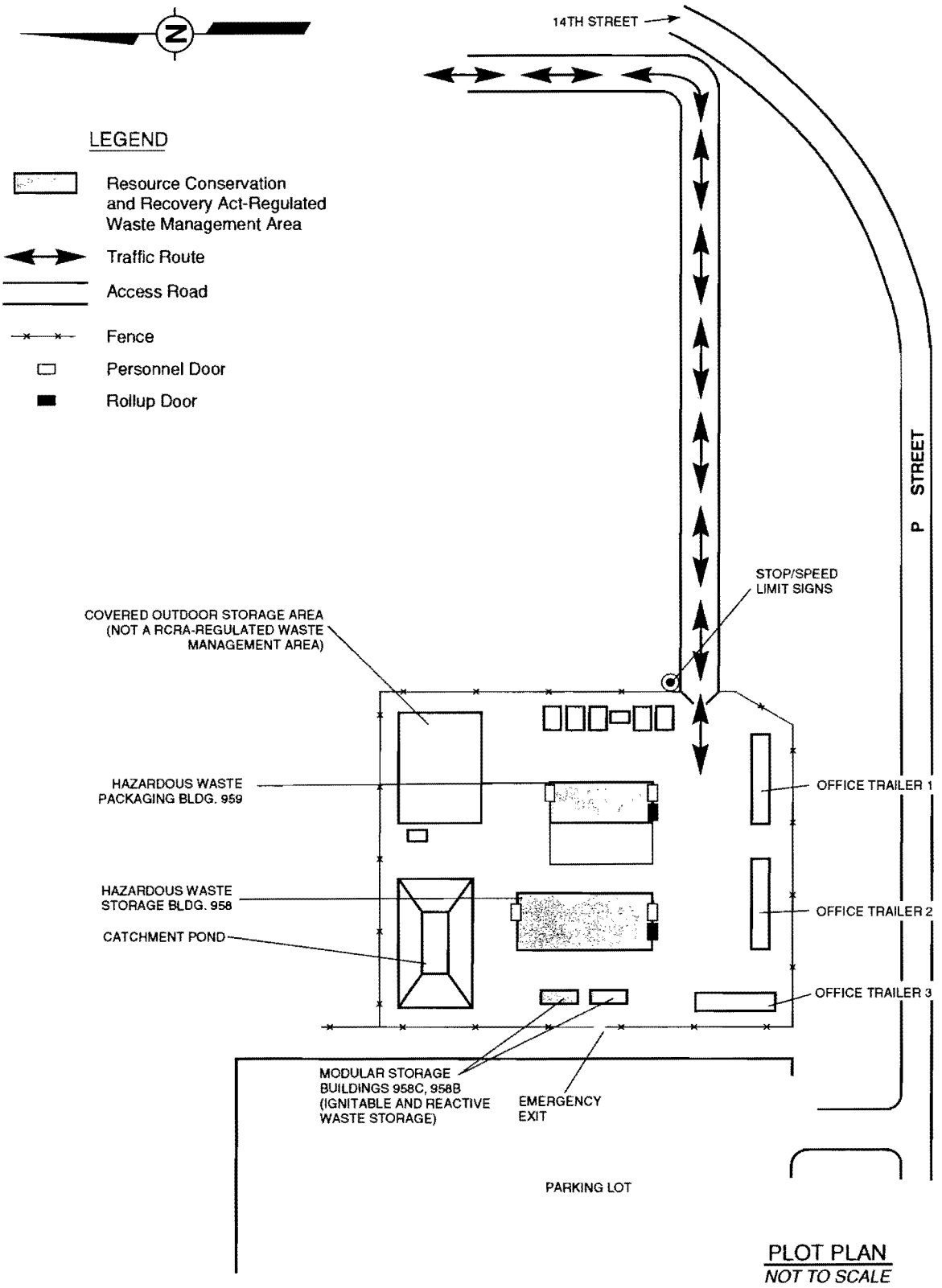


Figure 5

Hazardous Waste Management Facility, Traffic Routes and Controls

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

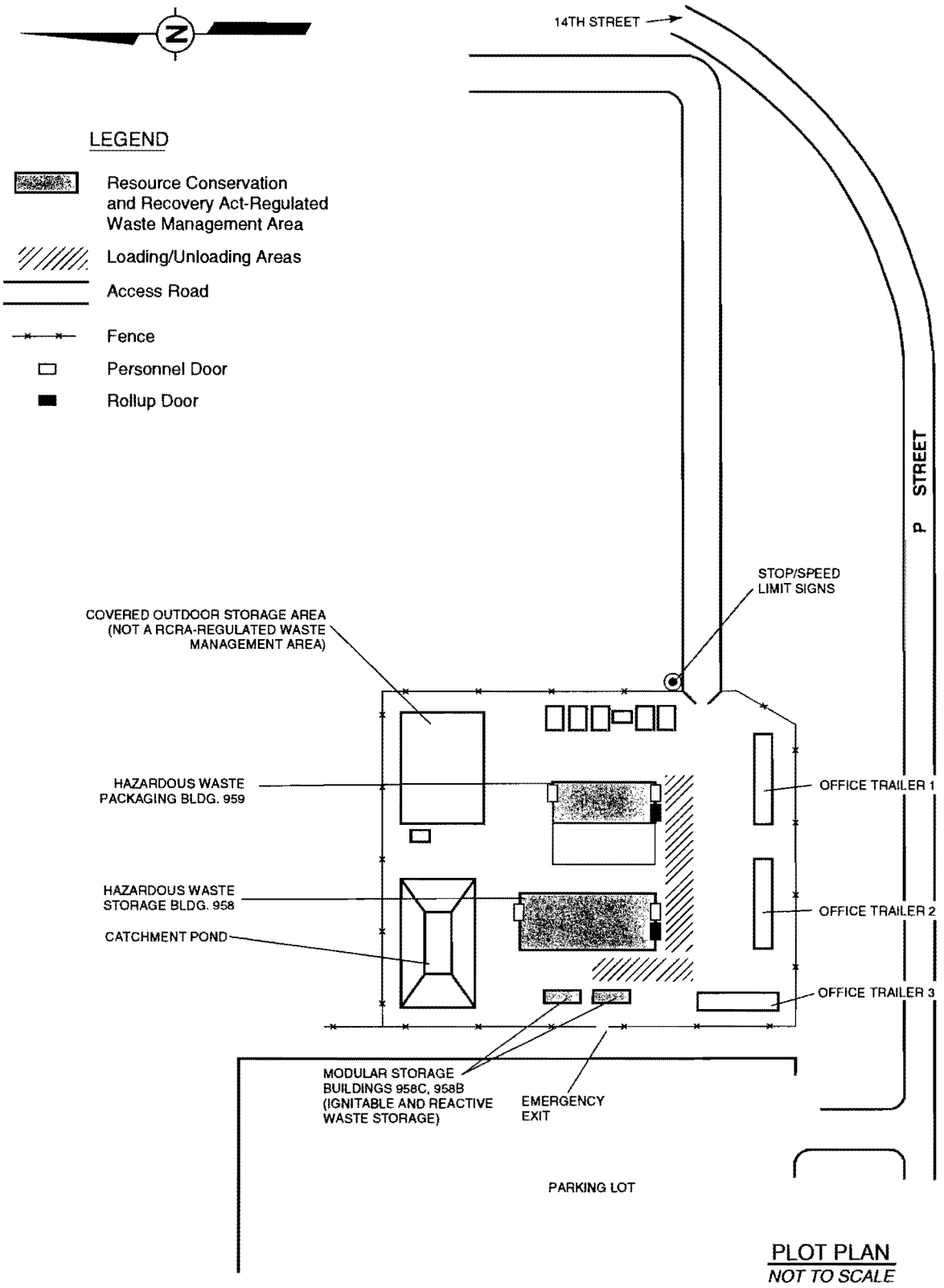


Figure 7

Hazardous Waste Management Facility, Access Control Features

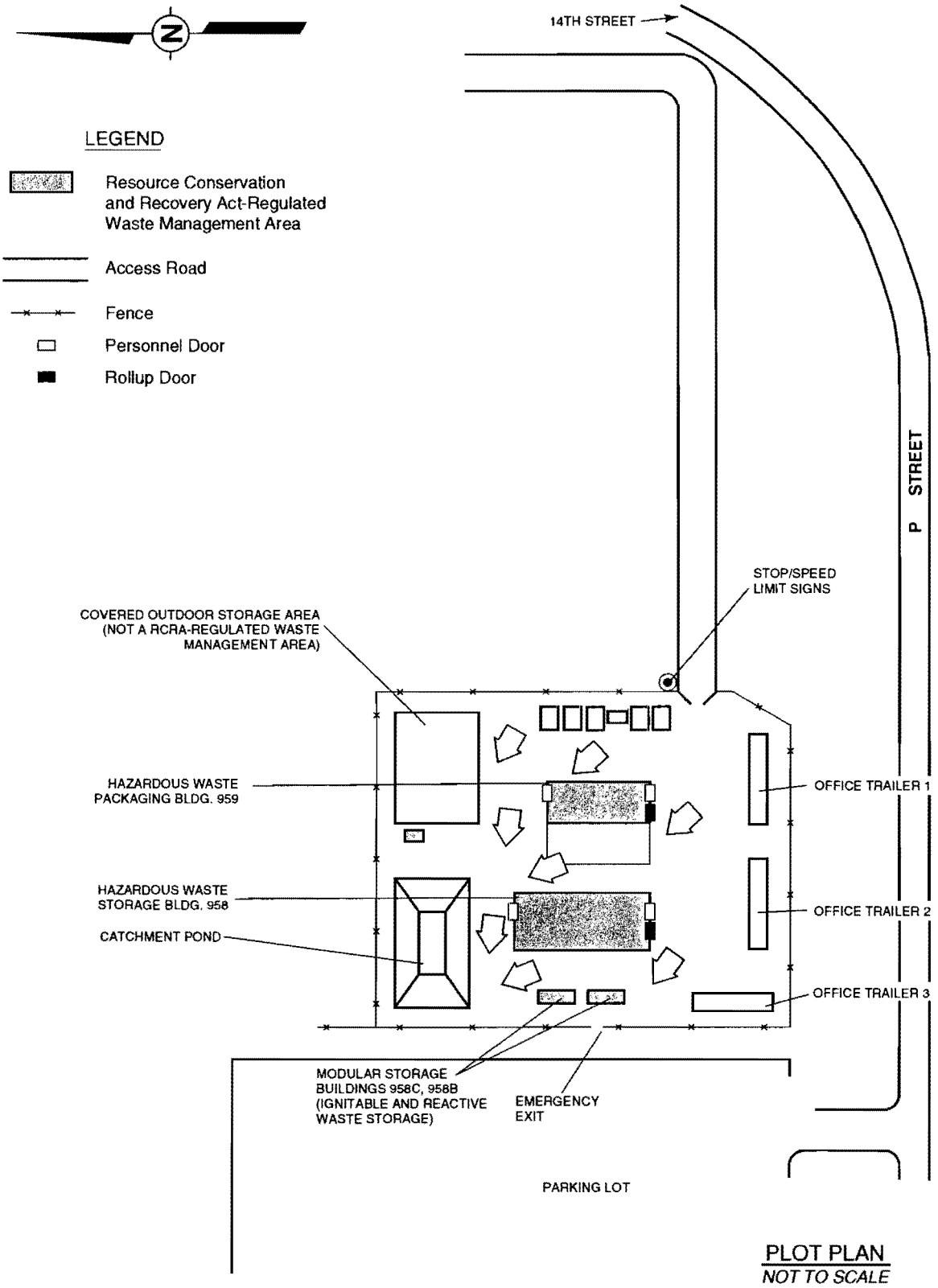


Figure 8

Hazardous Waste Management Facility, Drainage Control Features

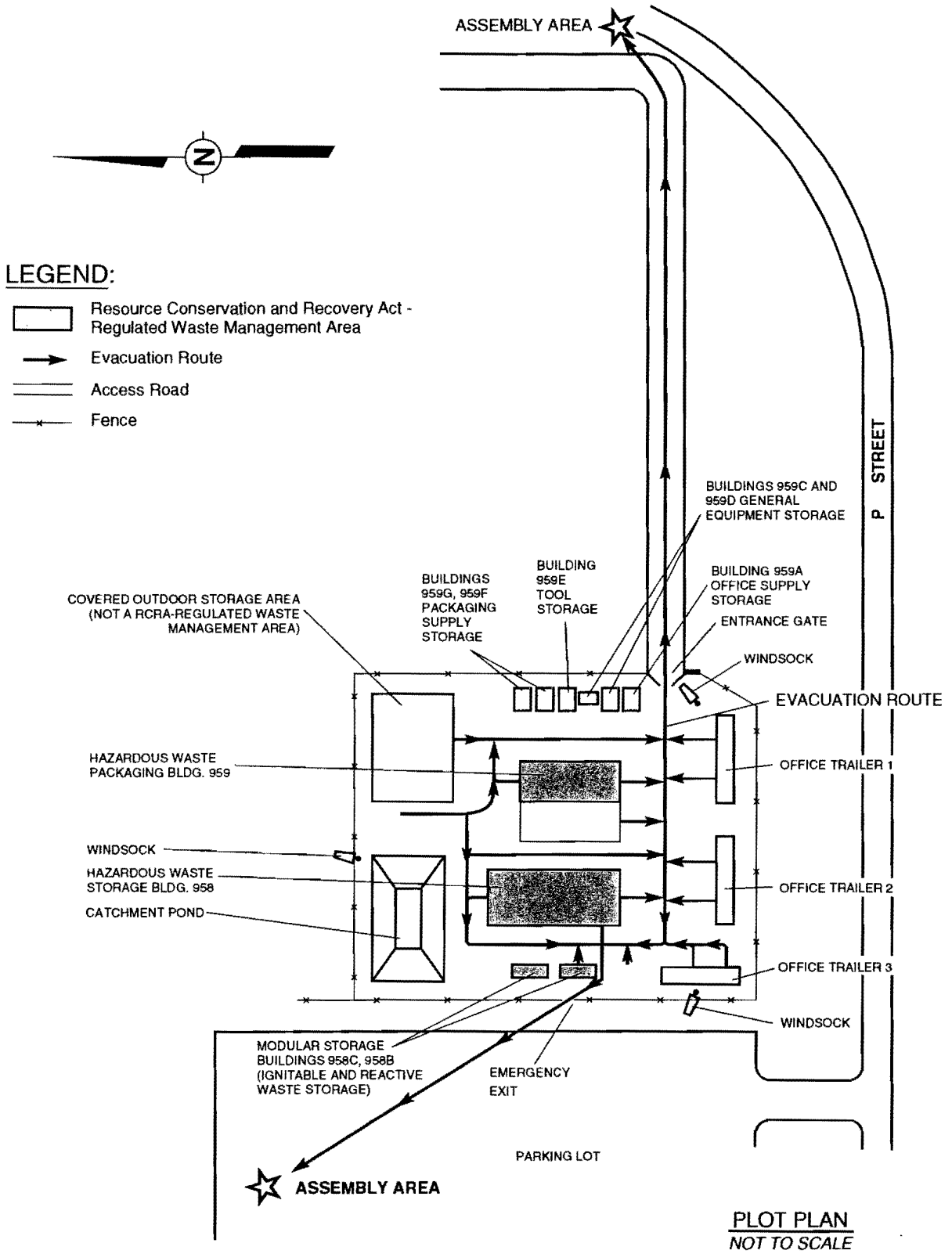


Figure 9

Hazardous Waste Management Facility, Evacuation Routes

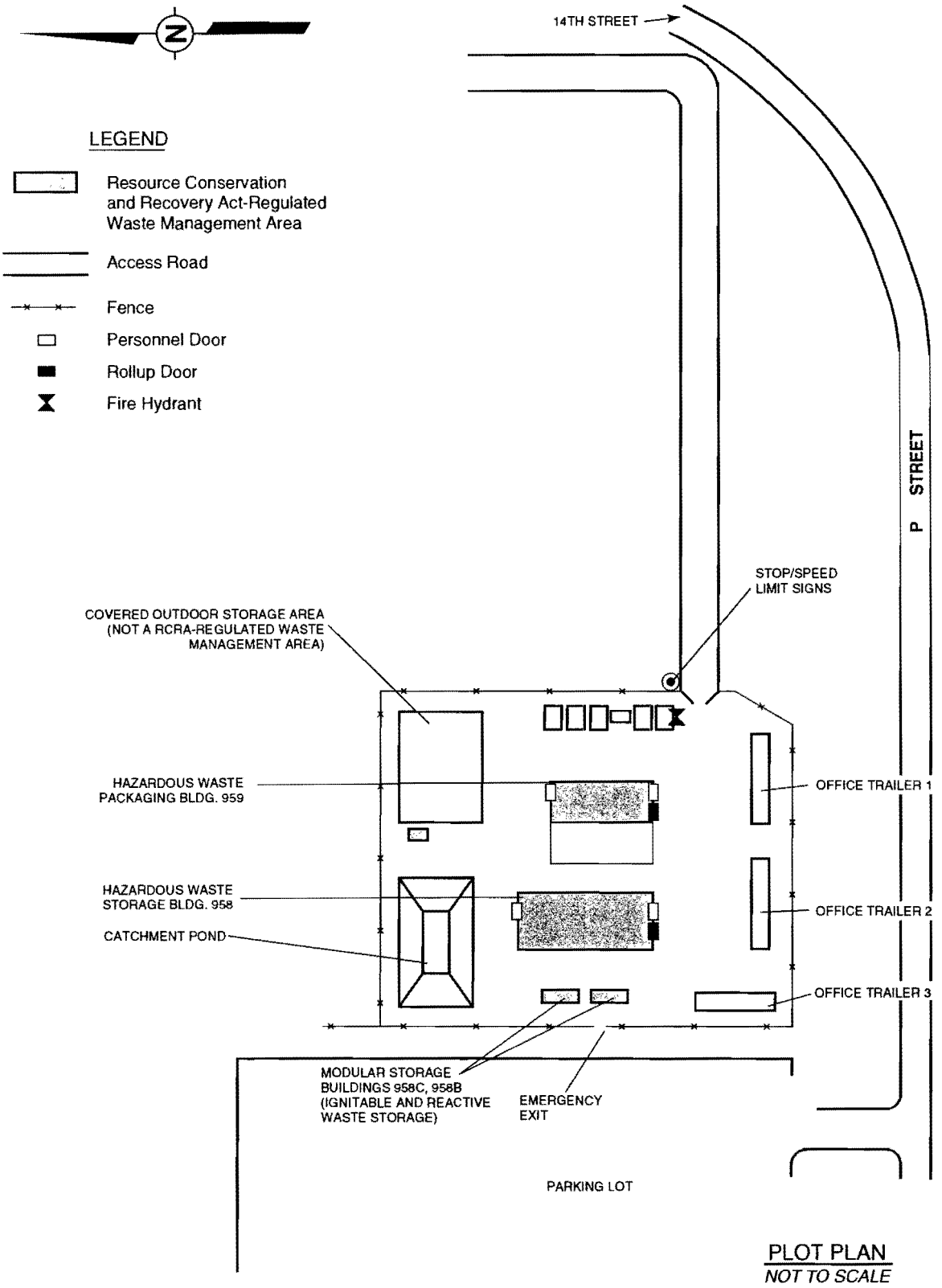


Figure 10

Hazardous Waste Management Facility, Emergency Response and Access Information

Sandia National Laboratories/New Mexico Thermal Treatment Facility Part B Permit Renewal Request

Module II

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... TTF-iii
LIST OF FIGURES ..... TTF-iv
ACRONYMS AND ABBREVIATIONS ..... TTF-v
1.0 GENERAL UNIT OPERATIONS TTF-1
1.1 Designated Waste Management Area TTF-1
1.2 Unit Operations TTF-2
1.2.1 Operation of Containment Systems TTF-2
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes .. TTF-2
1.2.2.1 General Precautions for Handling Reactive Waste TTF-2
1.2.2.2 Engineering Precautions to Prevent Reactions TTF-3
1.2.3 Preparedness and Prevention TTF-3
1.2.3.1 Required Equipment TTF-3
1.2.3.2 Testing and Maintenance of Equipment TTF-3
1.2.3.3 Access to Communications or Alarm Systems TTF-3
1.2.4 Hazards Prevention TTF-3
1.2.4.1 Preventing Hazards in Unloading TTF-4
1.2.4.2 Preventing Runoff or Flooding TTF-4
1.2.4.3 Preventing Contamination of Water Supplies TTF-4
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages TTF-4
1.2.4.5 Preventing Undue Exposure TTF-5
1.2.4.6 Preventing Releases to the Atmosphere TTF-5
1.3 Container Storage Practices TTF-7
1.4 Treatment Operations TTF-8
2.0 UNIT DESCRIPTION AND INFORMATION TTF-9
2.1 Security Procedures and Equipment TTF-9
2.1.1 Barriers and Means to Control Entry TTF-9
2.1.2 Warning Signs TTF-10
2.2 Traffic Pattern, Volume, and Controls TTF-10
2.2.1 Traffic Patterns TTF-10
2.2.2 Traffic Volumes TTF-10
2.2.3 Traffic Control Signals TTF-11
2.3 Unit Location Information TTF-11
2.3.1 Seismic Standard TTF-11
2.3.2 Floodplain Standard TTF-11
2.4 Topographic Maps TTF-11
2.5 Groundwater Monitoring TTF-13
3.0 WASTE ANALYSIS PLAN TTF-14
4.0 INSPECTION PLAN TTF-15
5.0 PERSONNEL TRAINING TTF-18
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE TTF-20
7.0 CLOSURE PLAN TTF-23
7.1 Estimate of Maximum Waste Inventory TTF-23
7.2 Closure Conditions TTF-23

TABLE OF CONTENTS (Concluded)

8.0 TREATMENT PLAN TTF-24
8.1 Treatment Operations TTF-24
8.2 Treatment Effectiveness TTF-25
9.0 Environmental Performance Standards for the Miscellaneous Unit TTF-26
9.1 Protection of Groundwater/Vadose Zone TTF-26
9.2 Protection of Surface Water, Wetlands, and Soil Surface TTF-27
9.3 Monitoring TTF-28
10.0 REFERENCES TTF-29

LIST OF TABLES

Table No.	Title
1	Calculated Silver Concentrations at Selected Distances from the Thermal Treatment Facility
2	Thermal Treatment Facility Inspection Criteria and Frequency
3	Thermal Treatment Facility Resource Conservation and Recovery Act-Regulated Waste Management Unit Training Content
4	Thermal Treatment Facility, Emergency Equipment
5	Thermal Treatment Facility, Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location of the Thermal Treatment Facility at Sandia National Laboratories/New Mexico
2	Thermal Treatment Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area
3	Thermal Treatment Facility (TTF)—Plan View
4	Thermal Treatment Facility (TTF)—Section View
5	Thermal Treatment Facility, Traffic Routes and Controls
6	Topographic Map, Thermal Treatment Facility
7	Thermal Treatment Facility, Access Control Features
8	Thermal Treatment Facility, Drainage Control Features
9	Thermal Treatment Facility, Evacuation Routes and Emergency Response and Access Information

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	microgram(s) per cubic meter
20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
A/BCAQCB	Albuquerque/Bernalillo County Air Quality Control Board
DOE	U.S. Department of Energy
ft	foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
mi	mile
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SASN	silver acetylide/silver nitrate
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TTF	Thermal Treatment Facility
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO THERMAL TREATMENT FACILITY PART B PERMIT RENEWAL REQUEST

This Sandia National Laboratories/New Mexico (SNL/NM) Thermal Treatment Facility (TTF) Part B Permit Renewal Request is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste treatment operations at the TTF. 20 NMAC 4.1.500 and .900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this TTF Part B Permit Renewal Request.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Thermal Treatment Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The TTF occupies 196 square feet south of Building 6715 in Technical Area (TA)-III. It is a thermal treatment unit surrounded by an earthen berm and a fence. The entire area within the fence is 8140 square feet. Operations include treatment of reactive (D003) RCRA-regulated wastes. Wastes generated during operations in Building 6715 are treated at the Unit. Sandia/DOE currently operate the TTF in accordance with the terms of NMED Permit NM5890110518-2, issued November 4, 1994 (NMED, 1994).

1.0 GENERAL UNIT OPERATIONS

This section provides descriptions of the TTF waste management area (WMA) and TTF treatment operations. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention; and
- Treatment practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts X, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.23 [6-14-00].

1.1 Designated Waste Management Area

The location of the TTF at SNL/NM is shown on Figure 1. The TTF has one designated WMA, the treatment area, shown on Figure 2.

The treatment area at the TTF is located outside the south end of Building 6715 in TA-III at SNL/NM. The treatment area consists of a square burn pan constructed of 0.375-inch (in.) steel, 2 feet (ft) 6 in. on a side and 6-in. deep. The burn pan is located near the center of a square curbed slab of concrete 14 ft on a side lined with 0.5-in. steel, with a 4-in. high, steel-lined concrete curb around the edge. The burn pan is enclosed within a square cage approximately 4 ft on a side, consisting of expanded metal screen approximately 8-ft high with a nearly solid metal roof having slots for tracks and cables. An expanded metal screen door, remotely activated from inside Building 6715, provides access to the treatment area (i.e., burn pan). TTF site plans and drawings are presented in Figures 3 and 4.

An enclosure on the east side of the cage houses three propane burners, which can be remotely activated from inside Building 6715. Two propane jets are located at the bottom of the burn pan. The third gas jet, located over the burn pan, ignites flammable vapors above the pan.

Liquids that might accumulate at the TTF WMA are contained within a secondary containment system (i.e., steel-lined concrete pad that drains into a catch tank) that is sufficiently impervious to contain spills or accumulated precipitation until the liquid is removed. The secondary containment system provided by the steel-lined concrete pad is designed to contain the entire volume of potential liquid waste. The maximum volume of RCRA-regulated liquid waste in the TTF burn pan at any time is 20.8 gallons. The catch tank has a containment capacity of approximately 157 gallons.

1.2 Unit Operations

The TTF WMA is used to treat RCRA-regulated wastes specified in Section 1.1 of this module. The U.S. Environmental Protection Agency Hazardous Waste Numbers for those wastes are listed in the SNL/NM General Part A (SNL/NM, 2002).

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes; preparedness and prevention; and, hazards prevention requirements applicable to the TTF WMA are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.23; and 20 NMAC 4.1.500/40 CFR 264.175[b][5])

Water collected in the catch tank primarily consists of precipitation. If the water is known to be runoff resulting from precipitation and not suspected to be contaminated with any RCRA-regulated waste constituents, it will be assumed to meet City of Albuquerque wastewater discharge parameters and be discharged (pumped) directly to the Technical Area III sanitary sewer system. If the water is suspected to be contaminated with RCRA-regulated waste constituents, or is derived from RCRA-regulated listed wastes treated at the TTF, it will be containerized and arrangements will be made for disposal into the City of Albuquerque sewer treatment system with a one-time notice placed in the facility file in accordance with 20 NMAC 4.1.800/40 CFR 268.7(a)(6) [6-14-00]. If the wastewater cannot be discharged in the City of Albuquerque sewer treatment system, it will be containerized and handled through normal procedures at one of the other SNL/NM Units.

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9], and 20 NMAC 4.1.500/40 CFR 264.17)

1.2.2.1 General Precautions for Handling Reactive Waste

The grounds and berms near the TTF are routinely cleared of dry or dead weeds and brush. This helps to prevent brush fires near the TTF. During normal operations, wastes are not stored at the TTF prior to treatment. Reactive explosives and energetic waste (sensitive to impact, heat, shock, and light) are treated soon after transfer to the TTF.

Incompatible wastes are not accepted for treatment at the TTF. In addition, copper is incompatible with an explosive slurry of silver acetylide/silver nitrate (SASN); therefore, no exposed copper is allowed when the explosive SASN is present. No other materials that would produce undesirable reactions with RCRA-regulated waste (e.g., explosion, toxic fumes, or structural damage) are located at the TTF.

1.2.2.2 Engineering Precautions to Prevent Reactions

Reactive waste is protected from open flames by disabling the gas burner system during manual loading of the TTF burn pan; however, the gas burners may be operational when waste is transferred to the burn pan via the waste transfer pump. The gas burner system is disabled by removing the only key from the lock on the control console in Building 6715. Thus, the gas burner system is controlled by the operator who is loading the TTF burn pan while the TTF expanded metal screen door is open. The door is also operable from the control console which reduces the chance of opening the door for loading or unloading without disabling the gas burner system. The gas burner system is reactivated at the control console only after an area check for personnel and a public address announcement is made that the TTF will begin operations.

1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C)

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the TTF.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant at the TTF is shown in Figure 9. Information on other required equipment located at the TTF is provided in Section 6 and Table 4 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the TTF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the TTF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the TTF to prevent hazards. Additional information applicable to the TTF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

TTF personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent hazards in unloading, as applicable. Waste treated at the TTF is pumped or hand-carried to the Unit. Loading activities are limited to removal of ash residue from the burn pan or contaminated water from the catch tank, and loading the containers on a flatbed truck or other vehicle for transport to another Unit. Vehicles are typically loaded on the paved area southeast of Building 6715 (Figure7). The surface is level, the pavement is in good condition in the area, and there is sufficient room for the smaller vehicles used to transport RCRA-regulated wastes between Units.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The land surrounding the TTF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas is diverted around the TTF treatment area by an 8-ft-high earthen berm that surrounds the Unit on the east, south, and west. The diverted storm water drains to the west.

Sheet-flow runoff from the berms surrounding the TTF is directed toward the opening on the north side and away from the burn pan. The steel-lined concrete pad is surrounded by a 4-inch-high concrete curb and is elevated approximately 12 to 24 inches above the surrounding soil, further preventing runon.

The curbs also prevent runoff from the TTF WMA. Storm water that collects in the pad is drains to the catch tank. The containment capacity of the catch tank exceeds the volume expected from runoff from the treatment area during a storm event, as described in Section 1.2.1.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the TTF will affect water supplies, as described in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a).

Four pieces of equipment at the TTF would be affected by a power failure: the burners, the motor-driven burn cage door, the motor-driven burn pan lid, and the waste transfer pump. In the event of a power failure, personnel would take the following actions.

1. If the power failure occurs before waste were placed inside the burn pan, treatment operations will be delayed until power is restored.

2. If the power failure occurs after wastes are present in the burn pan but before the burners are ignited, personnel will manually lower the burn pan lid and wait until power is restored before proceeding with treatment. If the treatment cannot be conducted during the same day, Unit personnel will secure the area and notify Sandia/DOE security personnel of the presence and potential hazards of the waste.

3. If the power failure occurs during treatment, personnel will not enter the TTF. Personnel will complete treatment as soon as power is restored. If the power is not restored in time to complete treatment during the day, personnel will secure the area, manually lower the burn pan lid if it is deemed safe to do so, and allow the waste to remain in the burn pan. Unit personnel will notify Sandia/DOE security personnel of the presence of potential hazards of the waste. Unit personnel will complete the treatment as soon as possible.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

TTF personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.601[c])

The TTF is subject to the regulations of the Albuquerque/Bernalillo County Air Quality Control Board (A/BCAQCB). Open burning of high explosives is allowed under A/BCAQCB Regulation Number 3 when transporting the material would be unnecessarily hazardous. The TTF is granted a permit for open burning of explosives by the City of Albuquerque on an annual basis. Treatment will be restricted to the open burning conditions imposed by the most current City of Albuquerque open burn permit.

The TTF will burn limited quantities of explosive wastes and explosive-contaminated wastes. The waste may be burned several times to complete the destruction of any explosives. The burns may, therefore, occur over two or three days. Each burn will last a minimum of 30 minutes. The sequence of burns is typically:

- Burning the contents of the burn pan until 30 minutes after audible and/or visual evidence of explosives has ceased;

- Lowering the burn pan cover; and

- Inspecting the contents of the burn pan after several hours to ensure no unburned waste remains and all pan contents are ashed; repeat burn if necessary.

The principal by-products of decomposition of waste are ash (carbon), gases, and silver (only during treatment of SASN). Gases consist primarily of nitrogen, water vapor, carbon dioxide, carbon monoxide, sulfur dioxide, diatomic oxygen, and traces of nitrous oxides.

Equipment

The burn pan is equipped with a cover that is lowered over the pan when the TTF is not operating. This engineering control limits wind dispersal of any ash or particulates remaining in the pan during cool-down between burns and during cool-down after the final burn, as does the expanded metal screen enclosing the unit.

Evaluation of Potential Exposure

Carbon monoxide and nitrous oxide by-products from the TTF appear to have little effect on Albuquerque's air quality. The only contaminant that may migrate from the TTF with the potential to cause adverse effects on human health and the environment is silver in the particulates, resulting from the treatment of SASN.

Because the silver discharge from the TTF to the air cannot be measured, a screening-level evaluation of the potential exposure due to pollutant discharge from the TTF was performed.

The Industrial Source Complex Short-Term Dispersion Model (EPA, 1986) was used to model airborne releases from the TTF. Silver is a key pollutant, although the results apply to any pollutant released at the assumed rate of one gram/second. The following assumptions were used:

- The source is 0.5 square meter in the area at a reference elevation of 0 meter (on the ground);
- Topography was not taken into account because of the open nature of the site;
- National Weather Service data for Albuquerque, New Mexico, were utilized;
- The wind direction is toward the receptor of interest;
- Generic meteorological data consisting of 48 combinations of wind speed and stability classes were used to represent typical meteorological conditions during a burn event; a one-hour duration was arbitrarily assigned to each of the 48 combinations; and
- Thermal buoyancy of the plume from the TTF operation is ignored.

The last three assumptions assure a conservative result when concentrations are calculated at the various receptors. The receptor distances were selected to reflect actual site conditions. Key receptors in the area of the TTF are:

- The McCormick Ranch (unoccupied); nearest structure outside the SNL/NM, Albuquerque, property (14,000 ft, 227°, southwest of site)
- Nearest base housing (18,500 ft, 344°, north-northwest of site)
- Nearest housing to the west (i.e., the most frequent downwind direction) (36,500 ft, 270°, west of site)

- Nearest structure on the west (may or may not be residential) (30,000 ft, 270°, west of site)

- Nearest sensitive population; Veterans Administration Hospital (23,000 ft, 329°, northwest of site).

Table 1 lists the one-hour average concentrations for silver calculated using the assumptions stated above.

Table 1
Calculated Silver Concentrations at Selected Distances from the Thermal Treatment Facility

Distance (feet)	One-Hour Average Silver Concentration[a] ($\mu g/m^3$)
14,000	44.3
18,500	30.4
23,000	22.8
30,000	15.3
36,500	12.3

[a] Calculated using the Industrial Source Code Short-Term Dispersion Model (EPA, 1986), assuming a release rate of 1 gram per second.
$\mu g/m^3$ = micrograms per cubic meter.

The Occupational Exposure Limit (or Threshold Limit Value Time Weighted Average) for silver is 100 micrograms per cubic meter ($\mu g/m^3$). The calculated concentrations are well below this value even at the nearest receptor utilizing the very high emission rate of one gram/second and other conservative assumptions. In reality, the total quantity of silver in 4 liters of slurry would not sustain an emission rate of 1 gram/second over a one-hour span; if all the silver became airborne, the calculated concentration at 14,000 ft would be less than 10 $\mu g/m^3$. These hypothetical airborne silver concentrations from the TTF are unlikely to result in heavy metals concentrations in suspended particulates exceeding state limits for the 30-day average (10 grams per cubic meter).

Wind may blow during cool down. The earthen berms surrounding the TTF are designed primarily to reduce the effects of wind on the burning operation and to limit ash dispersal. The slab and cage enclosure are designed to collect most material that may escape the burn pan due to wind.

1.3 Container Storage Practices

Sandia/DOE do not conduct container storage of RCRA-regulated wastes requiring a permit at the TTF.

1.4 Treatment Operations

The TTF is permitted for the treatment of RCRA-regulated wastes in accordance with the conditions of the "Sandia National Laboratories/New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-2" (NMED, 1994). Treatment practices applicable to the TTF are presented in Section 8 of this module.

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.100–.900/ [6-14-00]. 40 CFR 260–266, 268, and 270.The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]);
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the TTF.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The TTF is completely surrounded by an approximately 8-ft high, single chain-link fence topped with three strands of barbed wire. Three gates provide access to the TTF and remain locked except when TTF personnel are performing operations, inspections, maintenance, or repairs. The active portion of the TTF is also the south portion of the Building 6715 complex. Access to the north TTF fence, and, therefore, all three TTF gates, is from inside the Building 6715 complex, which is also completely surrounded by an 8-foot tall chain link fence with three strands of barbed wire at the top and lock-equipped gates. The gates to the Building 6715 complex and the building doors are kept locked during non-operational hours. As noted in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the Building 6715 complex and TTF gates during non-operational hours.

TTF personnel have Sandia-issued badges. Individuals who do not have a Sandia-issued badge are escorted. TTF personnel and visitors typically enter the Building 6715 Complex through the east gate. During treatment events, all TTF gates are locked. These procedures limit access to the TTF RCRA-regulated WMAs, in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The Building 6715 complex is located inside TA-III (Figures 1 and 2). TA III is surrounded by a barbed-wire fence with designated access gates. TA-III access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-III.

2.1.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fences surrounding the TTF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to the TTF.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes from the TTF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P Street, and Pennsylvania Avenue.

Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-III turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Boulevard Kirtland Air Force Base entrance gate as shown on Figure A-4 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

Within TA-III, traffic access to and from the TTF is along the 2-lane asphalt-paved roads shown on Figure A-6 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles entering the Building 6715 complex travel on a 2-lane asphalt-paved drive from the road to the east gate (Figure 5). Within the Building 6715 Complex, waste is typically transported on concrete- or asphalt-paved surfaces.

2.2.2 Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Traffic volumes within

TA-III are light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically enter the compound per week. These include flatbed trucks and trailers carrying supplies, treated residues, and contaminated catch tank water from the TTF. Wastes are generated within the compound and not transported in vehicles to the TTF. Treated residue and contaminated catch tank water are transported to another Unit for storage.

2.2.3 Traffic Control Signals

Vehicles must stop at a gate prior to entering or leaving TA-III. Only authorized personnel are permitted into TA-III. Speed limit signs (i.e., "30 mph Unless Otherwise Posted") are located at several locations in TA-III.

There are no traffic control signals or signs at the Building 6715 Complex. The TTF is locked except when personnel are present. Treatment operations are carefully coordinated with appropriate individuals to limit vehicle presence and access to treatment event personnel. The paved access surface from the Building 6715 Complex east gate to the TTF is approximately 100 ft long. Therefore, signals or signs are not necessary to control traffic within the Building 6715 Complex.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11]; 20 NMAC 4.1.900/40 CFR 264.18)

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMA at the TTF is not located within 3,000 ft of any fault with Holocene displacement (see Section A.4.2 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMA at the TTF is not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).

- Surface waters, including intermittent streams, near the TTF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii][6-14-00]).

- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and on Figure 6 of this module. (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the TTF is occupied by test areas and Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the TTF) are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the TTF (e.g., fences, gates) are shown on Figures 6 and 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the TTF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).

- The location of the TTF WMA and associated structures, loading and unloading areas, roads, and sanitary sewers are shown on Figures 6 and 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figures 6 and 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).

- The location of the TTF WMA is shown on Figure 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the TTF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the New Mexico Environment Department at these scales and contour intervals due to the size of the TTF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The TTF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the TTF likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

In accordance with 20 NMAC 4.1.900/ 40 CFR 270.14[b][2]; 20 NMAC 4.1.500/ 40 CFR 264.13, "General Waste Analysis"; and 20 NMAC 4.1.800/ 40 CFR 268.7, "Waste Analysis and Record-Keeping," [6-14-00], waste analysis requirements applicable to all units, including the TTF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

20 NMAC 4.1.500/40 CFR 264.15(b)(4) [6-14-00], requires inspections of specific portions of a facility, rather than the general facility. RCRA-regulated waste at the TTF is managed in a miscellaneous unit requiring inspection as a "specific portion" of the SNL/NM facility. 20 NMAC 4.1.500/40 CFR 264.602 [6-14-00], requires that inspections required in 20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00], as well as any additional requirements needed to protect human health and the environment, be met. The requirements of 20 NMAC 4.1.500/ 40 CFR 264.15 and 264.33 [6-14-00], are discussed in this section, Section 6, and Appendices C and E of the SNL/NM General Part B (SNL/NM, 2003b).

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2003a). TTF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, with the inspection criteria and frequency.

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

The inspection results (including any remedial actions taken) are recorded on a form similar to those in Appendix C. The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms similar to the ones presented in Appendix C. The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained in Building 6715. Inspection records for previous calendar years are maintained in Building 6715 or the SNL/NM Records Center.

Table 2
Thermal Treatment Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash and safety shower	Operational, accessible, in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
First-aid kit	Present and stocked	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Personal protective equipment	Present, quantities per inventory, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Spill control equipment	Present, accessible, quantities per inventory, in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Fire alarm pull station(s)	Present, accessible, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Public address system	Operational	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Telephone(s)	Present and operational	Weekly when operations are conducted in Building 6715. Monthly otherwise.
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Weekly when operations are conducted in Building 6715. Monthly otherwise.
OPERATING AND STRUCTURAL EQUIPMENT		
Waste transfer pump	Present, operational, and in good condition	Prior to use. Monthly otherwise.
Waste transfer tubes	Free of apparent leaks and in good condition	Prior to use. Monthly otherwise.
Burn pan	Present, free of apparent leaks, and in good condition	Prior to treatment event. Monthly otherwise.
Burn pan lid	Operational and in good condition	Prior to treatment event. Monthly otherwise.
Burn cage	Present and in good condition	Prior to treatment event. Monthly otherwise.
Burn cage door	Operational and in good condition	Prior to treatment event. Monthly otherwise.
Steel-lined concrete pad	Free of apparent cracks and in good condition	Monthly.
Filter element	Present, free of apparent tears or holes, and in good condition	After measurable precipitation event. Monthly otherwise.
Rain catch tank	Free of apparent leaks and in good condition	After measurable precipitation event. Monthly otherwise.

Table 2 (Concluded)
Thermal Treatment Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Area condition	Free of combustible materials and weeds and in good condition	Prior to treatment event. Monthly otherwise.
Red warning beacons	Present and operational	Prior to treatment event. Monthly otherwise.
Water spigot and hose	Present, operational, and in good condition	Prior to treatment event. Monthly otherwise.
Burner control warning bell	Operational	Prior to treatment event. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present legible, and in good condition	Monthly
Gates	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly

5.0 PERSONNEL TRAINING

Training requirements for Unit personnel are specified in 20 NMAC 4.1.900/ 40 CFR 270.14[b][12], and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training." The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the TTF.

TTF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003a).

Only the following job descriptions identified in Appendix D, Table D-2 are applicable at the TTF: Training Director, Project Leader, Emergency Coordinator, Field Technician, and Inspector.

Additional training designed to specifically teach TTF personnel (i.e., TTF Project Leader, TTF Field Technician, TTF Inspector) to perform their duties safely and in conformance with regulatory requirements is presented in this section. TTF training course content includes, at a minimum, the topics shown in Table 3.

Training records for TTF personnel are maintained in Building 6715.

Table 3
Thermal Treatment Facility
Resource Conservation and Recovery Act-Regulated Waste Management Unit
Training Content

Explosives Personnel Safety Course

Duration: Variable (Typically 16 hours)
Frequency: Initial
Method: Classroom instruction

Minimum content may include:

- Basic explosives definitions
- Overview of explosives and explosive device categories and characteristics
- Initiation stimuli and safety guidelines for avoiding accidental ignition
- Standards for explosives operations, including compatibility, storage, and standard operating procedures

Operating Procedures of the Thermal Treatment Facility

Duration: Variable (Typically 4 hours)
Frequency: Annual
Method: Classroom instruction, on-the-job training, and/or document review

Minimum content may include:

- Overview of written operating procedures
- Overview of the waste analysis plan
- Safety practices
- Security, site entry, and site control
- Facility operations
- Facility equipment and structures
- Procedures to prevent the reaction of reactive waste
- Permit requirements for the Thermal Treatment Facility

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental TTF-specific information is included in this section, in Figure 9, and in Tables 4 and 5 of this module.

The TTF is located in the north-central portion of Technical Area III at SNL/NM, just south of Building 6715. The TTF consists of a square, steel burn pan, 30 inches (in.) on each side and 6 in. deep. A remotely-operated metal lid can be raised to open, or lowered to cover, the burn pan. The burn pan is enclosed by an expanded metal screen (i.e., open to the air) cage, approximately 4 feet (ft) on each side and 8 ft tall. Access to the burn pan is provided by a door on the north side of the burn cage, which is operated remotely from controls inside Building 6715. The burn cage sits in the center of a steel-lined concrete pad. The concrete pad is surrounded on the west, south, and east sides by a earthen berm, approximately 8 ft tall. An 8-ft-high chain-link security fence surrounds the entire TTF.

The TTF is used to thermally treat (i.e., burn) small quantities of waste explosive substances, waste liquids (e.g., water, volatile organics) contaminated with explosive substances, and waste items (e.g. rags, wipes, swabs) contaminated with explosive substances. Wastes bearing U.S. EPA Hazardous Waste Numbers D001, D003, D011, and F003may be treated at the TTF.

RCRA-regulated waste is not stored at the TTF and is only present during a planned treatment event. However, if for some reason a treatment event is aborted and it is deemed unsafe to remove the waste, the burn pan lid will be lowered remotely to cover the burn pan and the waste will remain there until it is possible to perform the treatment or safely remove the waste.

Figure 9 presents the evacuation route, emergency response, and access information for the TTF. Table 4 lists the emergency equipment typically available at the TTF. Table 5 lists the emergency coordinators for the TTF.

Current copies of the Site-Wide Contingency Plan and this supplemental information are maintained in Building 6715 and at the SNL/NM Emergency Operations Center.

Table 4
Thermal Treatment Facility, Emergency Response Equipment

Building 6715 Complex

Category	Description/Capabilities	Location
Safety and Decontamination Equipment	Permanent eyewash/hand-held deluge showers	Building 6715
	First aid kit	Building 6715I
	Absorbent	Building 6715I
	Miscellaneous PPE (protective suits, goggles, gloves)	Building 6715I
Internal Communication and Alarm System	Fire alarm pull)station (pulling handle sends signal to KAFB fire department)	One on east wall inside Building 6715 near personnel door
	Public address system	Microphone in Building 6715
External Communication System	Telephones	Building 6715
	Fire alarm pull station (pulling handle sends signal to KAFB fire department)	Near personnel doors in Building 6715.
Fire Extinguishers	Portable (A-B-C)	One at or near each personnel door in Buildings 6715 and 6715I
Fire Suppression	Water supplied by fire hydrant	One hydrant, location shown in Figure 10

KAFB = Kirtland Air Force Base.

Table 5
Thermal Treatment Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	David Castillo Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-4192 (office) (505) 540-9375 (pager)	(505) 899-1956
First Alternate	Maryann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-2688 (pager)	(505) 299-0793
Second Alternate	Bill Suderman Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-4218 (office) (505) 540-4019 (pager)	(505) 265-1786

One or more of these personnel are routinely available during operating hours (7:00 am to 5:00 pm on days when activities are conducted in Building 6715).

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/ 40 CFR 270.14[b][13], and 20 NMAC 4.1.500/40 CFR 264, Subparts G and X, [6-14-00]. General closure information applicable to all RCRA-regulated Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b). The general closure information includes closure performance standards; amendment of the Closure Plan; closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste Inventory

The maximum total inventory of RCRA-regulated waste in treatment at any time at the TTF was no more than 20.8 gallons of explosive-contaminated material.

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), partial closure activities specified in this plan assume the following conditions were met during the operational life of the TTF:

- RCRA-regulated waste handling activities at the TTF were confined to the burn pan and immediate surrounding area. If contamination occurred, it would have been confined to those areas; and

- The burn pan was maintained to retain its integrity by following established maintenance and inspection procedures.

8.0 TREATMENT PLAN

In accordance with 20 NMAC 4.1.900/40 CFR 270.23 [6-14-00], treatment operations for RCRA-regulated wastes treated at the TTF are described in this section.

8.1 Treatment Operations

A description of the TTF burn pan design, construction, and materials is provided in Section 1.1 of this permit renewal request to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.23(a) [6-14-00]; and 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00].

All waste to be treated is manually placed, poured, or pumped into the burn pan by qualified explosive waste handlers. . All other treatment operations are performed remotely from inside Building 6715 by qualified TTF personnel. The door to the burn cage is remotely closed and the treatment process started from the control console in Building 6715. Three remotely operated propane gas jets, one positioned to heat the inside of the burn pan and two positioned to heat the bottom of the burn pan, are ignited. The gas jet located over the burn pan ignites materials in the pan. Upon heating, the waste burns and decomposes (i.e., oxidizes to nonhazardous gases and carbon). The burn may be repeated several times to assure complete destruction of the explosive waste.

The treated contents of the burn pan are managed in accordance with applicable requirements (determined by the composition and types of RCRA-regulated wastes that were treated).

A waste transfer pump will be used to transfer waste liquid contaminated with SASN from Building 6715 into the TTF burn pan and is the only non-manual waste-handling equipment used at the TTF.

To minimize air emissions or exposure of people to toxic or hazardous air emissions, the TTF will be operated only:

- When the wind speed is less than or equal to 20 miles per hour (mph).
- When threatening weather is more than 10 miles (mi) from the TTF. Threatening weather is defined as winds in excess of 35 mph; tornadoes; electrical storms with or without precipitation of any type; snow storms with a visibility of less than 3/8 of a mi; rain with accumulations greater than 0.3 inch per hour; or any hail, sleet, or ice storms.

The TTF is limited to the treatment of the following annual quantities of reactive wastes:

- 7,300 pounds maximum net weight of explosive-contaminated substances (D001, D003, D011, F003, F005) combined as long as the individual "Boundary Condition" quantities specified in the Waste Analysis Plan (Section 3 of this module) are not exceeded.

If more restrictive conditions are imposed by the Open Burn Permit issued by the A/BCAQCB, those conditions will be followed.

8.2 Treatment Effectiveness (20 NMAC 4.1.900/40 CFR 270.23[d])

The thermal treatment of RCRA-regulated waste at the TTF is completely effective in deactivating explosives. Waste explosives have autoignition temperatures of less than 662 degrees Fahrenheit (°F). Propane, used to ignite the waste, has a flame temperature of 3500°F. The TTF burners are operated for a minimum of 30 minutes after there is no visual (sparks) or audible evidence of untreated explosive waste remaining in the burn pan.

Given the extremely high vapor pressure and low flash points of volatile organics (e.g., , acetone) that may be treated at the TTF (the flash point of acetone is 15°F), it can be concluded that the materials are completely burned and decompose to gaseous by-products and ash. Treated residues are managed in accordance with applicable RCRA requirements.

9.0 ENVIRONMENTAL PERFORMANCE STANDARDS FOR THE MISCELLANEOUS UNIT (20 NMAC 4.1.500/40 CFR 264, SUBPART X)

The TTF will be operated, maintained, and closed in a manner that will ensure protection of human health and the environment, in accordance with 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00]. The TTF is located in a sparsely populated area. The TTF has been designed to facilitate safe handling and treatment of RCRA-regulated wastes in order to prevent adverse human health and the environmental impacts. The small quantities treated, open burning restrictions, and operating requirements minimize the potential for a release. Hazard prevention programs are described in Section 1.2 of this module. Contingency and emergency response actions to minimize impacts of unanticipated events, such as spills, are referenced in Section 6.0 of this module. The closure plan for the TTF is provided in Section 7.0 of this module.

In conformance with 20 NMAC 4.1.500/40 CFR 264.601 [6-14-00], a miscellaneous RCRA-regulated waste storage, treatment, or disposal facility must be shown to prevent any releases to groundwater, surface water, soil, or air that may have adverse effects on human health and the environment. The TTF has been designed and is operated in such a manner as to meet these requirements.

9.1 Protection of Groundwater/Vadose Zone (20 NMAC 4.1.500/40 CFR 264.601[a])

Four situations present the potential for the release of RCRA-regulated waste to the TTF's hydrogeologic environment. They are:

- Transfer of liquid waste to the TTF burn pan
- Transfer of solid waste to the TTF burn pan
- Runoff of potentially contaminated precipitation
- Discharge of potentially contaminated precipitation from the catch tank.

If a spill of liquid waste occurs, the maximum amount of material that could be released is 20.8 gallons. Spillage would be removed immediately and placed in the TTF.

Solid waste, such as explosive-contaminated paper, filters, and solid explosives, are contained and carried to the TTF burn pan by hand.

Spills on the ground or on the TTF will be wetted with water using spray hoses. When saturated with water, explosive waste is stable. The spilled, wet waste can then be wiped or scooped up and deposited in the burn pan for destruction. Similarly, contaminated soils will be wetted, excavated, and placed in the TTF burn pan for treatment.

Once waste is transferred to the burn pan, treatment takes place immediately. In the unlikely event of spillage from the burn pan, waste material will be contained on the steel-lined concrete pad. Any precipitation or spillage in the steel-lined concrete pad is drained through a filter and settling basin into the 157-gallon catch tank. In addition, no waste material is allowed to remain for extended periods of time in the burn pan, and waste may be burned repeatedly to ensure

the complete destruction of explosive materials. 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.

Water collected in the catch tank will be containerized if it is suspected to be the result of a release or contaminated with RCRA-regulated constituents, according to the Waste Analysis Plan, Section 3 of this module. If the catch tank is nearing maximum capacity (157 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.

Exposure of humans or environmental receptors to RCRA-regulated waste or constituents via groundwater is unlikely. This conclusion is supported by the following considerations:

- The maximum volume of waste to be treated during any burn event is limited.
- The burn pan is situated on a steel-lined concrete pad with a four-inch curb that drains into a catch tank that serves as secondary containment.
- Depth to groundwater in the vicinity of the TTF is approximately 500 feet below the ground surface.
- The nearest location of groundwater withdrawal is greater than 2 mi away from the TTF, and the nearest major body of surface water (the Rio Grande) is situated approximately 6 mi to the west of the TTF.
- The mean annual moisture deficit or net recharge (evapotranspiration minus precipitation) is approximately 14 in., limiting the potential for contaminants in solid material to leach to the water table.

9.2 Protection of Surface Water, Wetlands, and Soil Surface (20 NMAC 4.1.500/40 CFR 264.601[b])

Exposure of humans or environmental receptors to RCRA-regulated waste or constituents via surface water, wetlands, or the soil surface is unlikely. This conclusion is supported by the following considerations:

- The maximum volume of waste to be treated during any burn event is limited.
- The TTF is approximately 6 mi from the Rio Grande.
- The burn pan is situated on a steel-lined concrete pad with a four-inch curb that drains into a catch tank that serves as secondary containment.

This supports the conclusion that the potential for adverse effects to human health or the environment via surface water, wetlands, or soil surface pathways is implausible.

9.3 Monitoring (20 NMAC 4.1.500/40 CFR 264.601 and 264.602)

This section is provided to satisfy the requirements of 20 NMAC 4.1.500/40 CFR 264.601 and 264.602 [6-14-00]. There are no monitoring stations at the TTF. Data from the stations closest to the TTF will be used to demonstrate compliance with environmental monitoring requirements. The SNL/NM Environmental Monitoring Program collects data from routine environmental surveillance activities on an ongoing basis. The results of the activities are provided in annual environmental monitoring reports. Contamination attributable to the TTF has not been detected during environmental monitoring activities at SNL/NM.

10.0 REFERENCES

EPA, see U.S. Environmental Protection Agency.

New Mexico Environment Department (NMED), 1994, "Sandia National Laboratories/ New Mexico Hazardous Waste Facility Operating Permit Number NM5890110518-2," effective November 4, 1994, New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, Santa Fe, New Mexico.

NMED, see New Mexico Environment Department.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A–F in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

U.S. Environmental Protection Agency (EPA), 1986, Industrial Source Complex Short-Term Dispersion Model, Washington, D.C.

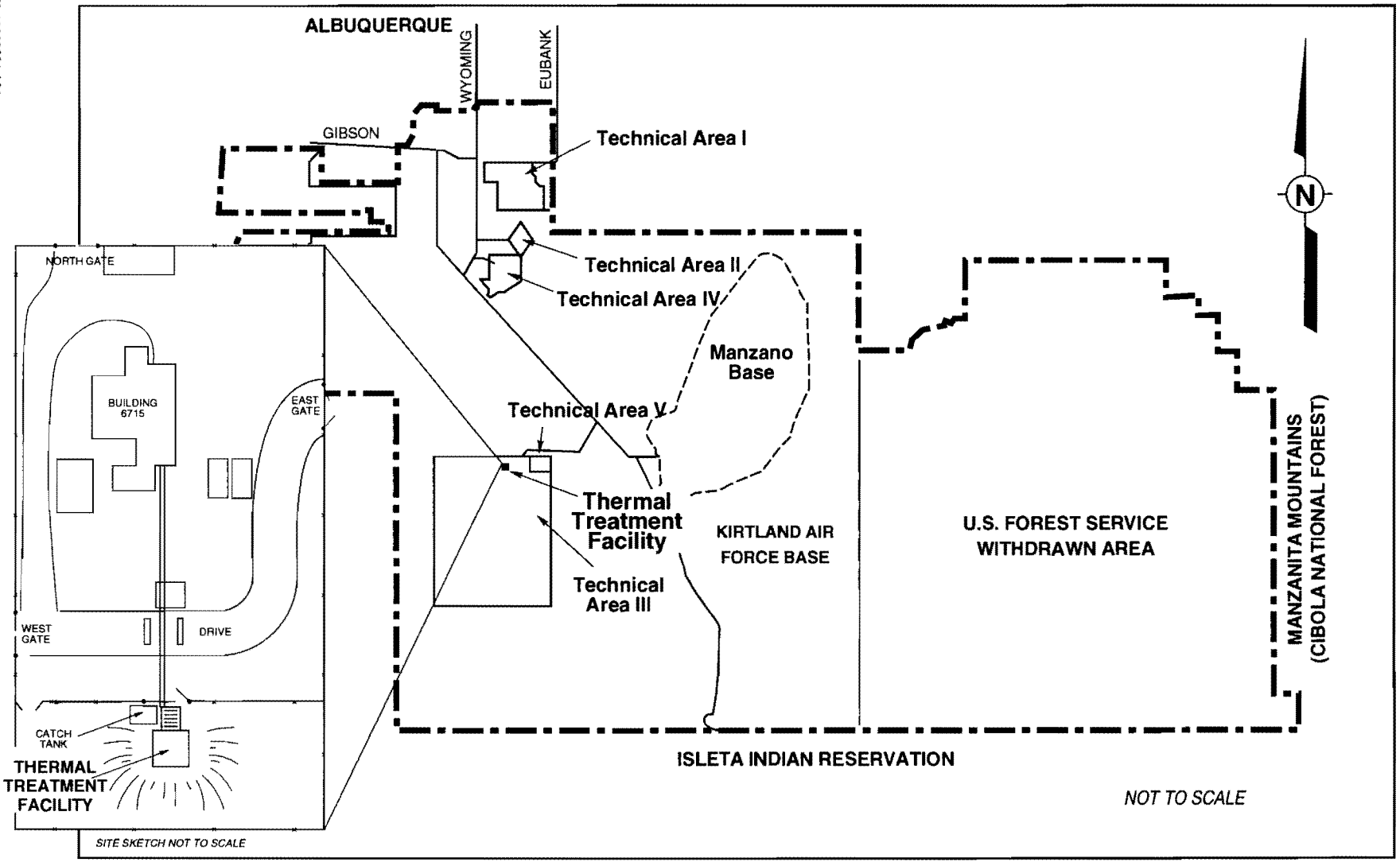
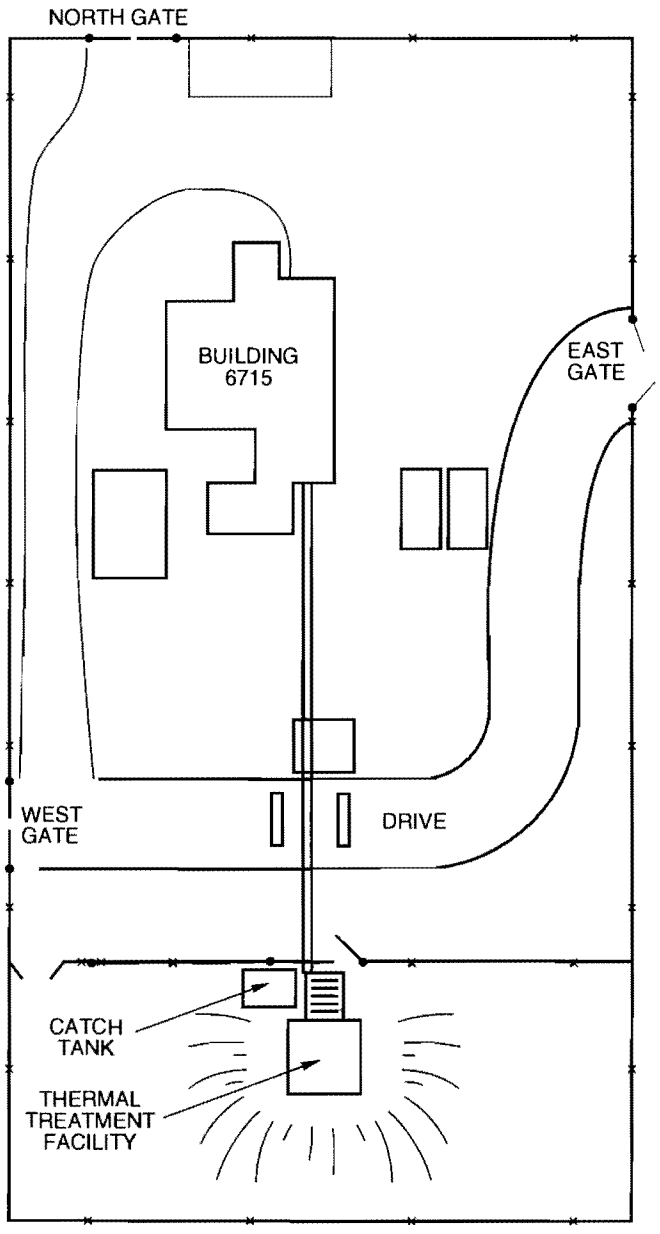


Figure 1
Location of the Thermal Treatment Facility at Sandia National Laboratories/New Mexico



SITE SKETCH NOT TO SCALE

LEGEND

- Resource Conservation And Recovery Act-Regulated Waste Management Area
- Access Road
- Fence
- Gate
- Steps
- Earthen Berm

NOTE:
SECURITY HAS KEYS TO THE NORTH AND WEST GATES. DURING OPERATIONS, A SECOND LOCK IS ATTACHED BY UNIT PERSONNEL. THESE TWO GATES ARE ALWAYS LOCKED.

Figure 2
Thermal Treatment Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Area

774470.10000001 A82

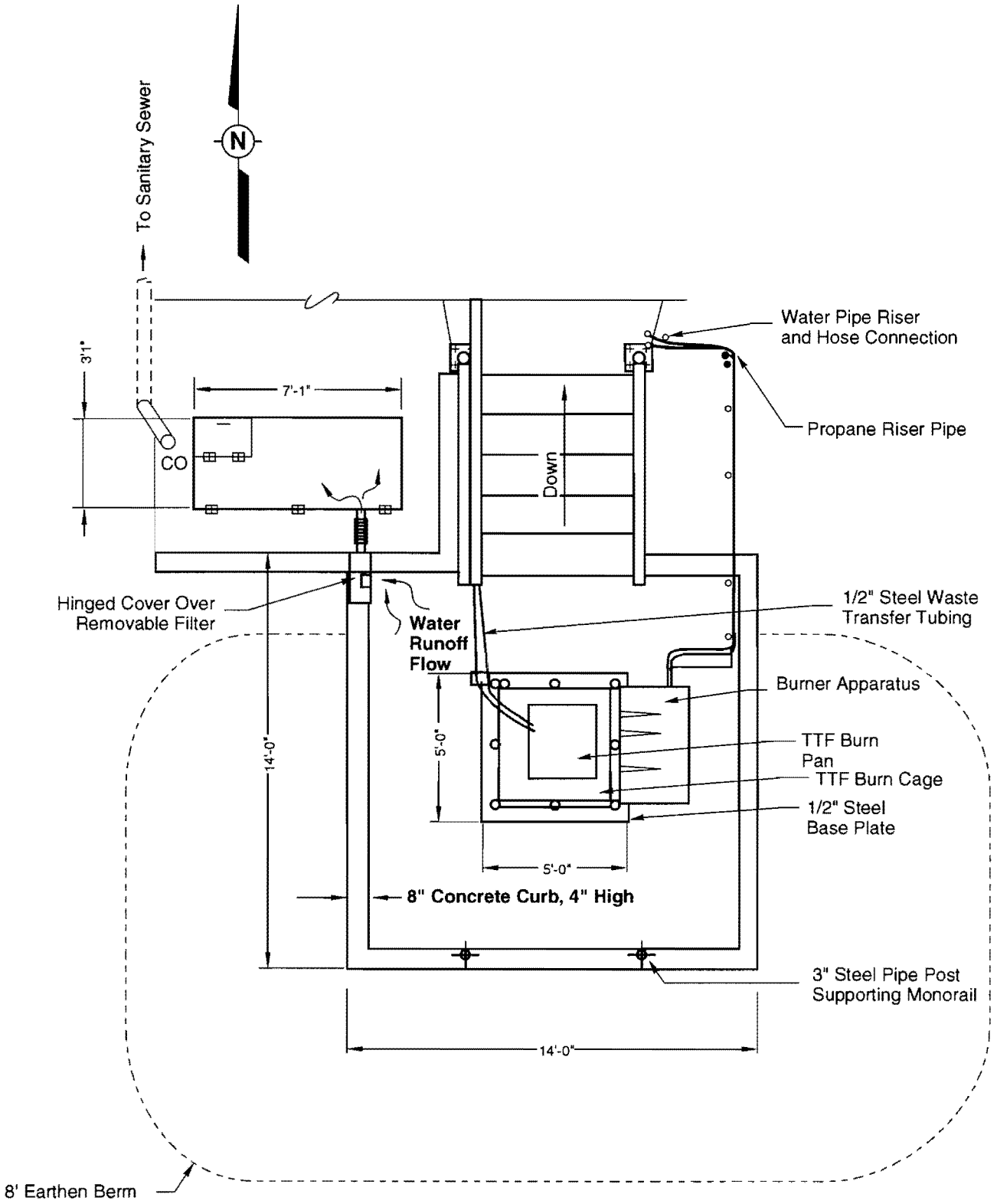


Figure 3
Thermal Treatment Facility (TTF)—Plan View

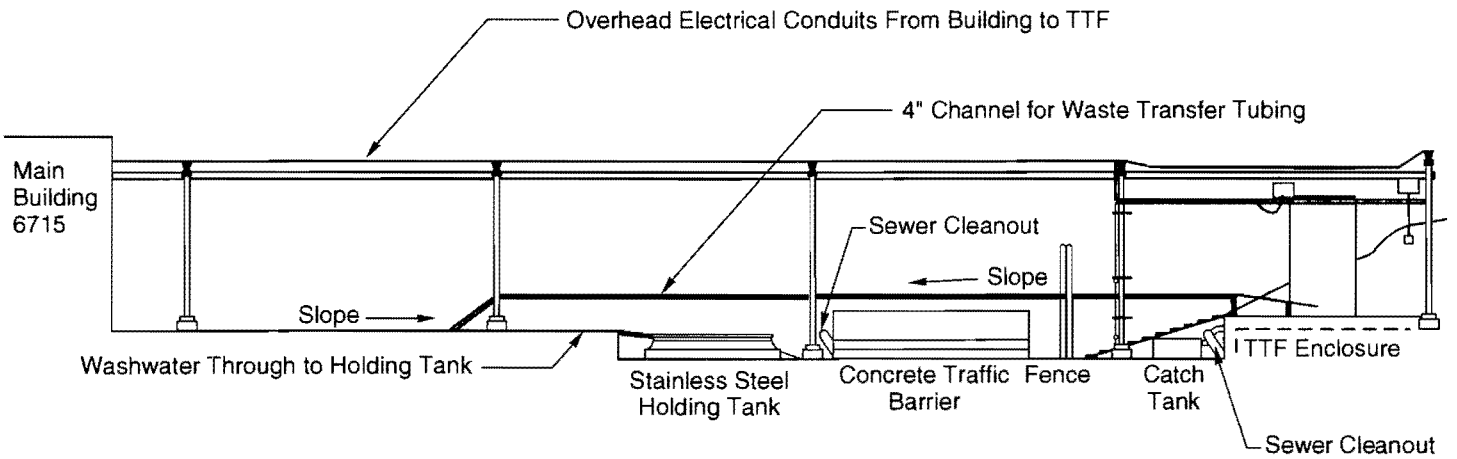


Figure 4
Thermal Treatment Facility (TTF)—Section View

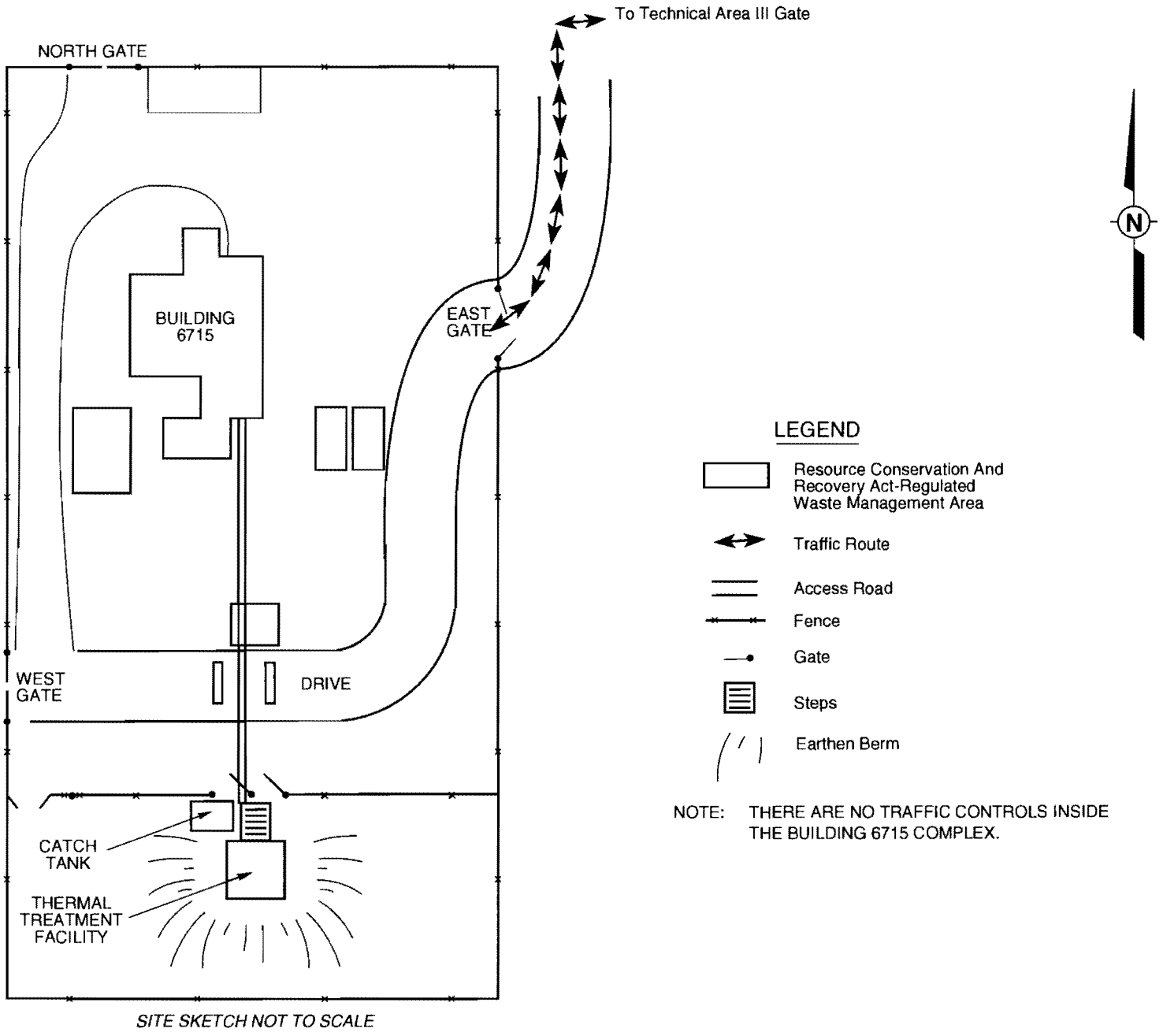
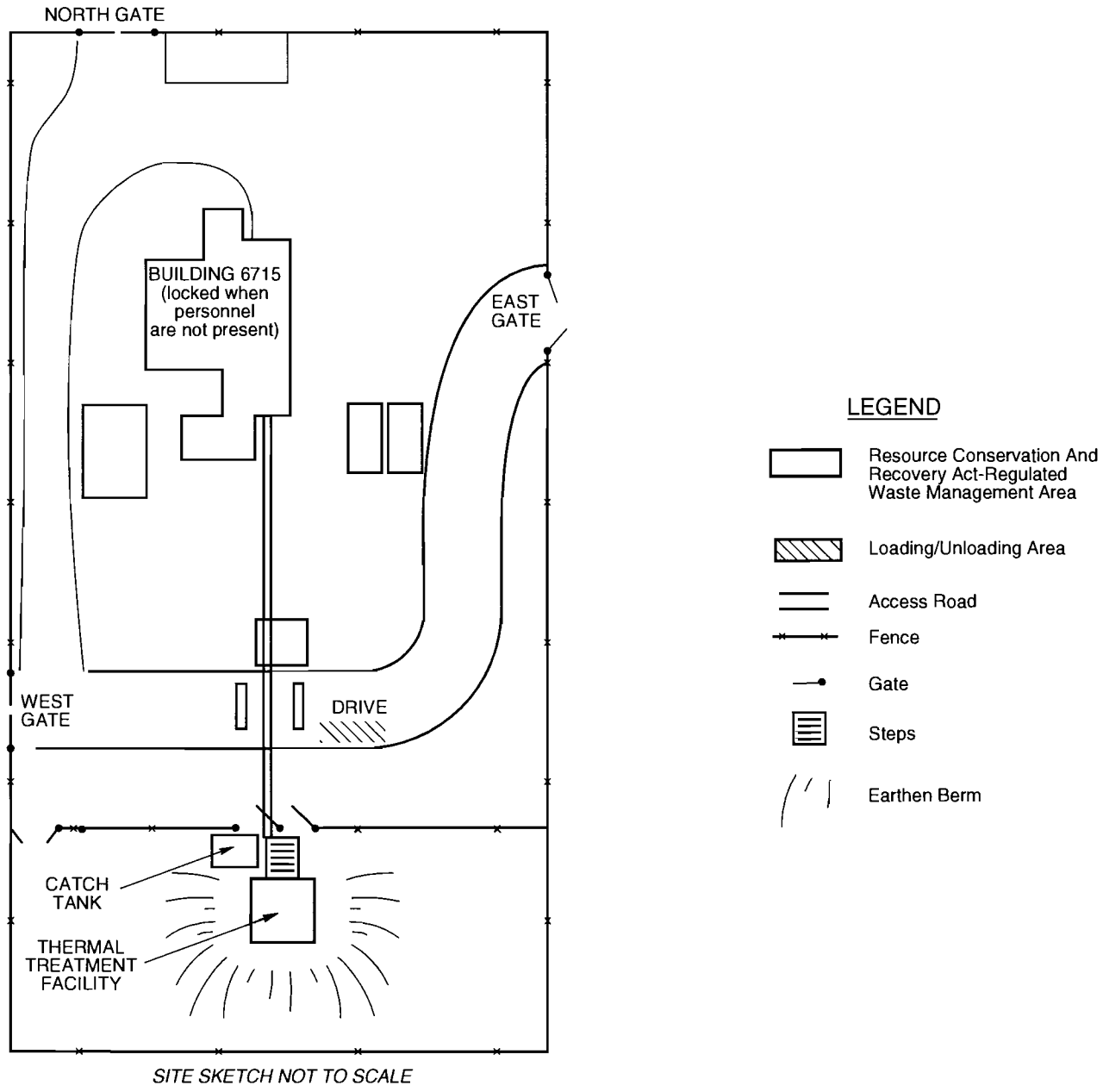


Figure 5
Thermal Treatment Facility, Traffic Routes and Controls

774470.14000000 A87

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT



SITE SKETCH NOT TO SCALE

Figure 7
Thermal Treatment Facility, Access Control Features

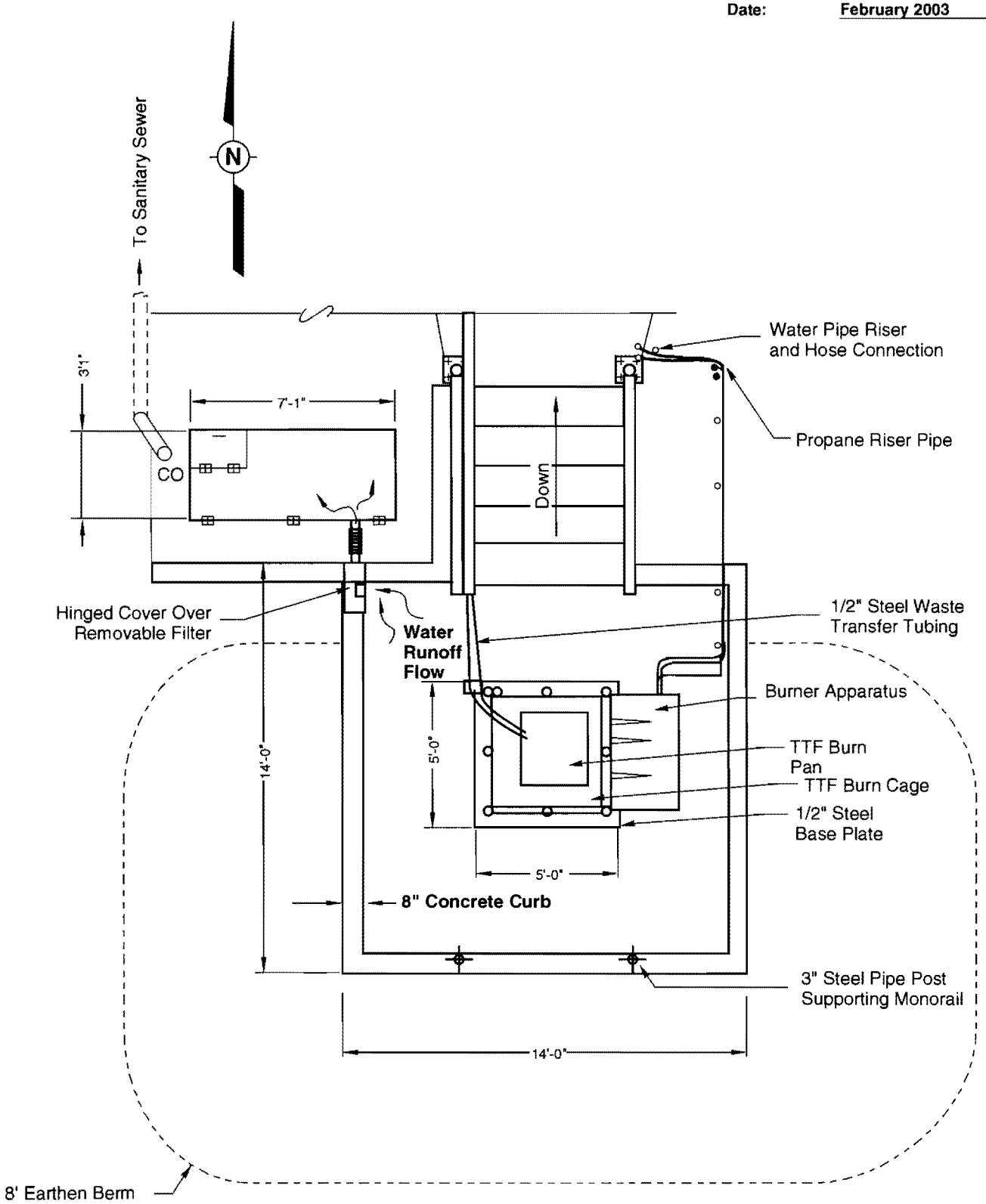


Figure 8
Thermal Treatment Facility (TTF), Drainage Control Features

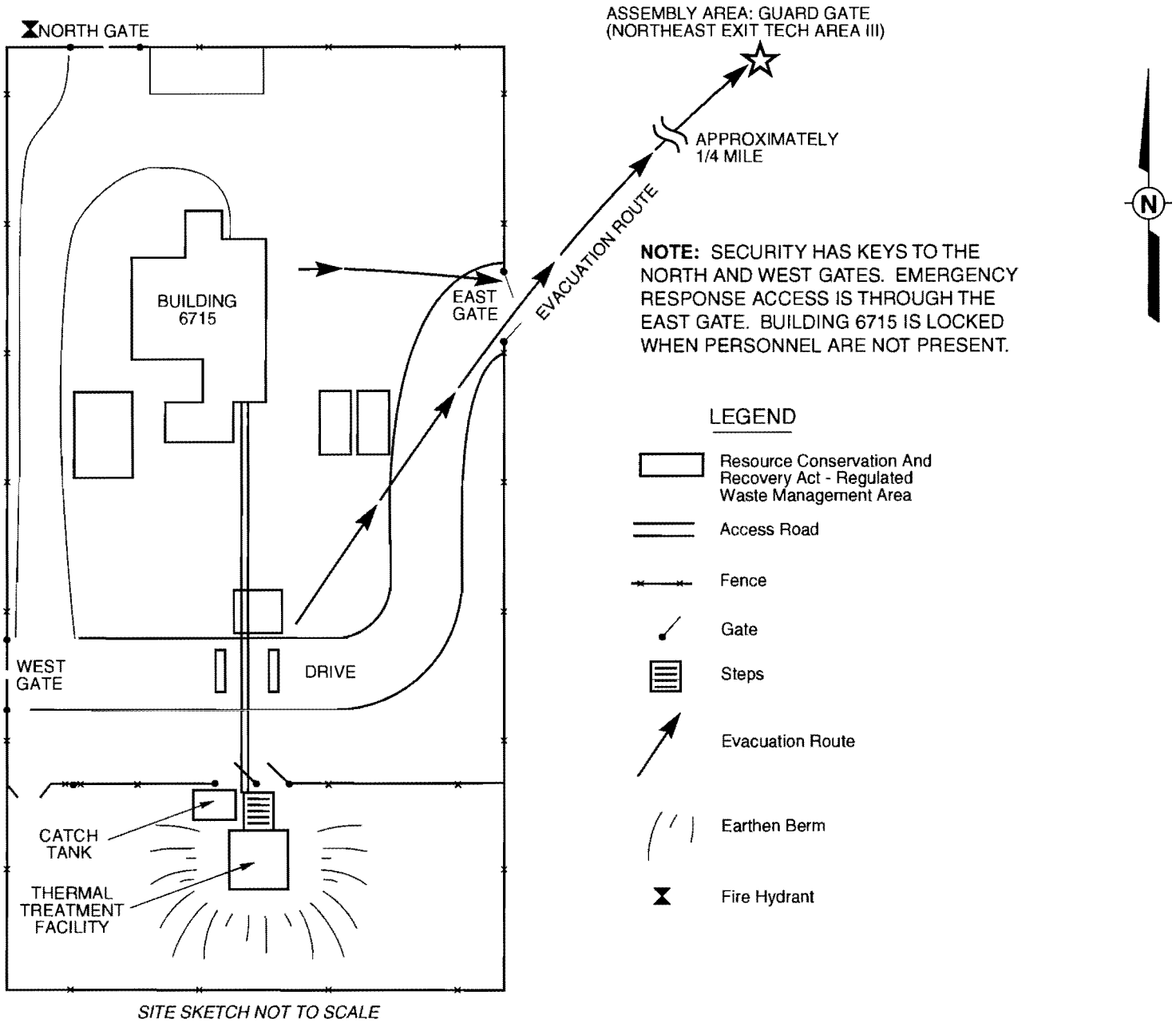


Figure 9
Thermal Treatment Facility, Evacuation Route and Emergency Response and Access Information

Sandia National Laboratories/New Mexico Radioactive and Mixed Waste Management Facility Part B Permit Application

Module III

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... RMWMF-iii
LIST OF FIGURES ..... RMWMF-iv
ACRONYMS AND ABBREVIATIONS ..... RMWMF-v
1.0 GENERAL UNIT OPERATIONS RMWMF-1
1.1 Designated Waste Management Areas RMWMF-1
1.1.1 Building 6920 ..... RMWMF-2
1.1.2 Building 6921 ..... RMWMF-3
1.1.3 Buildings 6925 and 6926 ..... RMWMF-3
1.1.4 Modular Storage Buildings (TP150 and TP153) RMWMF-3
1.1.5 Outdoor Waste Storage Area RMWMF-4
1.2 Unit Operations RMWMF-4
1.2.1 Operation of Containment Systems RMWMF-4
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes RMWMF-4
1.2.3 Preparedness and Prevention RMWMF-5
1.2.3.1 Required Equipment RMWMF-5
1.2.3.2 Testing and Maintenance of Equipment RMWMF-6
1.2.3.3 Access to Communications or Alarm Systems RMWMF-6
1.2.4 Hazards Prevention RMWMF-6
1.2.4.1 Preventing Hazards in Unloading RMWMF-7
1.2.4.2 Preventing Runoff or Flooding RMWMF-7
1.2.4.3 Preventing Contamination of Water Supplies RMWMF-7
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages RMWMF-8
1.2.4.5 Preventing Undue Exposure RMWMF-8
1.2.4.6 Preventing Releases to the Atmosphere RMWMF-8
1.3 Container Storage RMWMF-9
1.3.1 Container Types and Labeling RMWMF-9
1.3.2 Container Handling RMWMF-9
1.3.2.1 Condition of Containers RMWMF-9
1.3.2.2 Aisle Space and Storage Configuration RMWMF-9
1.3.2.3 Compatibility of Waste with Containers RMWMF-10
1.4 Treatment Operations RMWMF-10
2.0 UNIT DESCRIPTION AND INFORMATION RMWMF-11
2.1 Security Procedures And Equipment RMWMF-11
2.1.1 Barriers and Means to Control Entry RMWMF-11
2.1.2 Warning Signs RMWMF-12
2.2 Traffic Pattern, Volume, and Controls RMWMF-12
2.2.1 Traffic Patterns RMWMF-12
2.2.2 Traffic Volumes RMWMF-12
2.2.3 Traffic Control Signals RMWMF-13
2.3 Unit Location Information RMWMF-13
2.3.1 Seismic Standard RMWMF-13
2.3.2 Floodplain Standard RMWMF-13
2.4 Topographic Maps RMWMF-13
2.5 Groundwater Monitoring RMWMF-15

TABLE OF CONTENTS (Concluded)

3.0 WASTE ANALYSIS PLAN RMWMF-16
4.0 INSPECTION PLAN RMWMF-17
5.0 PERSONNEL TRAINING RMWMF-20
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE RMWMF-21
7.0 CLOSURE PLAN RMWMF-29
7.1 Estimate of Maximum Waste in Storage RMWMF-29
7.2 Closure Conditions RMWMF-29
7.3 Closure Schedule RMWMF-29
8.0 TREATMENT PLAN RMWMF-30
9.0 REFERENCES RMWMF-31

LIST OF TABLES

Table No.	Title
1	Fire Suppression Systems at the Radioactive and Mixed Waste Management Facility
2	Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency
3	Radioactive and Mixed Waste Management Facility Emergency Equipment and Locations
4	Radioactive and Mixed Waste Management Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/ New Mexico
2	Location of the Radioactive and Mixed Waste Management Facility (RMWMF) in Technical Area III
3	Radioactive and Mixed Waste Management Facility, Unit Layout
4	Radioactive and Mixed Waste Management Facility, Building 6920, Resource Conservation and Recovery Act-Regulated Waste Management Areas
5	Radioactive and Mixed Waste Management Facility, Building 6921, Resource Conservation and Recovery Act-Regulated Waste Management Areas
6	Radioactive and Mixed Waste Management Facility, Buildings 6925 and 6926, Resource Conservation and Recovery Act-Regulated Waste Management Area
7	Radioactive and Mixed Waste Management Facility, Traffic Route and Controls
8	Radioactive and Mixed Waste Management Facility, Topographic Map
9	Radioactive and Mixed Waste Management Facility, Access Control Features
10	Radioactive and Mixed Waste Management Facility, Drainage Control Features
11	Radioactive and Mixed Waste Management Facility, Evacuation Routes
12	Radioactive and Mixed Waste Management Facility, Emergency Response and Access Information
13	Radioactive and Mixed Waste Management Facility, Resource Conservation and Recovery Act-Regulated Waste Management Areas

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2XX, Section 2*XX.XX*
CMU	concrete masonry unit
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	foot/feet
ft^2	square foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
lb/ft^2	pound(s) per square foot/feet
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
RMWMF	Radioactive and Mixed Waste Management Facility
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO RADIOACTIVE AND MIXED WASTE MANAGEMENT FACILITY PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Radioactive and Mixed Waste Management Facility (RMWMF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage and treatment operations at the RMWMF. 20 NMAC 4.1.500 and .900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR [6-14-00], and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted the "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this RMWMF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., Radioactive and Mixed Waste Management Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The RMWMF occupies 3.11 acres in the southeast corner of Technical Area (TA)-III. It is a fenced compound with several buildings and waste management areas (WMAs). Operations include storage of RCRA-regulated wastes in containers and treating the wastes as needed to render them more suitable for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the RMWMF. Sandia/DOE currently operate the RMWMF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

This section provides descriptions of the RMWMF waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention;
- Container storage of RCRA-regulated wastes; and
- Treatment of RCRA-regulated wastes in containers and through mechanical processing practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

The location of the RMWMF at SNL/NM is shown on Figure 1. The location of the RMWMF within TA -III is shown on Figure 2. The RMWMF has six designated WMAs (Figure 3): Buildings 6920, 6921, 6925, and 6926; two modular storage buildings; and the outdoor waste storage area (i.e., paved areas within the RMWMF fence to the north, east, and west of Building 6920).

In each RMWMF WMA (except where noted), containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives, solvents, and other liquids. The containers of liquids (typically 5- to 55-gallon capacity) are stored on the grating. Any liquids released from the containers drain through the grating into the tub. The pallets come in various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

RCRA-regulated wastes are typically stored inside one of the buildings or inside transportainers in the outdoor storage area. The containers are protected from precipitation by the buildings and transportainers, and by the slope of the asphalt pavement and concrete pads outside the buildings that direct storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(4).

The following sections provide descriptions of the storage structure, location, and capacity of each WMA.

1.1.1 Building 6920

The principal structure at the RMWMF is Building 6920. The floor plan for Building 6920 is presented on Figure 4. The WMAs in Building 6920 include waste staging and storage areas and waste treatment areas. Building 6920 is a single-story concrete and steel structure with a total RCRA-regulated waste management area of approximately 5,000 square feet (ft^2) with a maximum capacity of approximately 13,420 gallons. The floors are 6-inch (in.) reinforced, sealed concrete on compacted subgrade sloped to catch basins with no outlets. Walls are 8-in. load-bearing concrete masonry unit (CMU) with prefinished metal building panels in some areas. Nongrouted cells of the 8-in. CMU exterior walls are filled with vermiculite insulation. The shielded staging area at the east end of the building has 14-foot (ft) high reinforced concrete walls. The exterior walls are 2-ft thick, interior walls are 1-ft thick, and the shared wall is 1.5-ft thick. Inner partitions are 8-in. reinforced CMU.

The roof consists of 24-in. deep steel joists with a 1.5 in. metal deck with 3-in. rigid insulation and a single-ply roof membrane. The roof system is a single-ply fully adhered elastomeric system, installed over rigid insulation with factory-laminated fiberglass-coated skin on both sides, attached to the deck with metal fasteners. Ceilings are exposed and painted. The interior airlock has a painted concrete ceiling.

Building 6920 consists of two bays (north and south) isolated from each other by an interior airlock at the west end of the building. Waste treatment is performed in certain portions of Building 6920 (Figure 4). There are six exterior personnel doors and four cargo entrances to the building, as well as separate entrances to the exterior mechanical and electrical rooms. The seven personnel doors include: three at the eastern side of the building, one on the northern side, and three at the western side. There is a cargo entrance (i.e., roll-up door) at each end of each bay. Rollup doors enclose the airlocks on the south bay. Both bays in Building 6920 are equipped with secondary containment. The floor in each bay slopes from the doorways toward one or more shallow (6-in.-deep) blind sumps covered with grating. Containers of liquid RCRA-regulated wastes are typically stored over or near the sumps in the south bay. In the north bay and other areas of Building 6920, containers of liquid RCRA-regulated wastes are stored on portable spill pallets and pans covered with grating. Floors, (including the sumps), walls, and ceilings in the WMAs of Building 6920 are sealed with a chemical-resistant epoxy, which withstands degradation by chemical substances and resists wear from forklift traffic. The sumps and pallets meet the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(1-4).

1.1.2 Building 6921

The Waste Assay Facility (Building 6921) is located east of Building 6920 (Figure 3). The Building 6921 floor plan is presented on Figure 5. Building 6921 is a single-story structure constructed with interior walls of 8-in. CMU and metal studs. The roof is comprised of steel bar joists with metal decking, rigid insulation, and single-ply membrane roofing. The floors are 6-in.-thick concrete slab-on-grade. The floors in the assay area on the south side of the building are sealed with a chemical-resistant epoxy that extends up the walls for 6 in. The total RCRA-regulated waste management area is approximately 1,450 ft^2 with a maximum capacity of approximately 7,810 gallons. The assay area is used for treatment and storage of RCRA-regulated wastes.

1.1.3 Buildings 6925 and 6926

Buildings 6925 and 6926 are used for storage and some treatment of RCRA-regulated waste at the RMWMF. The floor plans for Buildings 6925 and 6926 are presented on Figure 6. Building 6925 has a total storage area of approximately 4,000 ft^2 with a maximum capacity of approximately 83,160 gallons. Building 6926 also has a total storage area of approximately 4,000 ft^2 with a maximum capacity of approximately 83,160 gallons. Each building is prefabricated steel erected on a concrete slab floor and foundation. The concrete floors are covered with chemical-resistant epoxy coating. Steel rollup doors are located on the southern wall of each building, on the eastern wall of Building 6925, and on the western wall of Building 6926. Personnel doors are located on the east, south, and west sides of each building.

1.1.4 Modular Storage Buildings (TP150 and TP153)

There are two modular storage buildings located west of Building 6920 that are used for storage of RCRA-regulated reactive and ignitable/flammable wastes (Figure 3).

The exterior dimensions of each modular storage building are 23-ft long, 9-ft wide, and 8.6-ft high. The structures are constructed for a snow loading of 40 pounds per square foot (lb/ft^2), Uniform Building Code seismic Zone 3, and a wind loading with exposure C open area at 110 miles per hour. The walls and roof of each structure are rated for a 2-hour fire. Each building has two 5-ft wide doors, and each door has a single-point locking mechanism with inside safety release. Each building is vented. The inside walls and ceiling of each building are covered with an epoxy coating which is resistant to reactive wastes.

Each modular storage building has a 5.5-inch-deep integral spill containment reservoir under the entire building; the capacity is 650 gallons. The secondary containment capacity is 10% of the stored volume of the contents of the largest container; thus the storage capacity based on secondary containment is 6500 gallons. The secondary containment meets the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(1-4). The reservoirs are constructed of 10-gauge American Society for Testing and Materials A36 steel and are coated with a chemical-resistant epoxy. The building floors are epoxy-coated steel grating. Each building rests on structural supports that elevate it and allow visual inspections of the underside of the spill containment reservoir. The maximum storage capacity at each building is not based on secondary containment. It is approximately 1,100 gallons.

1.1.5 Outdoor Waste Storage Area

The outdoor waste storage area consists of the asphalt paved areas to the north, east, and west of Building 6920 and within the RMWMF fence (Figure 3). The outdoor waste storage area may be used for containerized RCRA-regulated waste storage. It has an area of approximately 48,500 ft^2 with a total storage capacity of approximately 19,800 gallons. The area is curbed and paved with berms on the east end of the site, and slopes toward the water retention pond. In the event of any releases of liquids in the outdoor storage area, the curbing and berms and the retention pond would capture released liquids, including stormwater run-on so that any contaminants would not exit the site.

Containers of RCRA-regulated wastes are typically stored inside enclosed steel transportainers, which are large 10- to 40-cubic-yard transportable containers. A transportainer typically has doors at one end and can be lifted onto a large flatbed truck for transportation.

1.2 Unit Operations

The RMWMF WMAs are used to store and/or treat any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002).

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes;; preparedness and prevention; and, hazards prevention requirements applicable to the RMWMF WMAs are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.900/40 CFR 270.14 [b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175[b][5])

Liquid wastes released from individual containers will accumulate in the spill pallets. Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets and sumps (in Building 6920) upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[d]; and 20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177)

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the RMWMF. Unit personnel employ the practices described in Section 1.1.2 of

the SNL/NM General Part B (SNL/NM, 2003a). Additional RMWMF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes and typically stored in the modular storage buildings. They may also be stored in Building 6925. Water-reactive wastes are not stored in areas equipped with water sprinklers for fire suppression.

- Forklifts are not used for waste movement near treatment operations involving ignitable or reactive wastes in Building 6920 to minimize potential sources of ignition while containers are or may be open.

- The modular storage buildings are grounded by a 10-ft-long grounding rod and cable and equipped with a dry chemical fire suppression system to assure that water-reactive wastes will not be exposed to water during fire emergencies.

- Wastes are mixed together on a very limited basis during the treatment and repackaging operations at the Unit. Ignitable and reactive wastes are treated or mixed on a case-by-case basis. Unit personnel plan each such operation carefully to identify the hazards and potential consequences as described in Section B.5. Personnel use waste characterization data and/or published chemical information (e.g., NIOSH Pocket Guide to Chemical Hazards or other chemical or engineering handbook) for each waste in the planning process. Personnel then conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. Treatment operations are described in Appendix G of the General Part B (SNL/NM, 2003b).

- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

1.2.3 Preparedness and Prevention (20 NMAC 4.1.5.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the RMWMF.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

General information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrants at the RMWMF are shown in Figure 12.

The modular storage buildings are grounded by a 10-ft-long grounding rod and cable. All buildings at the RMWMF are equipped with automatic fire suppression systems; summarized below:

Table 1
Fire Suppression Systems at the
Radioactive and Mixed Waste Management Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6920 (general area)	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS
			Automatic sprinkler, wet pipe	GB/FS
6920 (small rooms)	13	Extra/Group 1	Deluge, dry/open	Detection
HEPA filters	15	N/A		
6921	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS
6925	13	Storage	Automatic sprinkler, dry pipe	GB/FS
6926	13	Storage	Automatic sprinkler, dry pipe	GB/FS
TP150	17	N/A	Dry chemical	
TP153	17	N/A	Dry chemical	

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on other required equipment located at the RMWMF is provided in Section 6 and Table 2 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the RMWMF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the RMWMF is provided in Section 1.1.3.2 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the RMWMF to prevent hazards. Additional information applicable to the RMWMF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

RMWMF personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent hazards in unloading. Loading and unloading activities take place on the paved areas, typically immediately outside the buildings. The surface is sloped gently toward the shallow concrete drainage ditches, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Drums and other larger containers are typically strapped together on a pallet before being loaded onto vehicles. Containers are typically transported within the Unit with drum dollies or pallet jacks.

Unit personnel typically use the loading dock for loading and unloading wastes from trucks. The ramp on the west side of Building 6926 slopes gently up to the dock, allowing forklift operators to drive onto trailers of trucks parked at the dock. The dock and ramp are in good condition and is covered with a corrugated metal roof to provide protection from weather.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The area around the Unit slopes gently toward the west. Sheet-flow run-on of surface water from surrounding areas outside the Unit is prevented from entering the WMAs by several features. The elevated gravel road located outside the east fence of the Unit serves to divert water flowing from areas farther to the east. An 8-in. curb at the east edge of the asphalt pavement and an asphalt-lined drainage swale along the eastern edge of the Unit (inside the fence) divert run-on from the gravel road toward the south away from the Unit. On the south and west sides, the Unit is higher than the surrounding land. On the north side, the Unit and a narrow ledge of land outside the fence are higher than the surrounding land. Thus run-on from all directions is prevented from entering the Unit.

The asphalt-paved areas within the Unit are surrounded by an 8-inch curb, further preventing run-on and run-off. The outside storage area slopes toward the south and west. The concrete pads outside the doors and the asphalt pavement surrounding Buildings 6920, 6921, 6925, and 6926 all slope away from the doors and toward shallow concrete drainage channels that run between buildings 6920, 6925, and 6926. The channels lead to the synthetic-lined water retention pond at the southwest corner of the Unit, providing controlled drainage of storm water from roof downspouts and the paved areas in the RMWMF into the water retention pond. During normal operations, the water retention pond collects only storm water. The water retention pond does not provide secondary containment for RCRA-regulated waste.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the RMWMF will affect water supplies, as described in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). RCRA-regulated waste management activities at the RMWMF will be suspended in response to equipment failures of power outages affecting those WMAs.

The RMWMF is equipped with an auxiliary diesel generator that can provide backup power to Building 6920. The generator maintains containment ventilation, alarm systems, heating equipment, and controls necessary to keep water in pipes from freezing should the main power supply fail.

Equipment and/or power failures at Buildings 6921, 6925, 6926; the outdoor waste storage area; or the two modular storage buildings will not result in a loss of RCRA-regulated waste containment.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

RMWMF personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

RMWMF personnel employ the practices described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent releases to the atmosphere.

Sandia/DOE do not routinely manage hazardous wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service at the RMWMF will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f) [6-14-00]. The equipment use will be noted in the RMWMF operating log.

The WMAs at the RMWMF are typically used solely for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the RMWMF will be managed in separate WMAs, if possible. If these wastes cannot be segregated into separate WMAs, they will be segregated from other containers within the WMA.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/

40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

In addition, a negative pressure ventilation system in Building 6920 is provided for the RCRA-regulated waste storage, staging/packaging, and treatment areas. The ventilation air flow from these areas passes through high-efficiency particulate air filters before being released to the environment through a 30-ft stack above the building roofline. The filters effectively remove particulates entrained in the air flow.

1.3 Container Storage (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR 264, Subpart I)

Container storage practices applicable to the RMWMF are presented in the following sections.

1.3.1 Container Types and Labeling

RMWMF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 20023a).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

RMWMF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the RMWMF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

RMWMF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 2003a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

In Buildings 6920, 6921, 6925 and 6926, drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

Containers of liquids are not stacked when stored in the modular buildings.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

RMWMF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.4 Treatment Operations

Treatment practices applicable to the RMWMF are presented in Section 8.0 of this module.

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.100–.900/ [6-14-00]. 40 CFR 260–266, 268, and 270.The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures And Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the RMWMF.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The RMWMF is completely surrounded by an 8-ft-high chain-link and barbed-wire fence. A single personnel entrance door adjacent to the main vehicle entrance gate is located on the south side of the RMWMF. Another personnel entrance door and vehicle gate are located on the north side of the RMWMF. The gates and doors in the RMWMF fence are maintained in closed and locked positions. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the RMWMF gates during non-operational hours.

During work hours, RMWMF employees may enter the area through the locked personnel doors by entering the appropriate code into a keypad on the RMWMF fence near the personnel doors. Emergency and service vehicles may enter the RMWMF through the electronically-controlled main vehicle gate if RMWMF personnel enter the appropriate code into a keypad inside the

office trailer or on the keypads located near the personnel doors on the RMWMF fence. Signs instruct personnel and visitors to report to the office trailer for site entry privileges and instructions. Resident personnel have Sandia-issued badges. Individuals who do not have a Sandia-issued badge are escorted. These procedures limit access to the RMWMF RCRA-regulated WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The RMWMF is located inside TA-III (Figures 1 and 2). TA-III is surrounded by a barbed wire fence with designated access gates. TA-III access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-III.

2.1.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The permanent perimeter fence surrounding the RMWMF and the entrance to the RMWMF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish, are legible from a distance of 25 ft, and can be seen from any approach to the RMWMF.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b.

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated waste to the RMWMF include Wyoming Boulevard, Hardin Boulevard (formerly "O" Street), and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-III turns southwestward off of Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Boulevard entrance gate as shown on Figure A-4 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

Within TA-III, traffic access to and from the RMWMF is along 2-lane asphalt-paved roads shown on Figure A-6 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles entering the RMWMF travel on a asphalt-paved 2-lane drive from the road through the south vehicle gate, as shown on Figure 7. Within the RMWMF, waste is transported on asphalt-paved surfaces (Figure 7).

2.2.2 Traffic Volumes

Traffic volumes on Wyoming Boulevard and Hardin Boulevard are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Traffic volumes within TA-III are light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Approximately 10 to 30 vehicles per week travel into and out of the RMWMF. These include flatbed trucks and trailers carrying supplies, waste from generators, and waste to disposal facilities.

2.2.3 Traffic Control Signals

Vehicles must stop at a gate prior to entering or leaving TA-III. Only authorized personnel are permitted into TA-III. Speed limit signs (i.e., "30 mph Unless Otherwise Posted") are located at several locations in TA-III.

There are no traffic control signals or signs within the RMWMF fenced area. A speed limit sign (i.e., "Max. Speed 5 mph On Site") is posted on the fence adjacent to the RMWMF entrance gate (Figure 7). Vehicle presence within the RMWMF fenced area is limited to official and waste transport vehicles. Therefore, signals or signs are not necessary to control traffic within the RMWMF fenced area.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the RMWMF are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the RMWMF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).

- Surface waters, including intermittent streams, near the RMWMF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).

- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the RMWMF is occupied by test areas and Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the RMWMF) are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the RMWMF (e.g., fences, gates) are shown on Figure 8 and 9 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the RMWMF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 8 of this module (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][ix] [6-14-00]).

- The location of the RMWMF and associated WMA structures, loading and unloading areas, roads, and sanitary sewers are shown on Figures 8 and 9 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 10 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).

- Locations of the RMWMF and the RMWMF WMAs are shown on Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the RMWMF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the NMED at these scales and contour intervals due to the size of the RMWMF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The RMWMF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the RMWMF likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

Waste analysis requirements applicable to all Units, including the RMWMF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b) as required by 20 NMAC 4.1.900/40 CFR 270.14[b][2], 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis," and 20 NMAC 4.1.800/40 CFR 268.7 [6-14-00], "Waste Analysis and Record-Keeping."

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2003b). RMWMF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, with the inspection criteria and frequency. The items listed in the table are inspected in each RMWMF WMA.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained at the RMWMF. Inspection records for previous calendar years are maintained at the RMWMF or the SNL/NM Records Center.

Table 2
Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, accessible, quantities per inventory, in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Treatment area	Good condition, clean, uncluttered, no spills	Daily when wastes are managed. Monthly otherwise.
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Daily when wastes are managed. Monthly otherwise.
Monitoring equipment	Instruments in good condition, operational, calibrated	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Fence	Present and in good condition	Monthly
Warning signs	Present and in good condition	Monthly
Gates and doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.

Table 2 (Concluded)
Radioactive and Mixed Waste Management Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

5.0 PERSONNEL TRAINING

Training Requirements for Unit personnel are specified in 20 NMAC 4.1.900/40 CFR 270.14[b][12] and 20 NMAC 4.1.500/40 CFR 264.16 [6-14-00], "Personnel Training."

The Sandia/DOE training program is designed and implemented to prepare personnel to safely operate and maintain those areas used for managing RCRA-regulated wastes. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the RMWMF.

RMWMF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

All job descriptions identified in Appendix D, Table D-2 of the SNL/NM General Part B (SNL/NM, 2003b) are applicable at the RMWMF. Unit personnel perform periodic inspections to identify any malfunctions, signs of deterioration, operator errors, and discharges or spills that may cause or lead to a release of RCRA-regulated waste constituents that may threaten or harm human health or the environment.

Training records for RMWMF personnel are maintained at the RMWMF.

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia/DOE Site-Wide Contingency Plan is included in as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental RMWMF-specific information is included in this section, in Figures 11 and 12, and in Tables 3 and 4 of this module.

The RMWMF is located in the southeastern portion of TA-III at SNL/NM. It is used for treatment and storage of RCRA–regulated wastes. The RCRA-regulated WMAs at the RMWMF include Buildings 6920, 6921, 6925, and 6926; two modular storage buildings; and the outdoor waste storage area (i.e., paved areas within the RMWMF fence and north, east, and west of Building 6920). All are surrounded by a fence.

- Building 6920 is a single-story concrete masonry unit (CMU) and steel building with approximately 5,000 square feet of space used for RCRA-regulated storage and treatment activities. Inside the building are two bays (north and south), separated by an interior airlock. The south bay includes four small rooms used for treatment and storage. The building also includes a control room, restrooms, and electrical and mechanical rooms. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored over a sump in the south bay or on portable spill containment pallets. Containers of incompatible wastes are not stored together. The containers may be repackaged into larger containers for shipment to off-site facilities. Contents may also be treated by chemical deactivation, macroencapsulation, stabilization, thermal deactivation, or mechanical processing. Up to 13, 420 gallons of waste may be stored in this building. Eave height????

- Building 6921 is a single-story CMU building with approximately 1450 square feet of space used for RCRA-regulated storage and treatment activities. The building also includes office space and restrooms. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored on portable spill containment pallets. Containers of incompatible wastes are not stored together. The containers may be repackaged into larger containers for shipment to off-site facilities. Contents may also be treated by chemical deactivation, macroencapsulation, or stabilization. Up to 7,810 gallons of waste may be stored in this building.

- Buildings 6925 and 6926 are each 4000-square-foot prefabricated steel buildings on concrete foundations. Containers of wastes (typically less than 55 gallons) are stored in this building. Containers with liquids are stored on portable spill containment pallets. Containers of incompatible wastes are segregated into different areas. The containers may be repackaged into larger containers for shipment to off-site facilities. Up to 83,160 gallons of waste may be stored in each building.

- Two modular, prefabricated safety storage structures located west of Building 6920 are used for the storage of reactive and ignitable wastes. Each structure is constructed of 10- and 12-gauge welded steel with supporting structural steel sections, and includes a

welded steel containment pan covered by grating. Each structure may contain up to 1,100 gallons of waste.

- The outdoor waste storage area consists of 48,500 square feet of asphalt-paved areas to the north, east, and west of Building 6920 within the RMWMF fence that may be used for storage of containers of RCRA-regulated wastes. Containers of RCRA-regulated wastes are typically stored inside enclosed transportainers. Containers with liquids are stored on portable spill containment pallets inside the transportainers. Up to 19, 800 gallons of wastes may be stored in these areas.

RCRA-regulated wastes bearing the U.S. EPA Hazardous Waste Numbers listed in the SNL/NM General Part A Permit (SNL/NM, 2002) may be stored and/or treated at the RMWMF WMAs, which may be used for RCRA-regulated waste storage and treatment.

Figure 11 presents evacuation routes for the RMWMF. Figure 12 presents emergency response and access information for the RMWMF. Table 3 lists the emergency equipment typically available at the RMWMF. Table 4 lists the emergency coordinators for the RMWMF.

Current copies of the Site-wide Contingency Plan (SNL/NM, 2002b) and this supplemental information are maintained at the RMWMF and at the SNL/NM Emergency Operations Center.

Table 3
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Building 6920

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Eyewash Stations/ Showers	• On north wall in south bay • Near office in north bay
	Absorbent	In hallway between north and south bays
	Miscellaneous PPE (protective suits, goggles, gloves)	In hallway between north and south bays
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • In southwest corner of southwest airlock • By personnel door in west mechanical room • By personnel door on north wall of north bay • By personnel door in entryway west of office
	Audible fire alarms	Located throughout the building

Table 3 (Continued)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Building 6920

Category	Description/Capabilities	Location
External Communication System	Telephones	Control room, south and north bays
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • In southwest corner of southwest airlock • By personnel door in west mechanical room • By personnel door on north wall of north bay • By personnel door in entryway west of office
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building • By personnel door in southeast corner of south bay • By personnel door in southwest corner of south bay • In hallway between north and south bays • By personnel door in west mechanical room •
	Portable (D)	In northwest corner of north bay
	Portable (A-B-C)(D)	By personnel door on north wall of north bay
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers	Coverage throughout the building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3 (Continued)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Building 6921

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Eyewash Station/Shower	On north wall of assay area
	Absorbent	By north wall of assay area
	Miscellaneous PPE (protective suits, goggles, gloves)	By north wall of assay area
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in electrical/mechanical room • In central hallway outside restrooms • In northwest corner of assay area • By east personnel door in southeast counting room • By east personnel door in middle east office area
	Audible fire alarms	Located throughout the building
External Communication System	Telephones	Office and lab areas
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in electrical/mechanical room • In central hallway outside restrooms • In northwest corner of assay area • By east personnel door in southeast counting room • By east personnel door in middle east office area
Fire Extinguishers	Portable (A-B-C)	• By north personnel door in electrical/mechanical room • In hallway between assay area and north office area • By northwest personnel door of assay area • By east personnel door in southeast counting room
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers	Coverage throughout the building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3 (Continued)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Building 6925

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Portable Eyewash	By personnel door near center of south wall
	Absorbent	By personnel door near center of south wall
	Miscellaneous PPE (protective suits, goggles, gloves)	By personnel door near center of south wall
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building • By personnel door near center of south wall
	Audible fire alarms	Located on east and west wall
External Communication System	Telephone	By personnel door in southwest corner of building
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building • By personnel door near center of south wall
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building • By personnel door in southwest corner of building
	Portable (A-B-C)(D)	By personnel door near center of south wall
Fire Suppression	Automatic dry-pipe sprinkler system with heat-actuated sprinklers	Sprinklers located throughout building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3 (Continued)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Building 6926

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Eyewash Station/Shower	In southeast area of building
	Absorbent	In southeast area of building
	Miscellaneous PPE (protective suits, goggles, gloves)	In southeast area of building
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door on west wall of building • By personnel door on south wall of building
	Audible fire alarms	Located on east wall and west wall
External Communication System	Telephone	In southeast area of building
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in northeast corner of building • By personnel door on west wall of building • By personnel door on south wall of building
Fire Extinguishers	Portable (A-B-C)	• By personnel door in northeast corner of building • By personnel door on west wall of building
	Portable (A-B-C)(D)	By personnel door on south wall of building
Fire Suppression	Automatic dry-pipe sprinkler system with heat-actuated sprinklers	Sprinklers located throughout building
	Water supplied by fire hydrants	Three hydrants, locations shown in Figure 12

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 3 (Concluded)
Radioactive and Mixed Waste Management Facility, Emergency Equipment and Locations

Modular Storage Buildings

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Absorbent	Buildings 6920 and 6926
	Miscellaneous PPE (protective suits, goggles, gloves)	Buildings 6920 and 6926
Internal Communication and Alarm System	Voice command	
	Portable 2-way radio	Operating personnel typically carry radios
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system)	Buildings 6920, 6921, 6925, and 6926
	Audible fire alarms	
External Communication System	Telephones	Buildings 6920 and 6926
	Fire alarm pull boxes (pulling handle sends signal to KAFB fire department, does not actuate system)	Buildings 6920, 6921, 6925, and 6926
Fire Suppression	Automatic dry chemical system	Coverage throughout the building

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 4
Radioactive and Mixed Waste Management Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Jeff Jarry Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of these personnel are routinely available during operating hours (7:00 am to 5:30 pm, Monday through Thursday).

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/40 CFR 270.14[b][13] and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I [6-14-00]. General closure information applicable to all RCRA-regulated Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b). The general closure information includes closure performance standards, an SNL/NM facility description, amendment of the Closure Plan, closure certification and report, survey plat, and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage and/or treatment at any time at the RMWMF is estimated at approximately 209,550 gallons of liquids and/or solids.

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the RMWMF:

- RCRA-regulated waste handling and treatment activities involving the opening of waste containers were confined to the RMWMF RCRA-regulated WMAs. If contamination occurred, it would have been confined to those areas; and

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

8.0 TREATMENT PLAN

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.900/40 CFR Part 270, [6-14-00]. Treatment operations for the RMWMF RCRA-regulated wastes are described in Appendix G of the SNL/NM General Part B Permit (SNL/NM, 2003b). The treatment technologies listed below and described in Appendix G may be used to treat RCRA-regulated wastes at the RMWMF:

- Chemical deactivation,
- Macroencapsulation,
- Mechanical processing,
- Stabilization, and
- Thermal deactivation.

Each type of treatment listed above will be performed on batches of 500 pounds of waste or less. Liquid wastes will be treated in batches of 60 gallons or less.

Treatment may be performed in Buildings 6920, 6921, 6925, and 6926. Each treatment process and the associated equipment meets the environmental performance standards described in Appendix G of the SNL/NM General Part B (SNL/NM, 2003b). Treatment effectiveness for each waste stream will be determined through analysis and verification as described in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b) and Section 3 of this module.

9.0 REFERENCES

National Fire Protection Association (NFPA), 2001, "Standard for Water Spray Fixed Systems for Fire Protection", NFPA 15, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, " Standard for Dry Chemical Extinguishing Systems," NFPA 17, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A - F (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

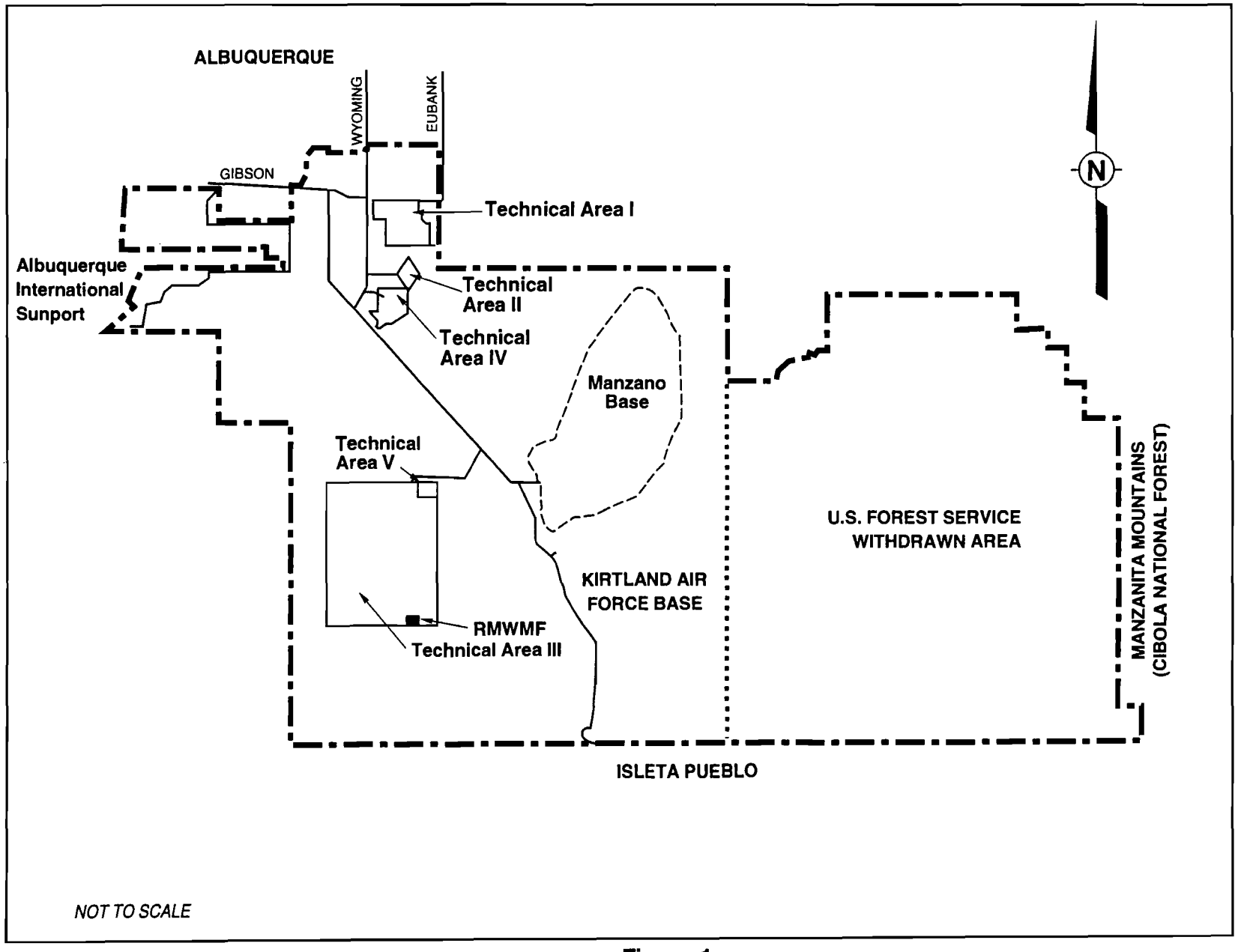


Figure 1
Location Map of the Radioactive and Mixed Waste Management Facility (RMWMF) at Sandia National Laboratories/New Mexico

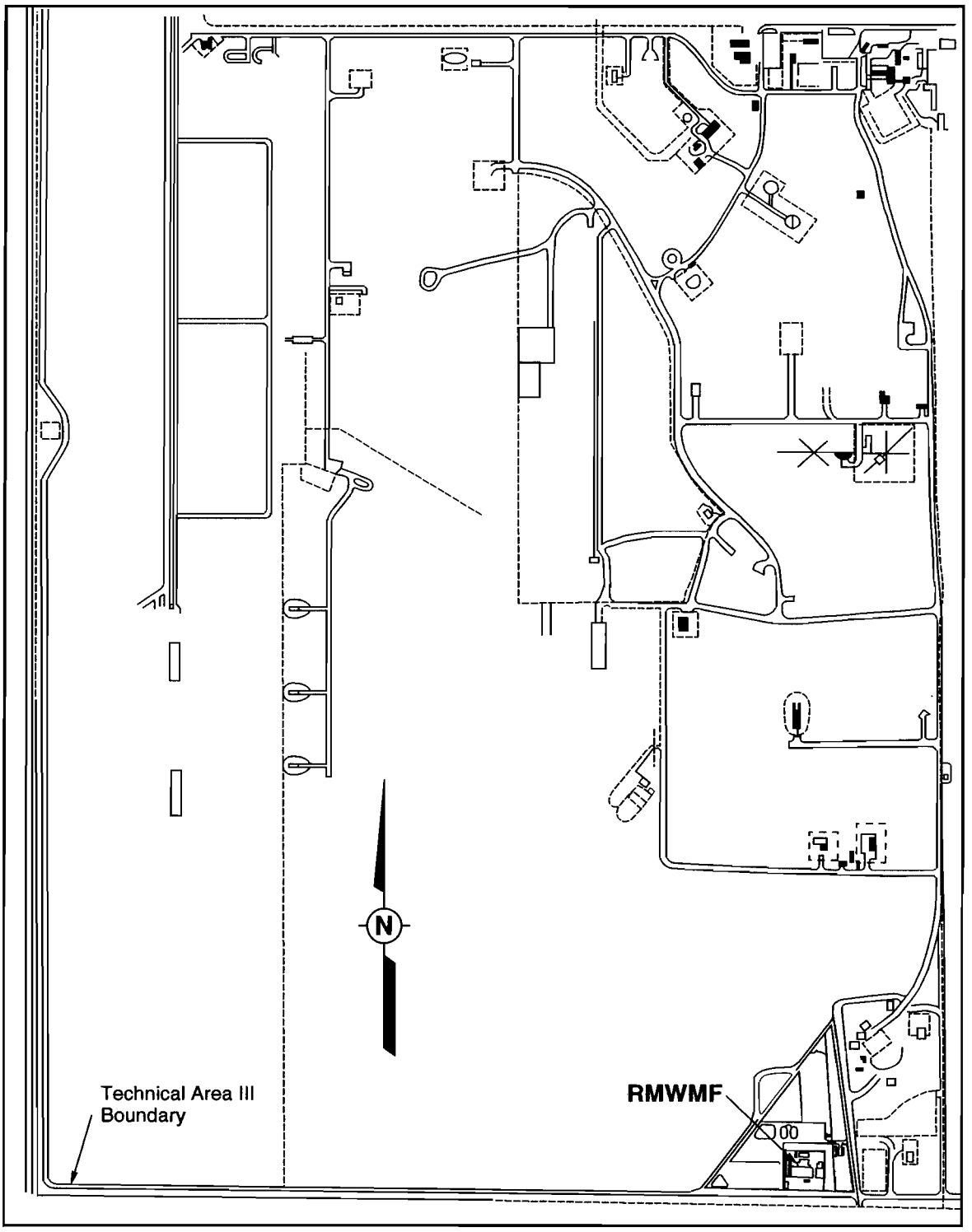


Figure 2
Location of the Radioactive and Mixed Waste Management Facility (RMWMF) in Technical Area III

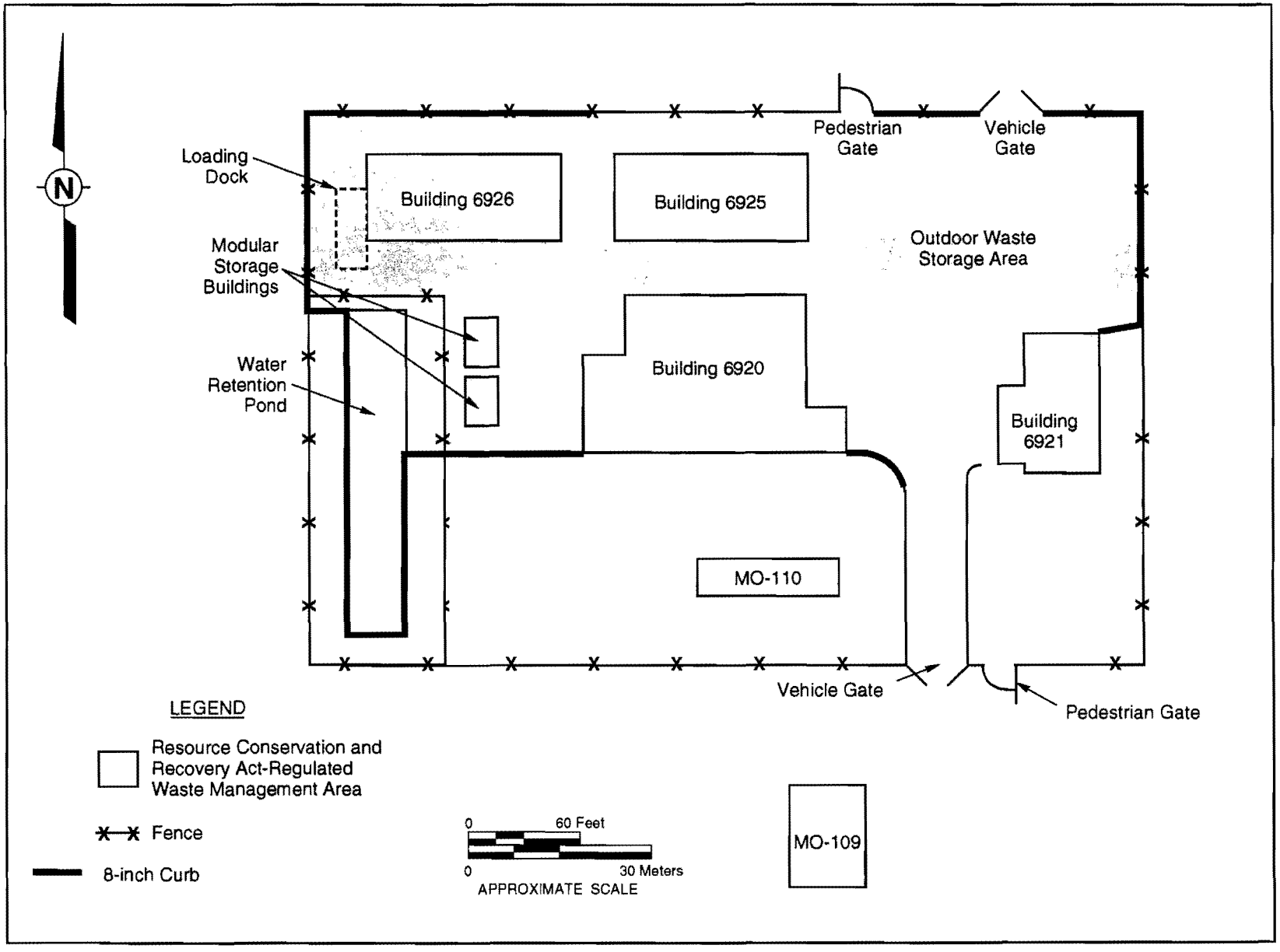


Figure 3
Radioactive and Mixed Waste Management Facility (RMWMF), Unit Layout

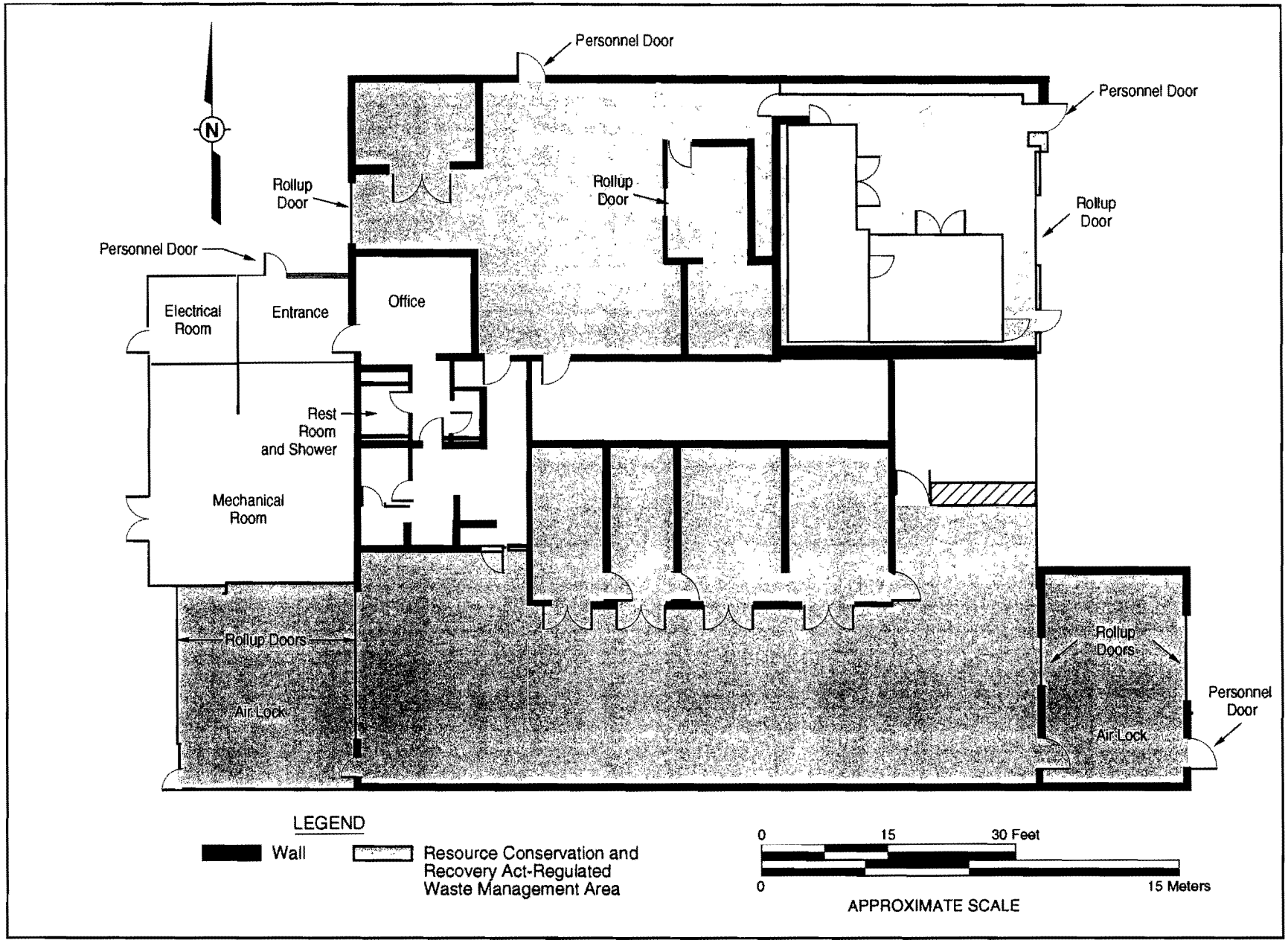


Figure 4
Radioactive and Mixed Waste Management Facility, Building 6920, Resource Conservation and Recovery Act-Regulated Waste Management Areas

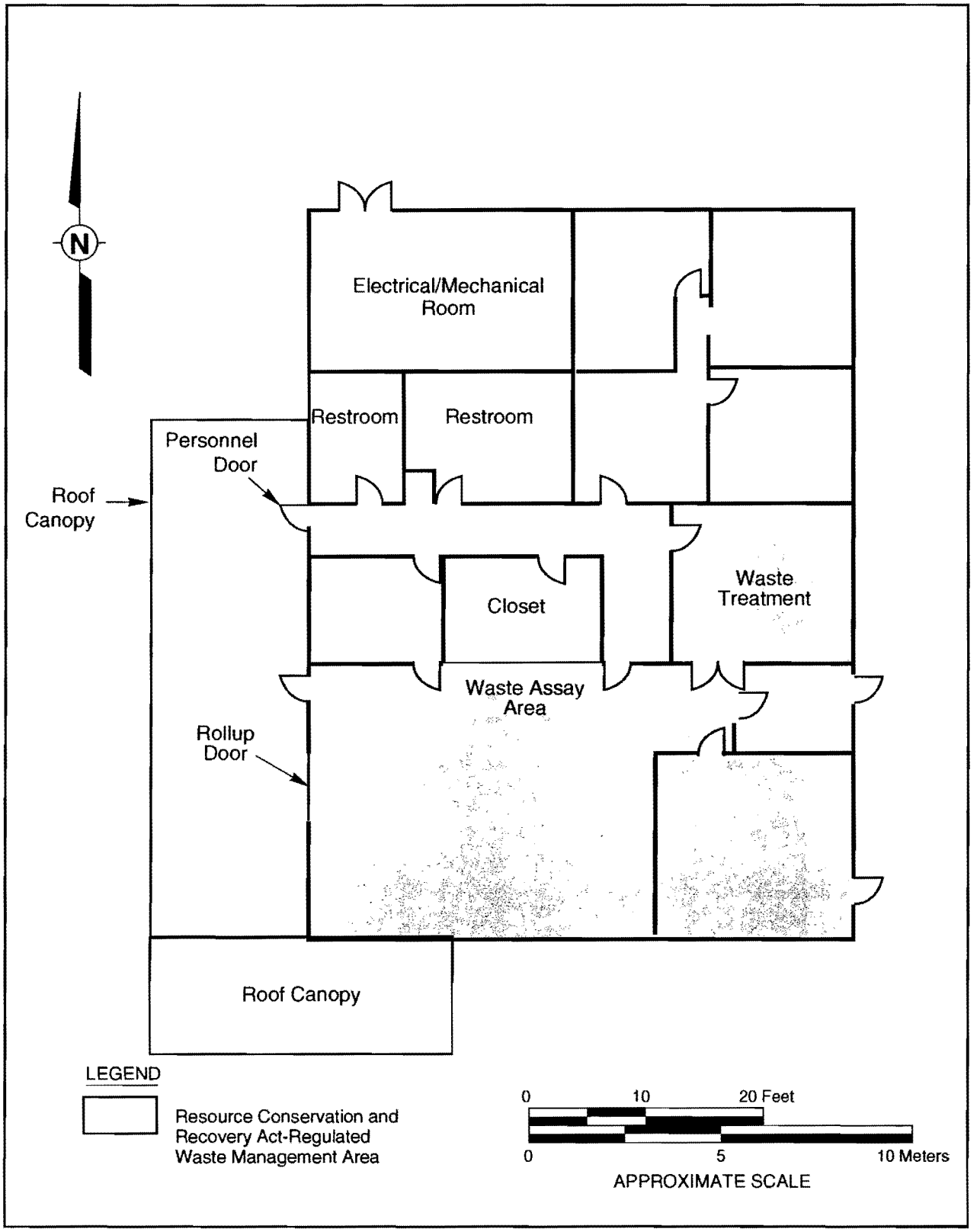


Figure 5
Radioactive and Mixed Waste Management Facility, Building 6921, Resource Conservation and Recovery Act-Regulated Waste Management Areas

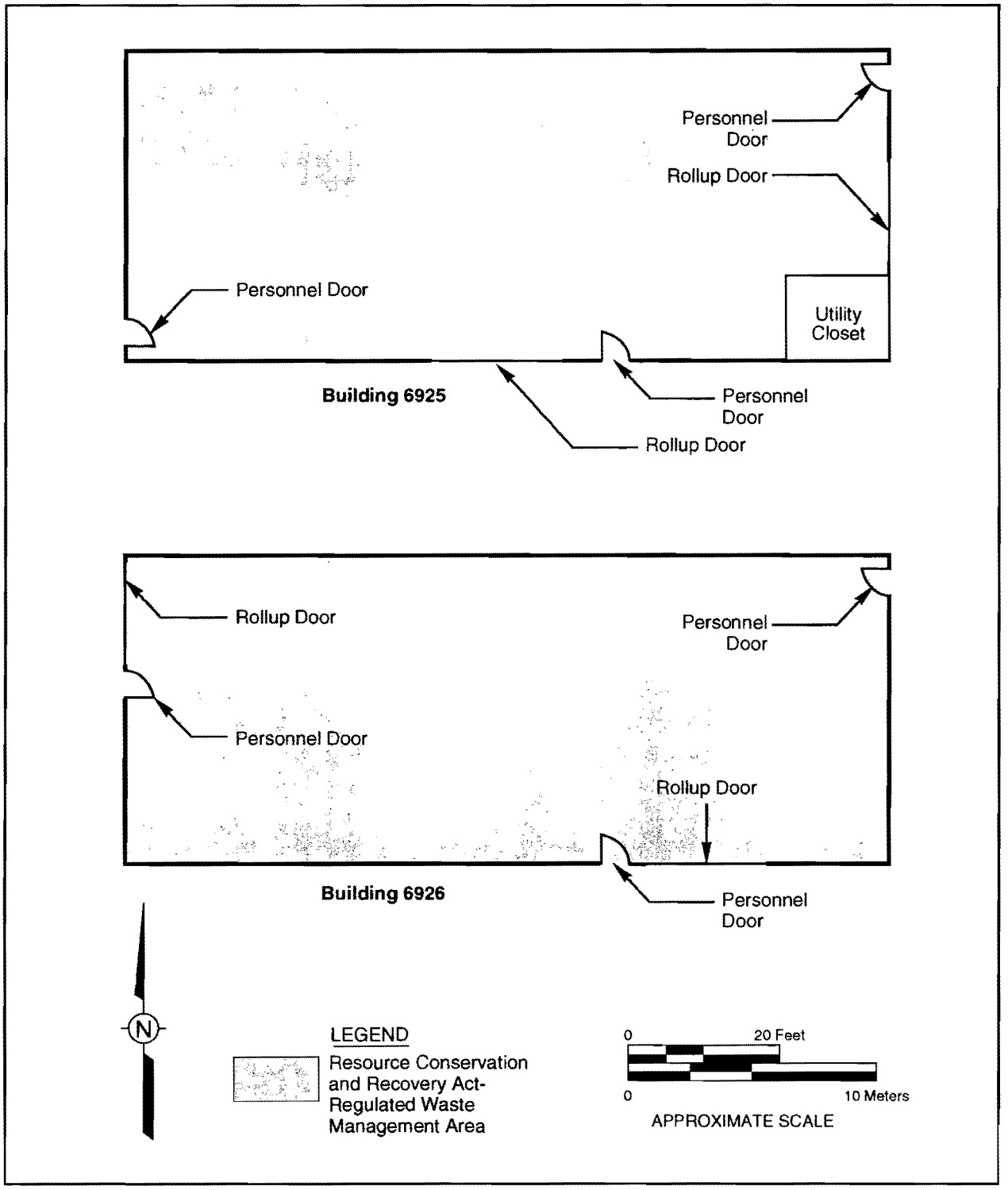


Figure 6

Radioactive and Mixed Waste Management Facility Compound, Buildings 6925 and 6926, Resource Conservation and Recovery Act-Regulated Waste Management Areas

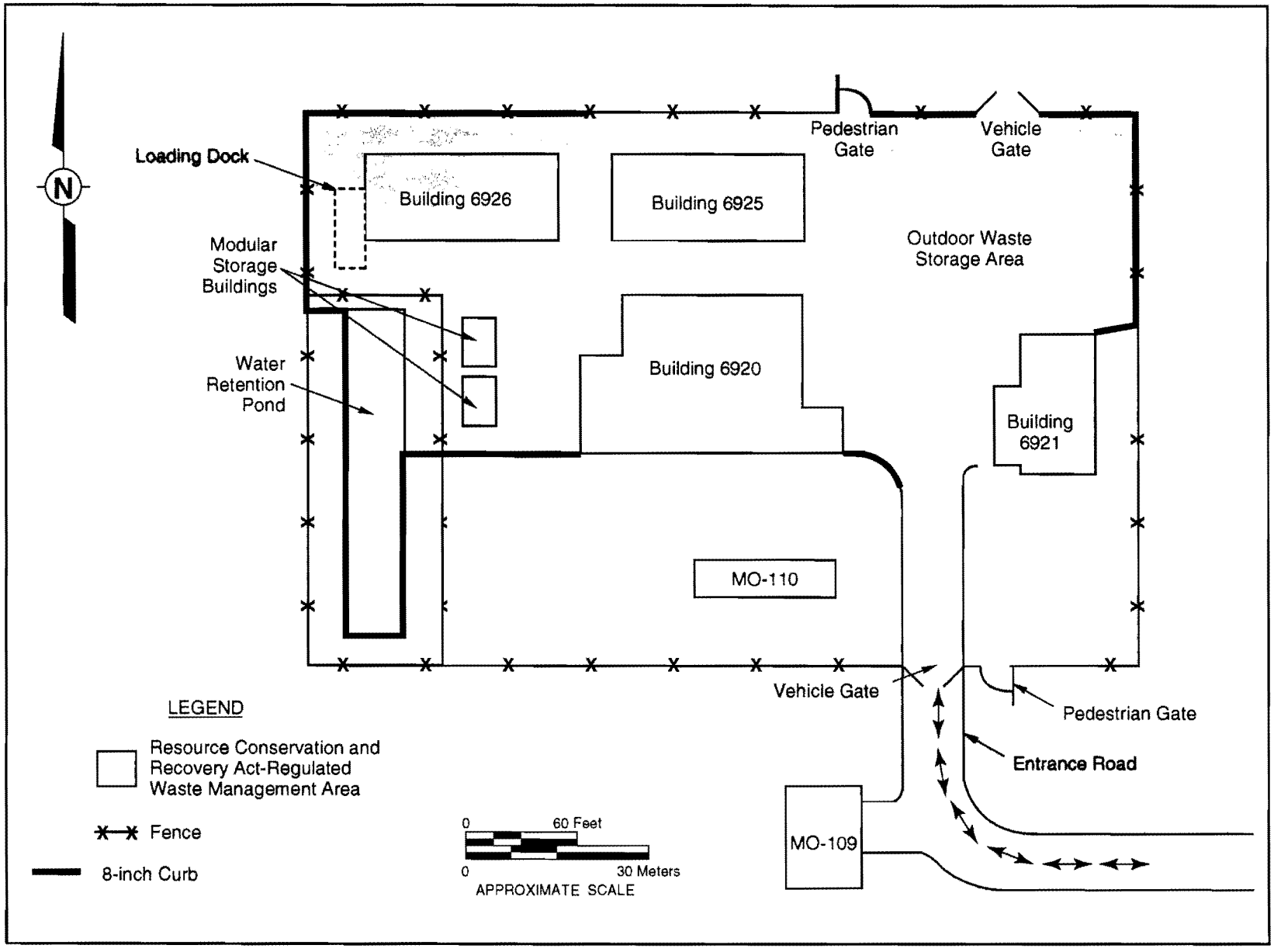


Figure 7

Radioactive and Mixed Waste Management Facility, Traffic Route and Controls

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

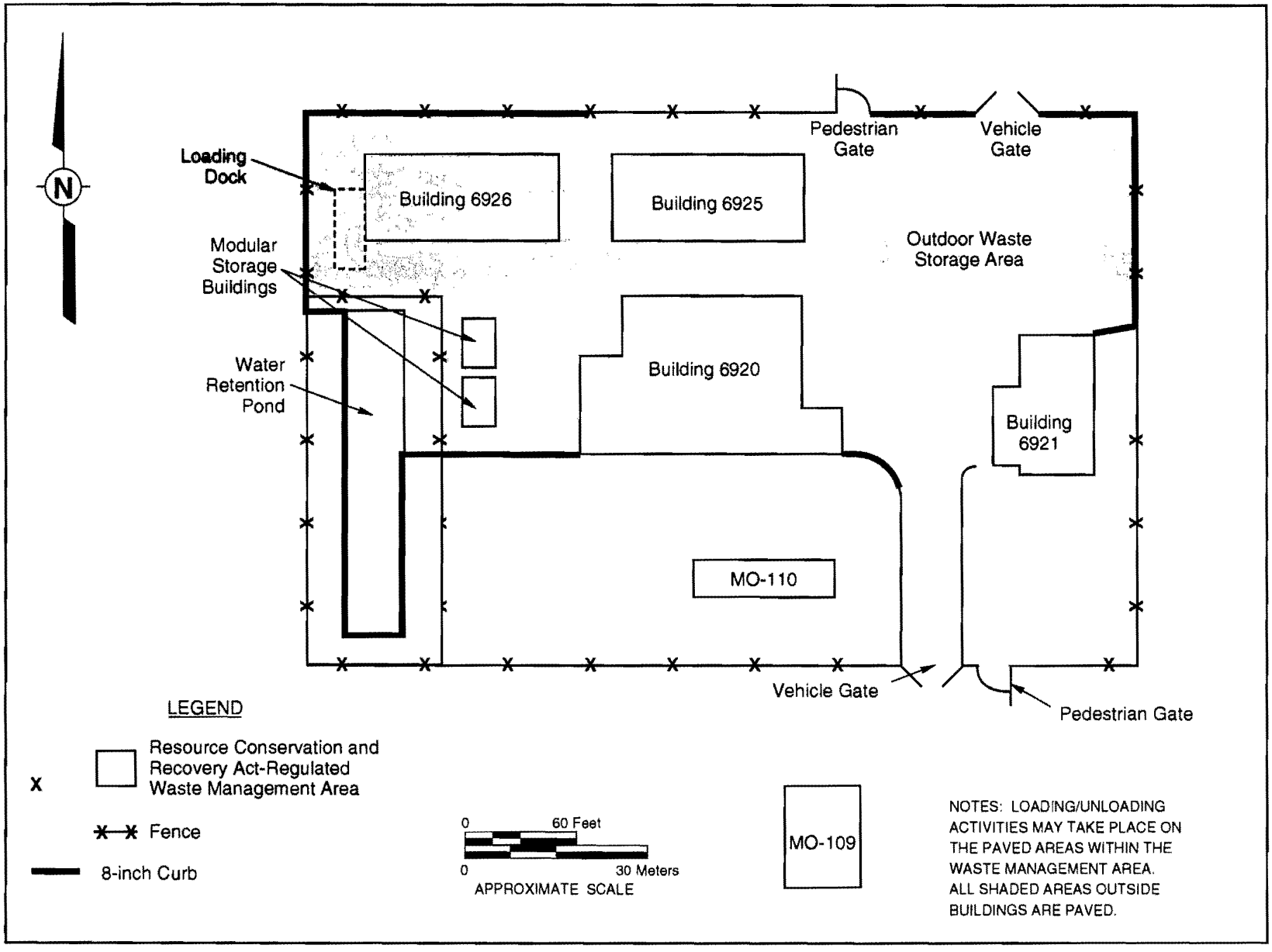


Figure 9

Radioactive and Mixed Waste Management Facility, Access Control Features

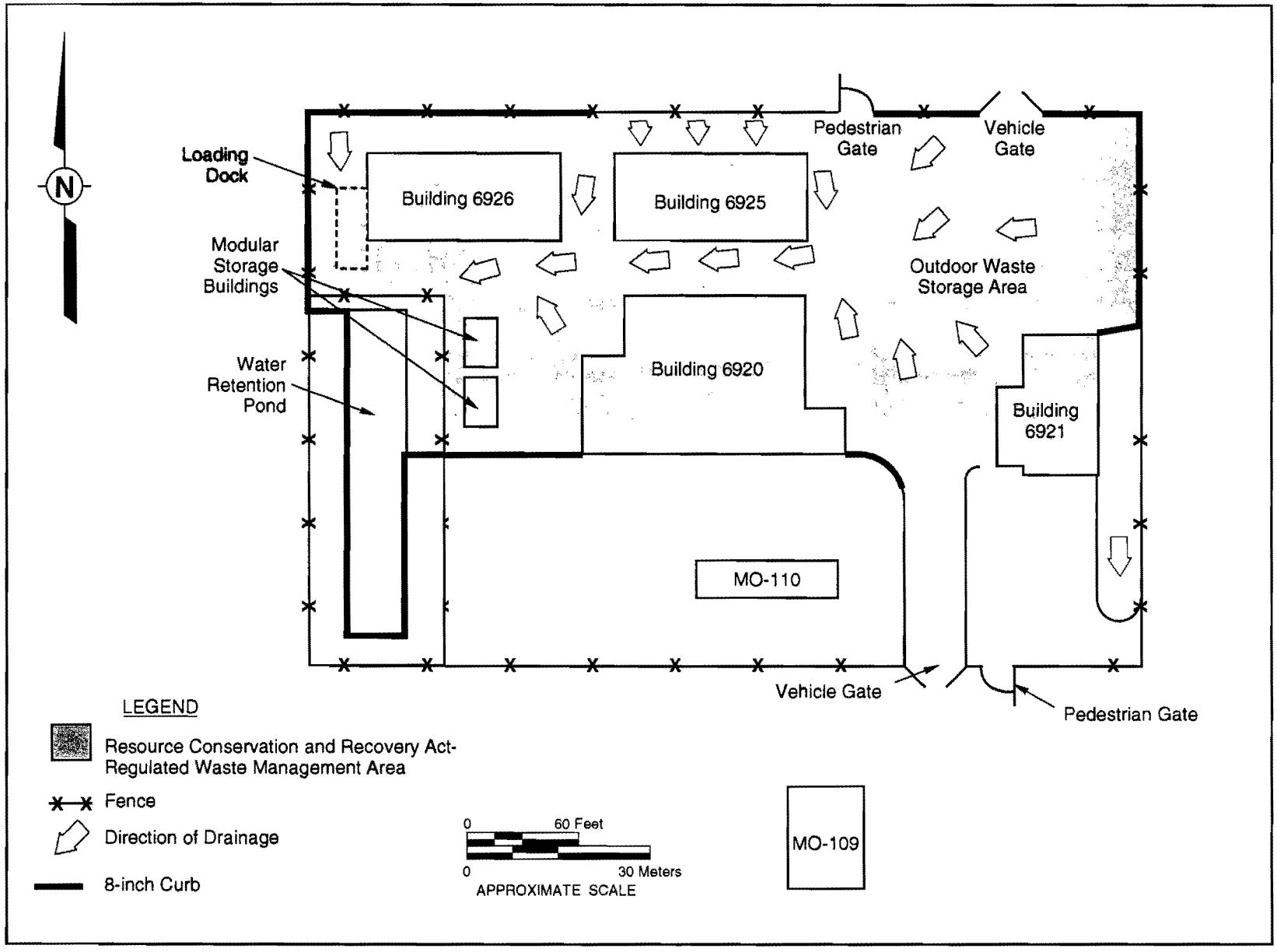


Figure 10

Radioactive and Mixed Waste Management Facility, Drainage Control Features

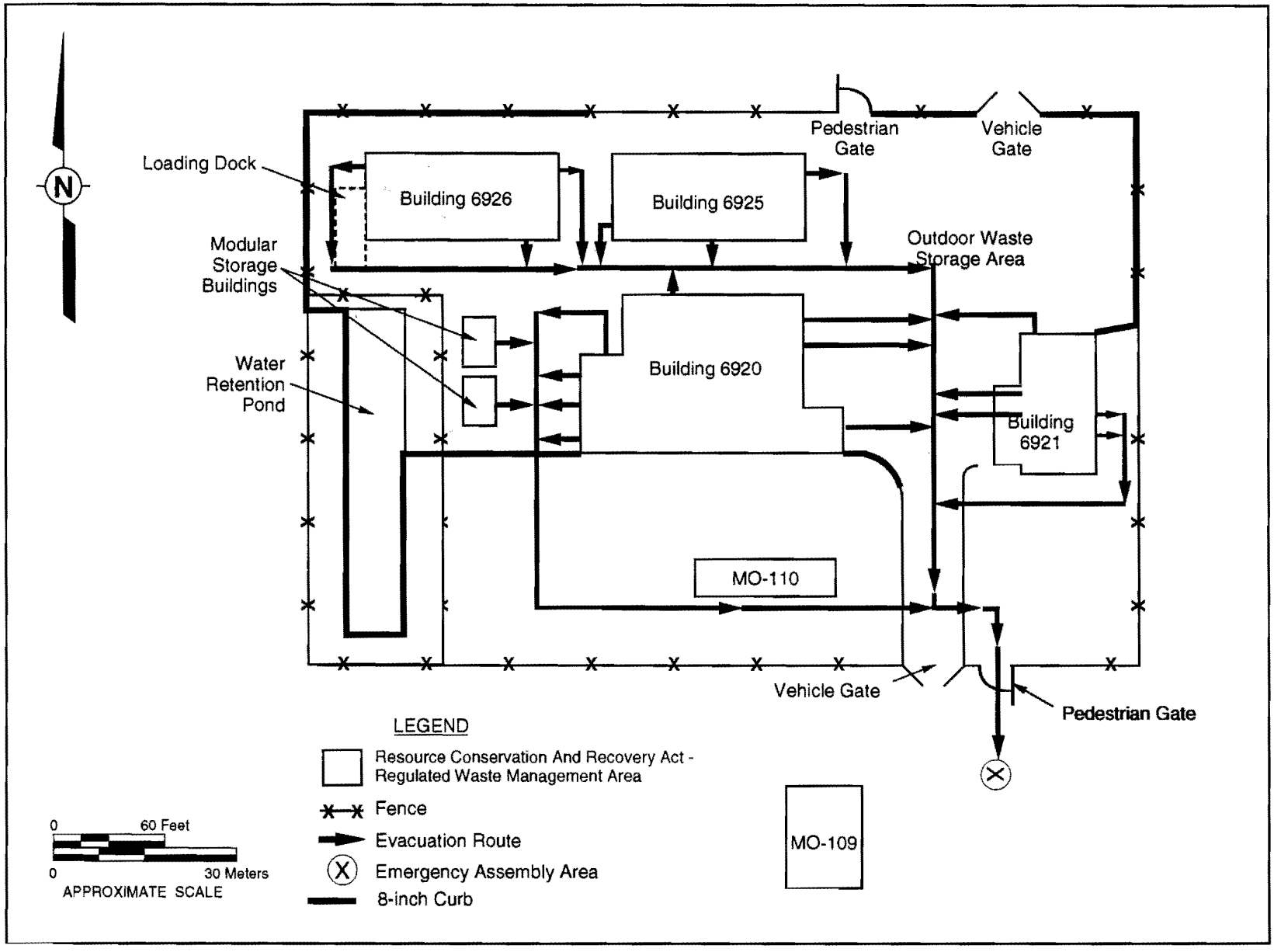
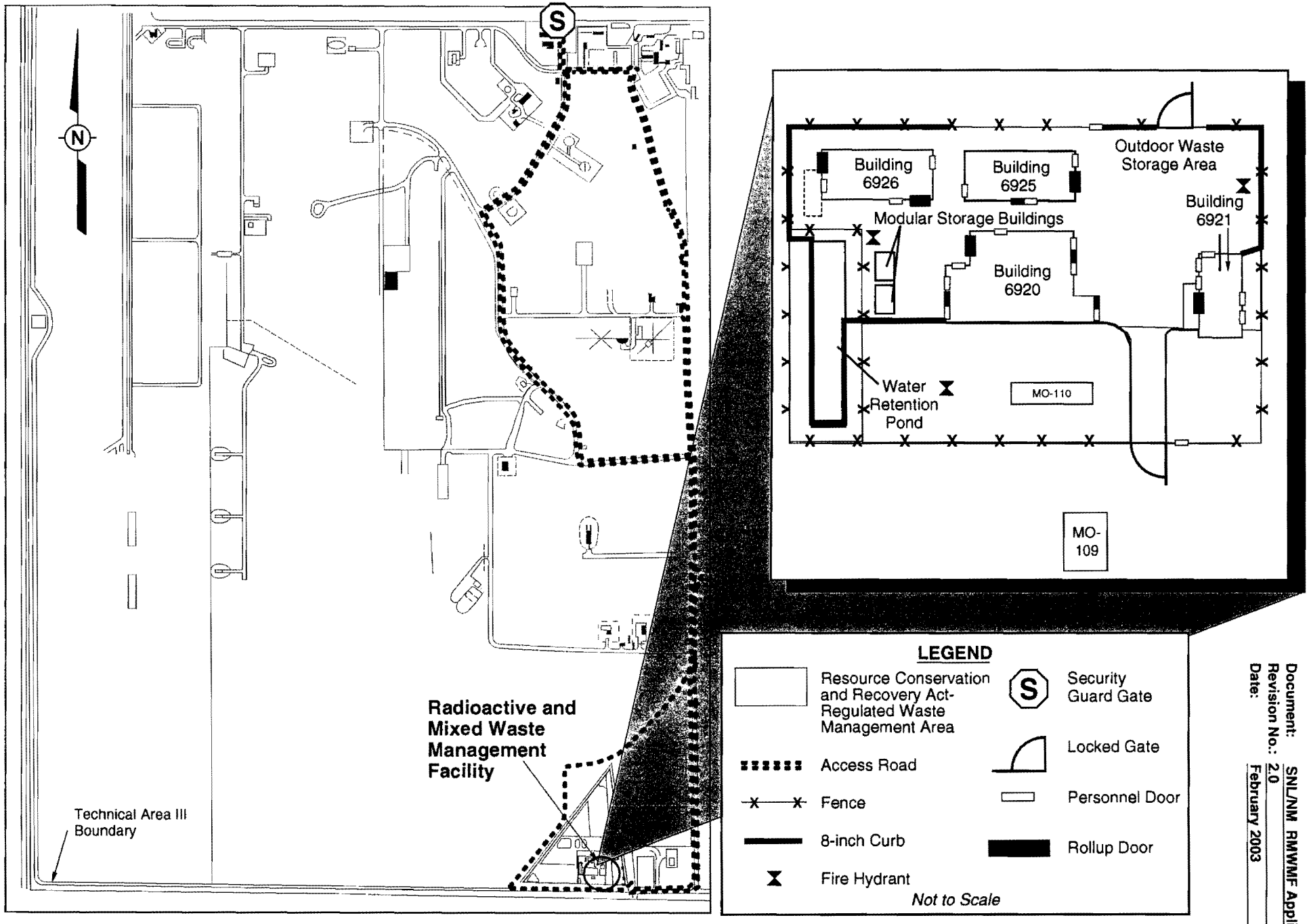


Figure 11

Radioactive and Mixed Waste Management Facility, Evacuation Routes



Document: SNL/NM RMWMF Application
Revision No.: 2.0
Date: February 2003

774470.14000000.A44

Figure 12

Radioactive and Mixed Waste Management Facility, Emergency Response and Access Information

Sandia National Laboratories/New Mexico
High Bay Waste Storage Facility
Part B Permit Application

Module IV

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... HBWSF-iii
LIST OF FIGURES ..... HBWSF-iv
ACRONYMS AND ABBREVIATIONS ..... HBWSF-v
1.0 GENERAL UNIT OPERATIONS HBWSF-1
1.1 Designated Waste Management Areas HBWSF-1
1.2 Unit Operations HBWSF-2
1.2.1 Operation of Containment Systems HBWSF-2
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes HBWSF-3
1.2.3 Preparedness and Prevention HBWSF-3
1.2.3.1 Required Equipment HBWSF-3
1.2.3.2 Testing and Maintenance of Equipment HBWSF-4
1.2.3.3 Access to Communications or Alarm Systems HBWSF-4
1.2.4 Hazards Prevention HBWSF-4
1.2.4.1 Preventing Hazards in Unloading HBWSF-4
1.2.4.2 Preventing Runoff or Flooding HBWSF-5
1.2.4.3 Preventing Contamination of Water Supplies HBWSF-5
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages HBWSF-5
1.2.4.5 Preventing Undue Exposure HBWSF-5
1.2.4.6 Preventing Releases to the Atmosphere HBWSF-6
1.3 Container Storage Practices HBWSF-6
1.3.1 Container Types and Labeling HBWSF-6
1.3.2 Container Handling HBWSF-6
1.3.2.1 Condition of Containers HBWSF-7
1.3.2.2 Aisle Space and Storage Configuration HBWSF-7
1.3.2.3 Compatibility of Waste with Containers HBWSF-7
2.0 UNIT DESCRIPTION AND INFORMATION HBWSF-8
2.1 Security Procedures and Equipment HBWSF-8
2.1.1 Barriers and Means to Control Entry HBWSF-8
2.1.2 Warning Signs HBWSF-9
2.2 Traffic Pattern, Volume, and Controls HBWSF-9
2.2.1 Traffic Patterns HBWSF-9
2.2.2 Traffic Volumes HBWSF-9
2.2.3 Traffic Control Signals HBWSF-10
2.3 Unit Location Information HBWSF-10
2.3.1 Seismic Standard HBWSF-10
2.3.2 Floodplain Standard HBWSF-10
2.4 Topographic Maps HBWSF-10
2.5 Groundwater Monitoring HBWSF-11
3.0 WASTE ANALYSIS PLAN HBWSF-12
4.0 INSPECTION PLAN HBWSF-13
5.0 PERSONNEL TRAINING HBWSF-15
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE FOR THE HIGH BAY WASTE STORAGE FACILITY HBWSF-16

TABLE OF CONTENTS (Concluded)

7.0 CLOSURE PLAN HBWSF-19
7.1 Estimate of Maximum Waste in Storage HBWSF-19
7.2 Closure Conditions HBWSF-19
7.3 Closure Schedule HBWSF-19
8.0 TREATMENT PLAN HBWSF-20
9.0 REFERENCES HBWSF-21

LIST OF TABLES

Table No.	Title
1	High Bay Waste Storage Facility Fire Suppression System
2	High Bay Waste Storage Facility Inspection Criteria and Frequency
3	High Bay Waste Storage Facility Emergency Equipment and Locations
4	High Bay Waste Storage Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the High Bay Waste Storage Facility at Sandia National Laboratories/New Mexico
2	Location of the High Bay Waste Storage Facility (HBWSF) in Technical Area (TA) V
3	High Bay Waste Storage Facility, Resource Conservation and Recovery Act-Regulated Waste Management Area
4	High Bay Waste Storage Facility, Traffic Routes and Controls
5	Topographic Map, High Bay Waste Storage Facility
6	High Bay Waste Storage Facility, Access Control Features
7	High Bay Waste Storage Facility, Drainge Control Features
8	High Bay Waste Storage Facility, Evacuation Routes
9	High Bay Waste Storage Facility, Emergency Response and Access Information

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
ft	foot/feet
HBWSF	High Bay Waste Storage Facility
HSWA	Hazardous and Solid Waste Amendments
m^3	cubic meter
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO HIGH BAY WASTE STORAGE FACILITY PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) High Bay Waste Storage Facility (HBWSF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the HBWSF. 20 NMAC 4.1.500 and .900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this HBWSF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., High Bay Waste Storage Facility). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The HBWSF occupies 5670 square feet in Building 6596 in Technical Area (TA)-V and is used for storage of RCRA-regulated wastes in containers. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HBWSF. Sandia/DOE currently operate the HBWSF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

This section provides descriptions of the HBWSF waste management area (WMA) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention; and
- Container storage of RCRA-regulated wastes.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

The location of the HBWSF at SNL/NM is shown on Figure 1. The location of the HBWSF within TA-V is shown on Figure 2. The HBWSF has one designated WMA in the main wing of Building 6596 (Figure 3). The following paragraphs provide descriptions of the storage structure, location, and capacity of the WMA.

Building 6596 is a pre-engineered metal building with a sloped-steel corrugated roof constructed on a concrete slab. Access for equipment and cargo is provided by a 20-foot (ft) wide steel rollup door at the western end of the building and a 12-ft wide steel rollup door on the southern side. Personnel may also enter or leave the HBWSF by means of hinged steel personnel doors located on the western and southern sides of the HBWSF.

The building western, southern, and northern interior walls in the WMA are constructed of galvanized sheet metal with a baked enamel finish. The eastern wall is constructed of 8-inch filled concrete block and coated with a chemical-resistant epoxy. The WMA floor is sealed with a chemical-resistant epoxy, which withstands degradation by chemical substances and resists wear from forklift traffic.

The HBWSF WMA is 40 ft by 145 ft with an eave height of 30 ft. The total storage area is approximately 4,900 square ft with a maximum storage capacity of 100,320 gallons.

Containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives, solvents, and other liquids. The containers of liquids (typically 5- to 30-gallon capacity) are stored on the grating. Any liquids

released from the containers drain through the grating into the tub. The pallets come in various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the building, and by the slope of the asphalt pavement and gravel-covered soil surface outside the building that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(4).

Building 6956 is also equipped with a system of floor trenches covered with grating. These trenches are not used to provide secondary containment.

1.2 Unit Operations

The HBWSF WMA is used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002).

The HBWSF is not continuously occupied. All personnel sign in on a log upon entering the Unit and sign out when they leave. Waste handling personnel work in pairs and maintain contact with each other. All personnel are trained to check that everyone has signed out and left before turning off the lights and closing and locking the doors.

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes; preparedness and prevention; and, hazards prevention requirements applicable to the HBWSF WMA are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 264.175[b][5]; 20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15)[a] and [b]

Liquid wastes released from individual containers will accumulate in the spill pallets. Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

The floor trenches are not used for secondary containment, and Sandia/DOE do not anticipate that liquid RCRA-regulated wastes would enter the trenches. RCRA-regulated waste liquids would only be released from containers of stored liquid wastes, and the largest single container would contain 122 gallons. The liquid would be contained in the trench, and would be handled as described above upon discovery.

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the HBWSF. Unit personnel employ the practices described in Section 1.1.2 of the SNL/NM General Part B (SNL/NM, 2003a). Additional HBWSF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the Unit.
- Containers are kept closed during storage at the Unit.
- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the HBWSF.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32 and 264.34)

General information about fire hydrants at each Unit is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrant closest to the HBWSF is shown in Figure 9.

The HBWSF is equipped with an automatic fire suppression system, which is summarized below in Table 1.

Table 1
Fire Suppression System at the High Bay Waste Storage Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6956	13	Ordinary/Group 2	Automatic sprinkler, wet pipe	GB/FS

[a] see references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on the required equipment located at the HBWSF is provided in Section 6 and Table 2 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the HBWSF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/ 40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the HBWSF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module. Personnel at the Unit typically maintain contact with the emergency coordinator and other Radioactive and Mixed Waste Management Facility (RMWMF) personnel through 2-way radios.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the HBWSF to prevent hazards. Additional information applicable to the HBWSF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

HBWSF personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent hazards in unloading. Unit personnel typically perform loading and unloading activities just inside the rollup door on the south side of the building (Figure 6). The floor is level and in good condition, and there is sufficient room for operating the vehicle and equipment.

Drums and other larger containers are typically strapped together on a pallet before being loaded onto vehicles. Containers are typically transported within the Unit with drum dollies or pallet jacks.

Waste handling personnel work in pairs at the Unit, and maintain contact with one another. Because the Unit is not routinely occupied, personnel are trained to be particularly aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The land surrounding the HBWSF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas outside the TA is prevented from entering the TA by a diversion berm east of TA-V that diverts storm water to the north and south.

The floor of Building 6596 is higher than the surrounding ground, serving to direct storm water away from the building and WMA. The pavement and gravel-covered soil around the HBWSF slopes toward a storm drain that directs stormwater toward the west.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the HBWSF will affect water supplies, as described in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). Electrical power is not required for the safe operation of the HBWSF WMA. RCRA-regulated waste management activities at the HBWSF will be suspended in response to equipment failures or power outages.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

HBWSF personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

HBWSF personnel employ the practices described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a) to prevent releases to the atmosphere.

The WMA at the HBWSF is typically used solely for the storage of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the HBWSF will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.6.6 of the SNL/NM General Part B (SNL/NM, 2003a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

In addition, a modular containment system may be used when RCRA-regulated wastes require overpacking or repackaging. A modular containment system can be equipped with an air filtration system to prevent the release of particulates.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

Container storage practices applicable to the HBWSF are presented in the following sections.

1.3.1 Container Types and Labeling

HBWSF personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2 Container Handling (20 NMAC 4.1 400/40 CFR 264.173)

HBWSF personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 2003a).

The only time RCRA-regulated waste containers are opened are when the wastes are added, sampled, or transferred to another container. These activities are only done within Building 6596.

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the HBWSF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

HBWSF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 2003a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

HBWSF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 2003a).

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.100–.900/ [6-14-00]. 40 CFR 260–266, 268, and 270.The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]);
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the HBWSF.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The doors to the WMA in Building 6596 are kept locked except when personnel are present. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the SNL/NM Technical Area gates during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the HBWSF in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The HBWSF is located inside TA-V (Figures 1 and 2). TA-V is enclosed by 8-ft-high standard security chain-link fences topped with barbed wire. Regular entries into and exits from TA-V

are through Building 6577, the Perimeter Access Building, or through the adjoining vehicle gate. TA-V access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-V.

2.1.2 Warning Signs (20 NMAC 4.1 .500/40 CFR 264.14[c])

The entrances to the HBWSF (on the western and southern sides of Building 6596) are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. Signs on the northern side are not necessary because employees or visitors do not approach nor is there access to the HBWSF from that direction. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to the HBWSF WMA.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the HBWSF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P Street, and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-V turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming entrance gate.

Waste transport vehicles travel along a 2-lane asphalt-paved drive to enter TA-V from the two-lane paved road as shown on Figures A-4 and A-6 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Within TA-V, waste is transported on asphalt- or concrete-paved surfaces (Figure 4).

2.2.2 Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically travel to the HBWSF per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the HBWSF.

2.2.3 Traffic Control Signals

Within TA-V, there are no traffic control signals or signs. Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Vehicle presence within TA-V is limited to waste transport vehicles and other work vehicles. Therefore, signals or signs are not necessary to control traffic within TA-V.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i] and [ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMA at the HBWSF is not located within 3,000 feet of any faults with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11] [iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMA at the HBWSF is not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi]) [6-14-00]. The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).
- Surface waters, including intermittent streams, near the HBWSF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).
- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the HBWSF is occupied by other Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the HBWSF) are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the HBWSF (e.g., fences, gates) are shown on Figures 5 and 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the HBWSF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).

- The location of the HBWSF and associated WMA structures, loading and unloading areas, roads, and sanitary sewers are shown on Figures 5 and 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figures 5 and 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).

- The location of the HBWSF WMA is shown on Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the HBWSF. As provided in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to NMED at these scales and contour intervals due to the size of the HBWSF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The HBWSF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the HBWSF likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

In accordance with 20 NMAC 4.1.900/ 40 CFR 270.14[b][2]; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," [6-14-00], waste analysis requirements applicable to all Units, including the HBWSF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as" Appendix C of the SNL/NM General Part B (SNL/NM, 2003b). Unit personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, which includes the inspection criteria and frequency.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) is maintained at the RMWMF. Inspection records for the current calendar year are maintained at the HBWSF. Inspection records for previous calendar years are maintained at the RMWMF or the SNL/NM Records Center.

Table 2
High Bay Waste Storage Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, accessible, quantities per inventory, and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

5.0 PERSONNEL TRAINING

Training requirements for Unit personnel are specified in 20 NMAC 4.1.900/ 40 CFR 270.14[b][12], and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training." The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the HBWSF.

HBWSF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

All job descriptions identified in Appendix D, Table D-2 are applicable at the HBWSF.

Training records for HBWSF personnel are maintained at the Radioactive and Mixed Waste Management Facility at SNL/NM.

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE FOR THE HIGH BAY WASTE STORAGE FACILITY

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental HBWSF-specific information is included in this section, in Figures 8 and 9, and in Tables 3 and 4 of this module.

The HBWSF is the western portion of the main wing of Building 6596 in TA -V at SNL/NM and is used for storage of RCRA-regulated wastes. Building 6596 is a pre-engineered metal building with a 30-foot eave height, constructed on a concrete pad. It has approximately 4,900 square feet of space used for storage of RCRA-regulated wastes. The building western, southern, and northern interior walls in the WMA are constructed of galvanized sheet metal with a baked enamel finish. The eastern wall is constructed of 8-inch filled concrete masonry units.

RCRA-regulated wastes bearing the U.S. EPA Hazardous Waste Numbers listed in the General Part A (SNL/NM, 2002) may be stored at the HBWSF. Within the HBWSF, waste is segregated based on compatibility groups.

During an emergency, Unit personnel will evacuate the Unit as described in Section E.5.2 of the Site-wide Contingency Plan. In addition, Unit personnel may choose to implement a coordinated evacuation of all of TA-V. To notify all TA-V personnel, Unit personnel would activate the TA-V alarm by activating any fire alarm pull station.

During an emergency, Sandia security officers provide unimpeded access to the facility for authorized personnel as directed by the IC. Security officers also provide additional emergency assistance as required by the IC. Personnel who are authorized to enter TA-V in case of emergencies are members of the SNL/NM Emergency Response Organization, including medical personnel, the KAFB fire department, and Air Force security police.

Figure 8 presents evacuation routes for the HBWSF. Figure 9 presents emergency response and access information for the HBWSF. Table 3 lists the emergency equipment typically available at the HBWSF. Table 4 lists the emergency coordinators for the HBWSF.

The emergency coordinators are informed of planned work activities at the beginning of each work day; this includes activities at Units that are not routinely staffed (such as the HBWSF).

Current copies of the Site-Wide Contingency Plan and this supplemental information are maintained at the Radioactive and Mixed Waste Management Facility, in the TA-V emergency control room, and at the SNL/NM Emergency Operations Center.

Table 3
High Bay Waste Storage Facility
Emergency Equipment and Locations

Building 6596 High Bay

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Eyewash Station/Shower	On south wall of high bay near southwest corner
	Absorbents	• In storage area behind north wall of high bay • By personnel door in south wall of high bay
	Miscellaneous PPE (protective suits, goggles, gloves)	• In storage area behind north wall of high bay • By personnel door in south wall of high bay
Internal Communication and Alarm System	Voice command	Operating personnel typically carry radios
	Portable 2-way radio	
	Fire alarm pull station (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	• By personnel door in southwest corner of high bay • By personnel door in south wall of high bay
	Audible fire alarm	By personnel door in south wall of high bay
External Communication System	Mobile telephone or portable radio	Taken to the High Bay Waste Storage Facility by personnel
Fire Extinguishers	Portable (A-B-C)	• By personnel door in southwest corner of high bay • In storage area behind north wall of high-bay • By personnel door in south wall of high bay
	Portable (A-B-C)(D)	By personnel door in southeast corner of high bay
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers	Coverage throughout the building.
	Water supplied by fire hydrant	One hydrant, location shown in Figure X

PPE personal protective equipment
KAFB = Kirtland Air Force Base

Table 4
High Bay Waste Storage Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary:	Jeff Jarry Sandia National Laboratories P. O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate:	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of these personnel are routinely available at the Radioactive and Mixed Waste Management Facility during operating hours (7:00 am to 5:30 pm, Monday through Thursday) and can be contacted by radio or telephone during those hours.

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/40 CFR 270.14[b][13], and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I, [6-14-00]. General closure information applicable to all RCRA-regulated Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b). The general closure information includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the HBWSF is estimated at 100,320 gallons of liquids and/or solids.

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the HBWSF:

- RCRA-regulated waste handling activities involving the opening of waste containers were confined to the interior of the HBWSF WMA. If contamination occurred, it would have been confined to that area; and

- The interior walls and floors of the WMA were maintained to retain their integrity by following established maintenance and inspection procedures, and breaches of protective coatings did not occur.

7.3 Closure Schedule

8.0 TREATMENT PLAN

Sandia/DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the HBWSF.

9.0 REFERENCES

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A–F in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

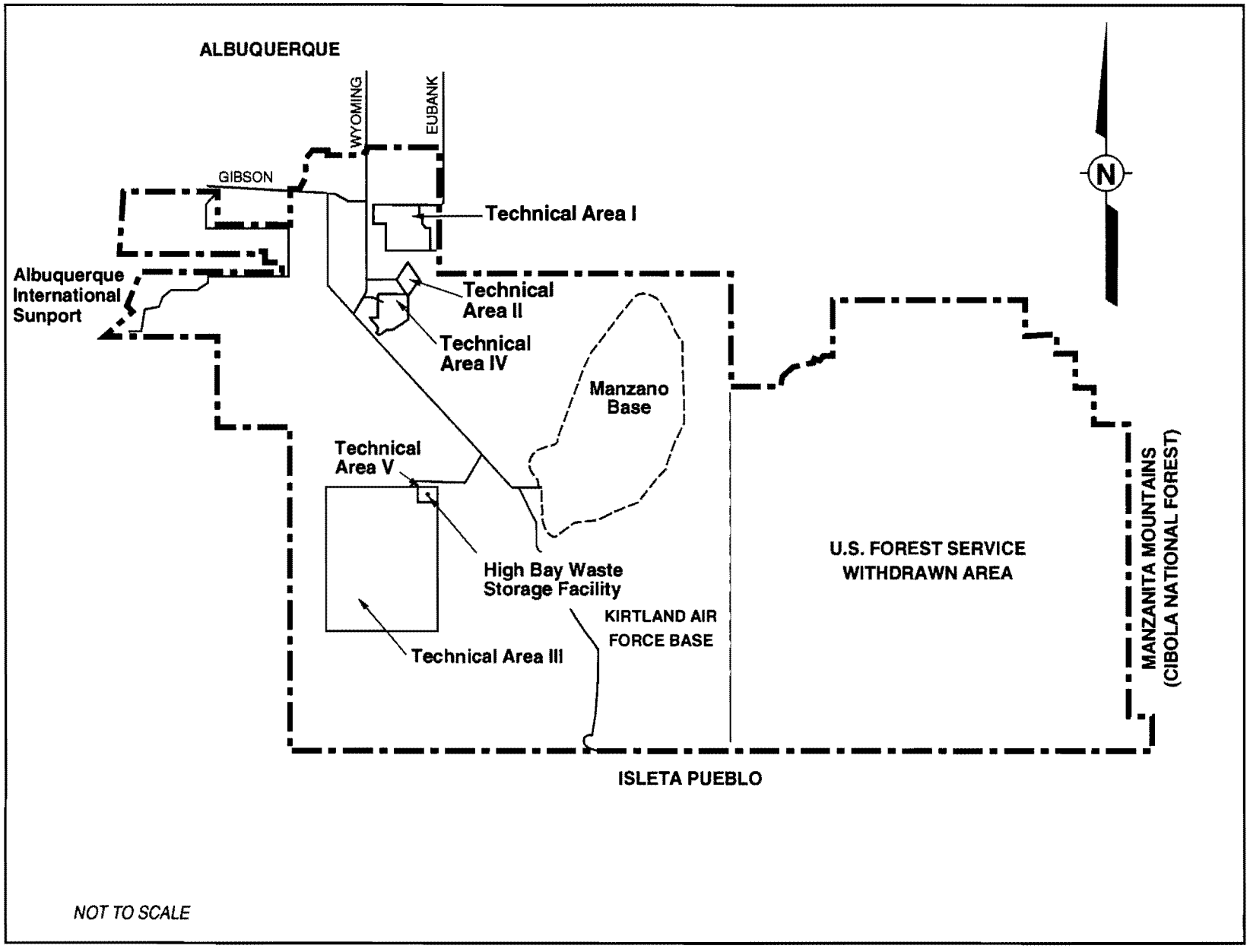


Figure 1
Location Map of the High Bay Waste Storage Facility at Sandia National Laboratories/New Mexico

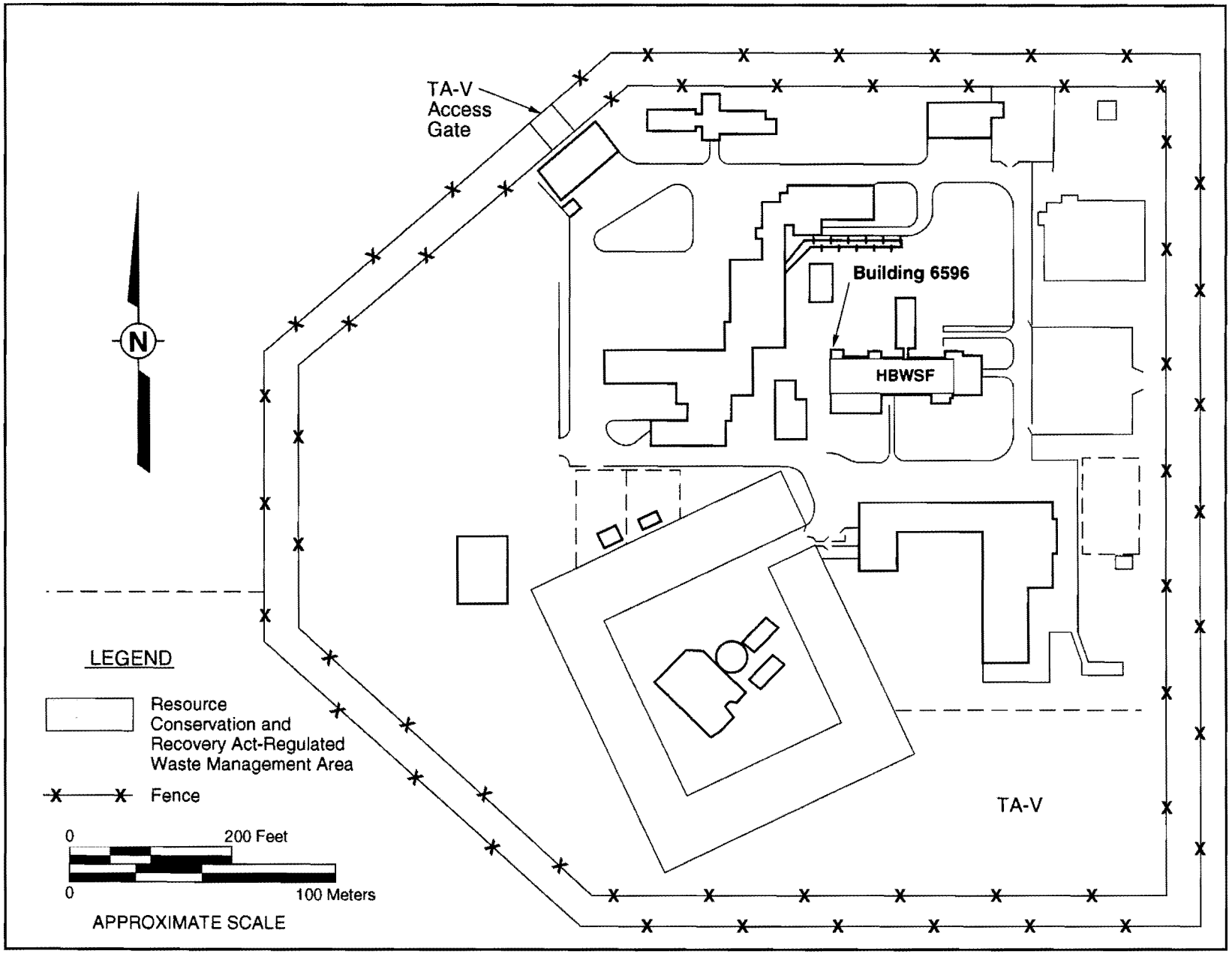


Figure 2
Location of the High Bay Waste Storage Facility (HBWSF) in Technical Area (TA) V

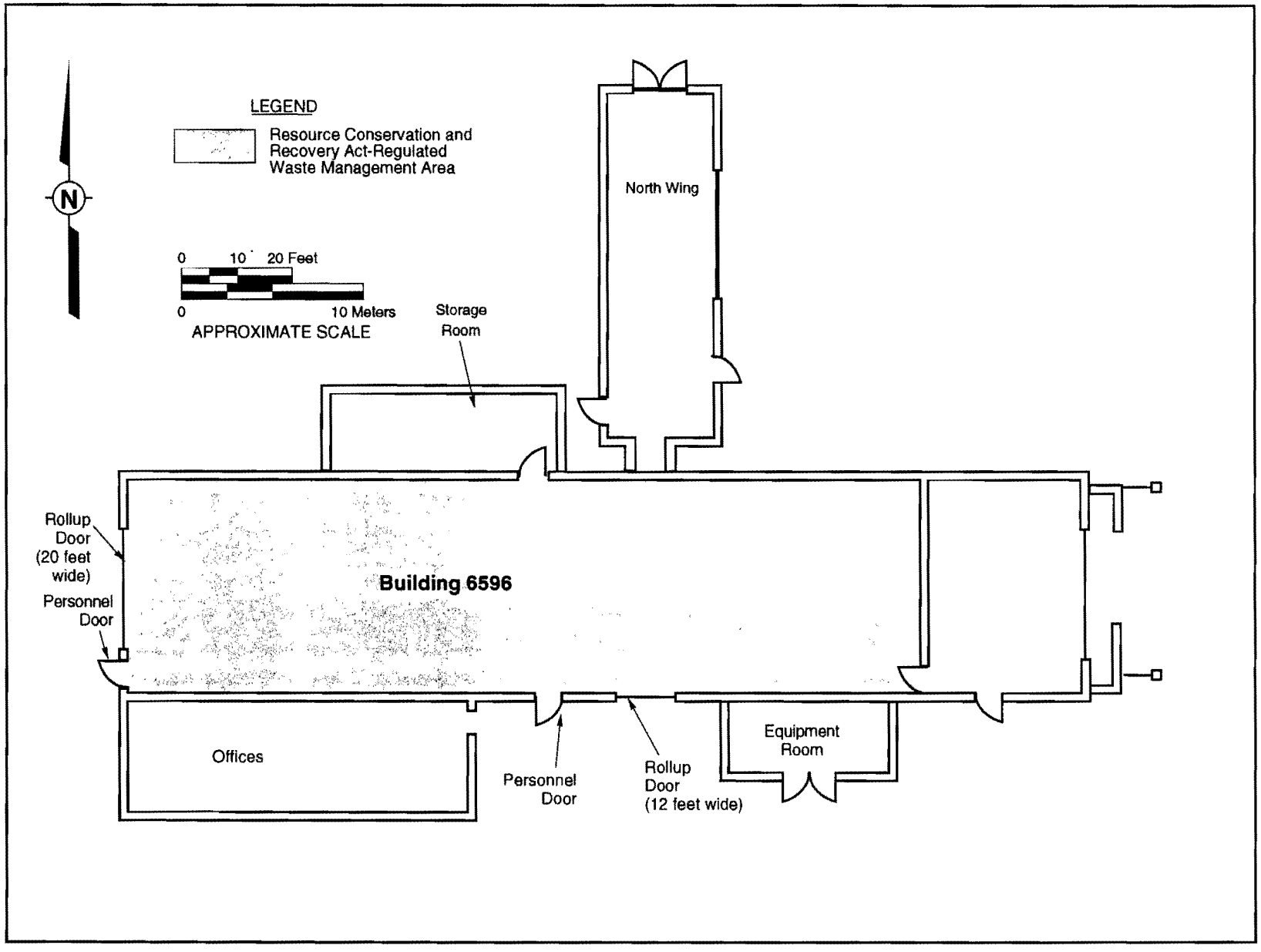


Figure 3
High Bay Waste Storage Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Area

774470.10000001 A47

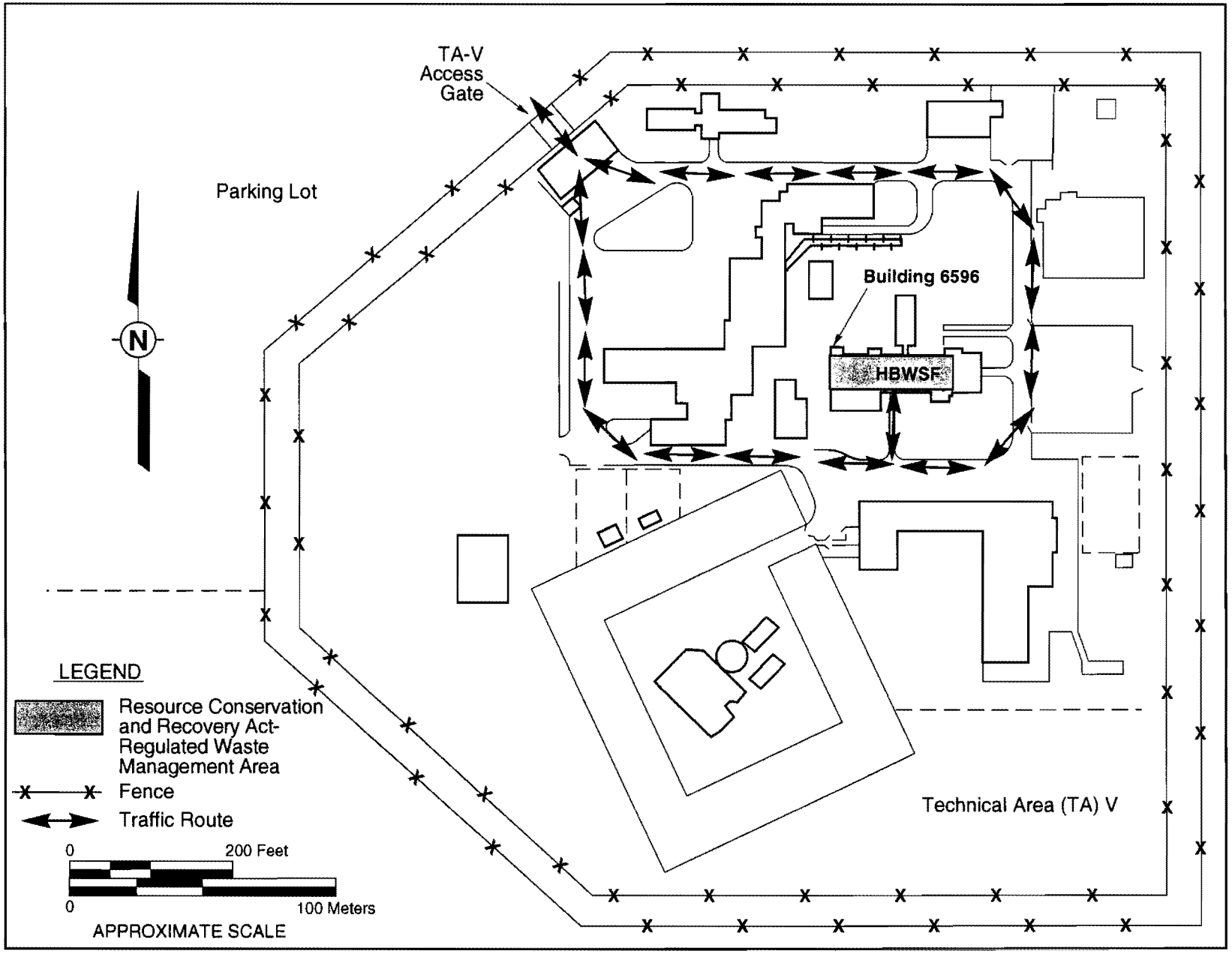


Figure 4
High Bay Waste Storage Facility, Traffic Routes and Controls

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

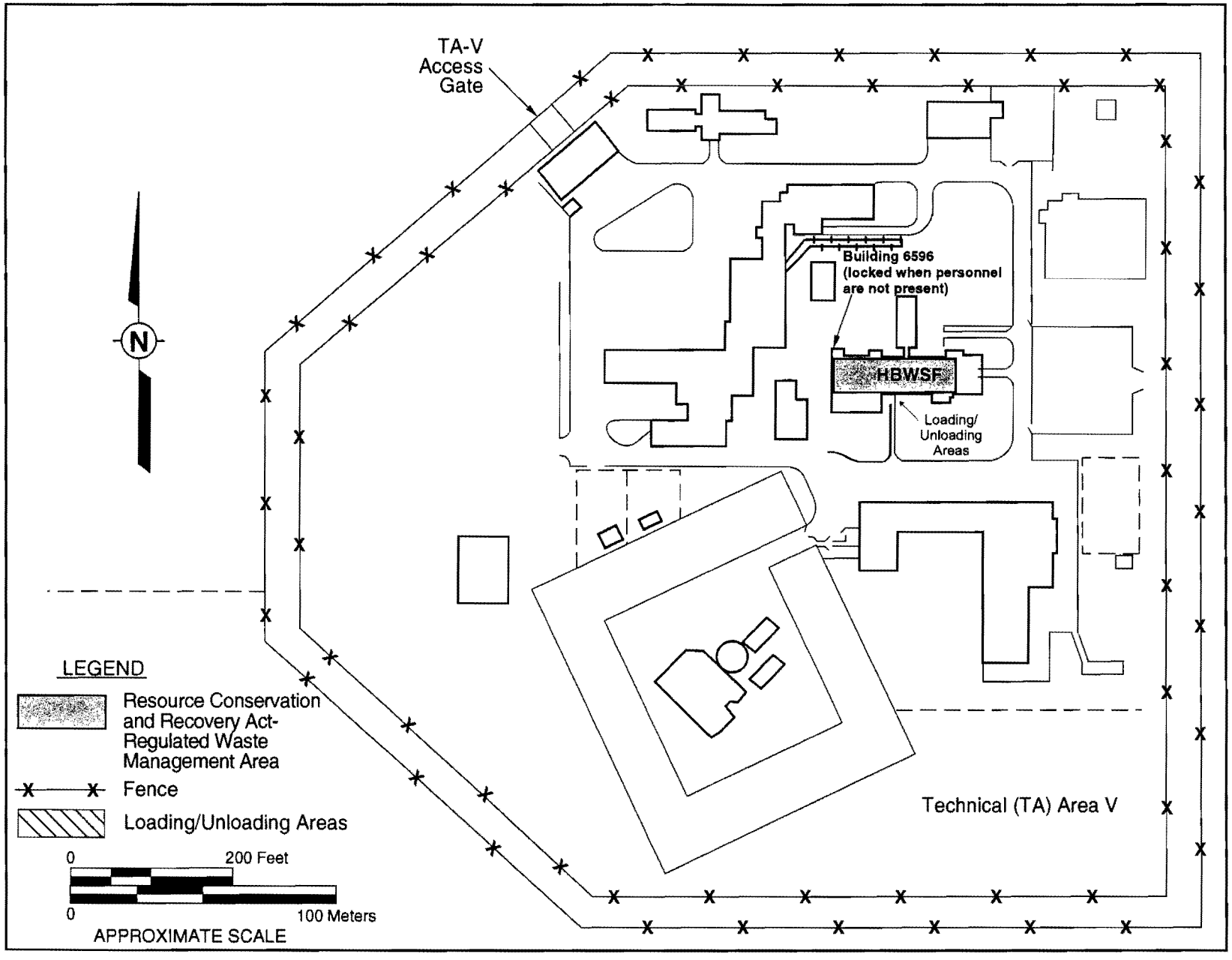


Figure 6
High Bay Waste Storage Facility, Access Control Features

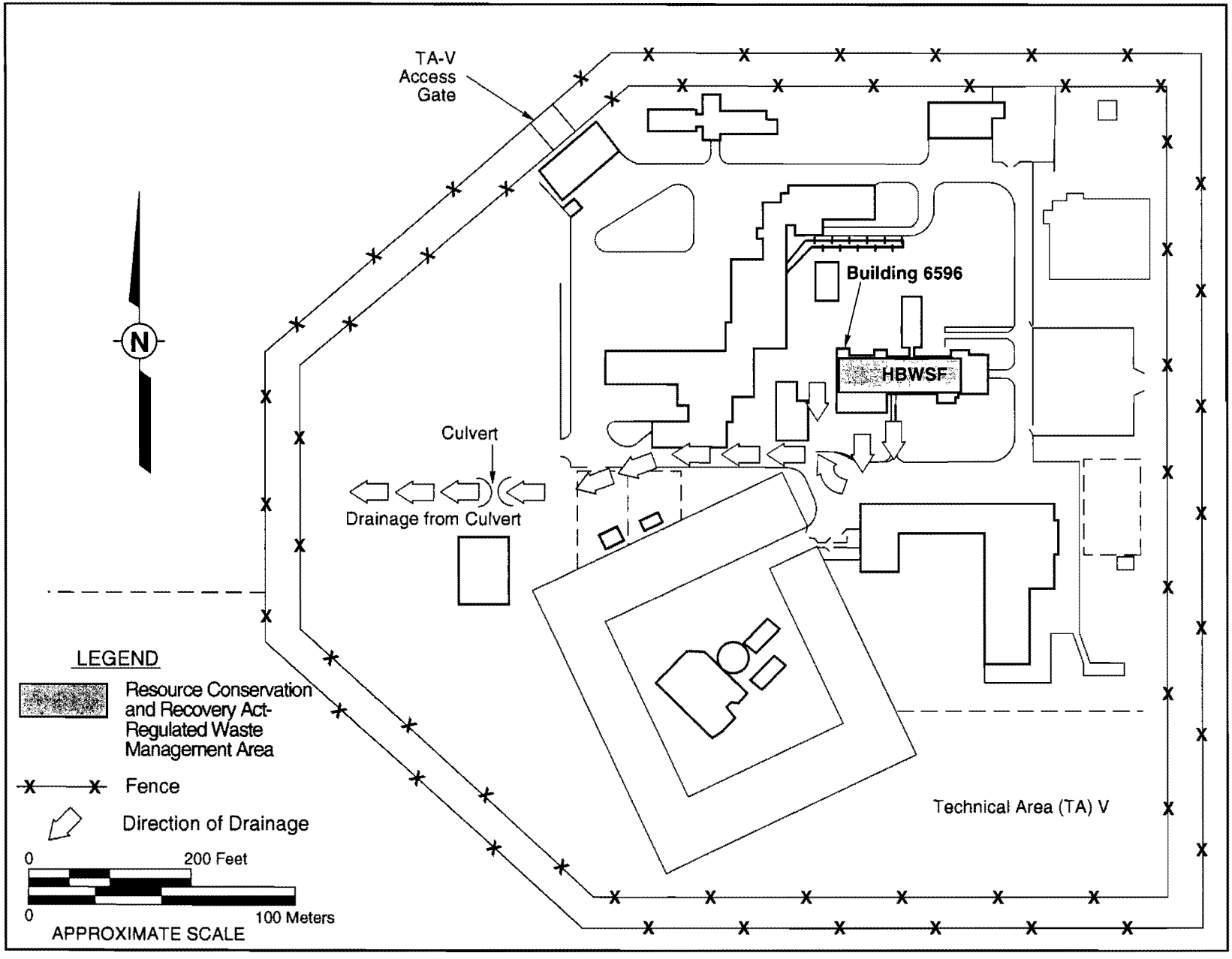


Figure 7
High Bay Waste Storage Facility, Drainage Control Features

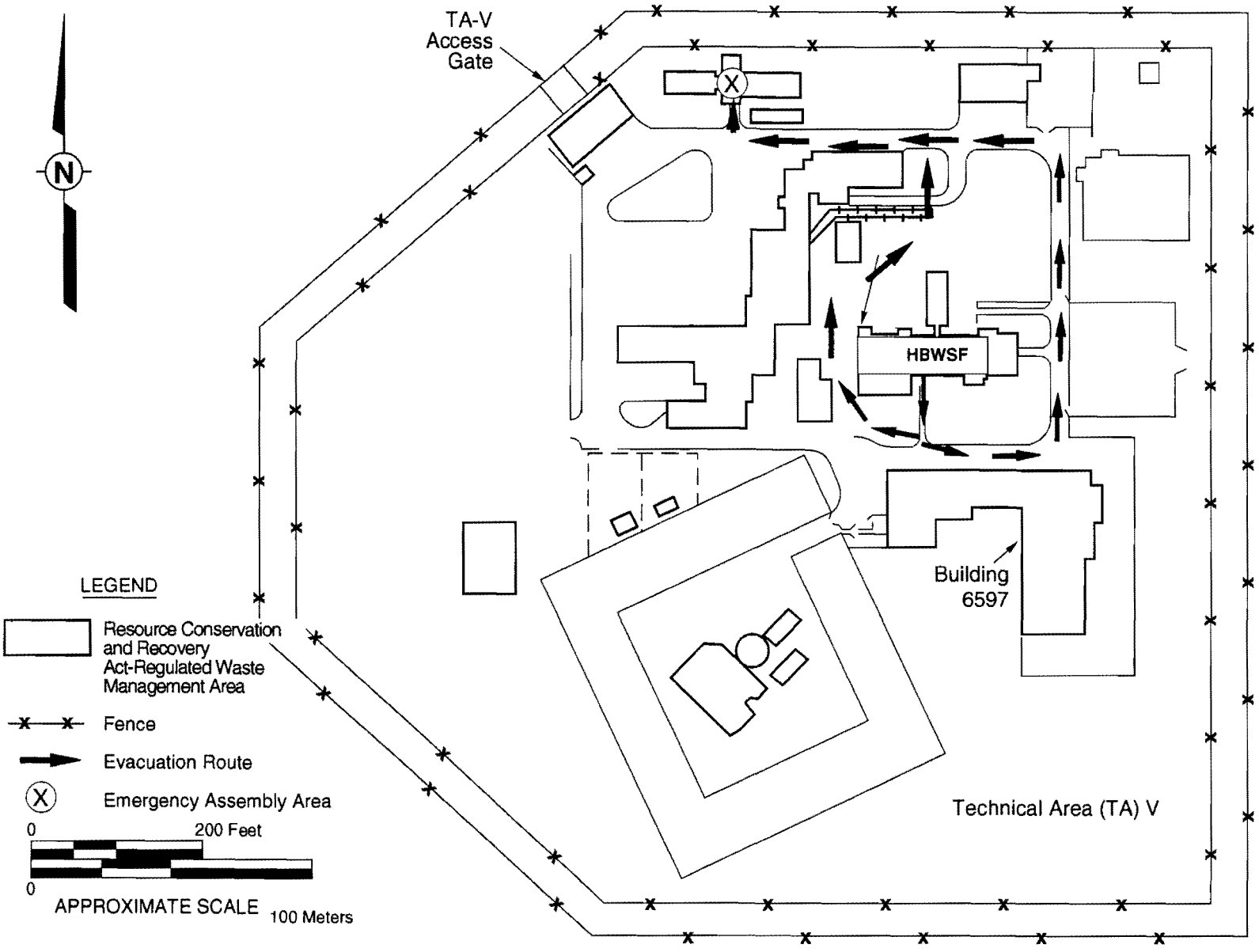
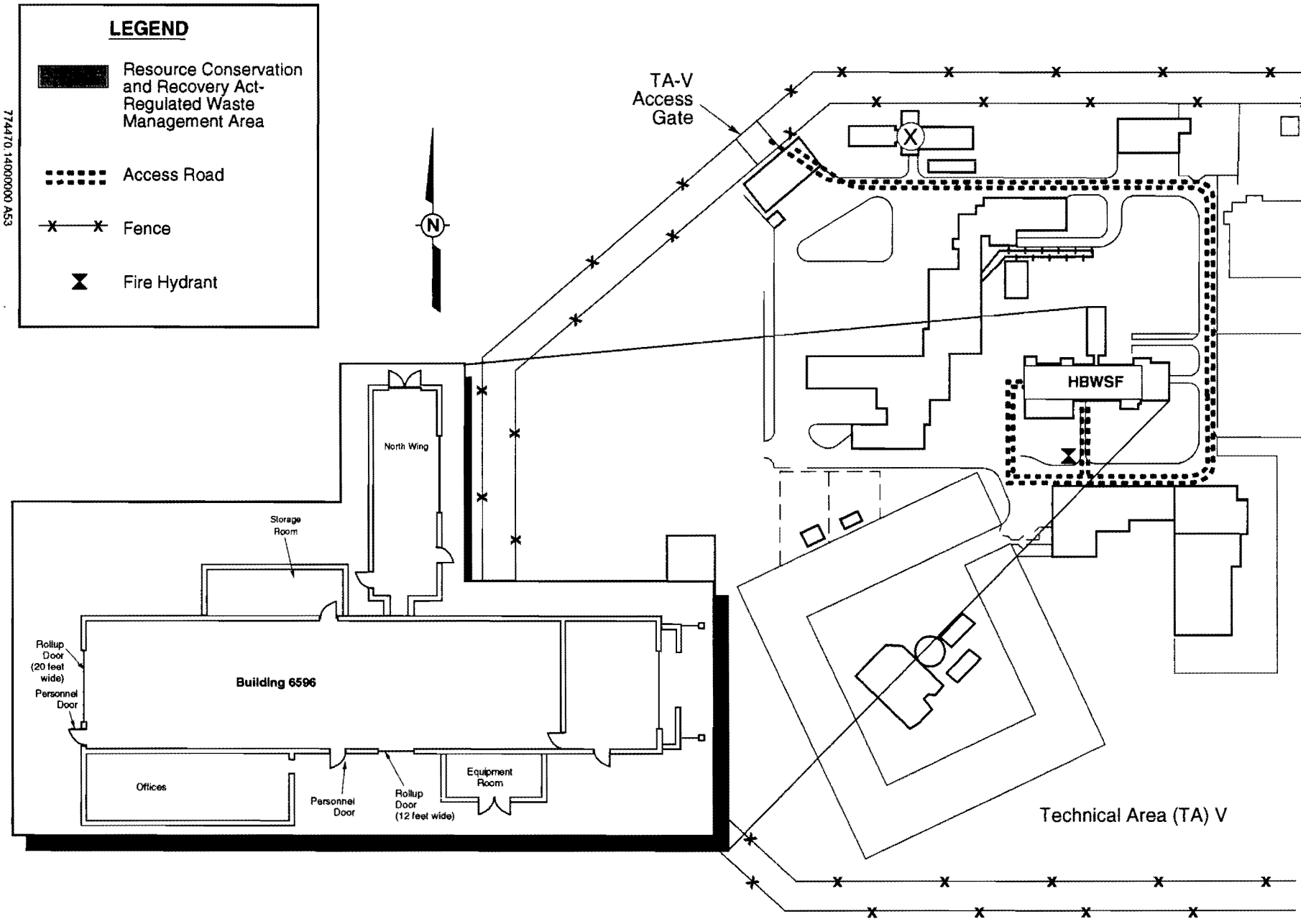


Figure 8
High Bay Waste Storage Facility, Evacuation Routes



Not to Scale

Figure 9
High Bay Waste Storage Facility, Emergency Response and Access Information

774470.14000000.A53

Sandia National Laboratories/New Mexico
Auxiliary Hot Cell Facility
Part B Permit Application

Module V

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... AHCF-iii
LIST OF FIGURES ..... AHCF-iv
ACRONYMS AND ABBREVIATIONS ..... AHCF-v
1.0 GENERAL UNIT OPERATIONS AHCF-1
1.1 Designated Waste Management Areas AHCF-1
1.1.1 Hot Cell AHCF-1
1.1.2 Work Area AHCF-1
1.1.3 Fume Hood AHCF-2
1.1.4 Storage Silos AHCF-2
1.1.5 Container Storage AHCF-2
1.2 Unit Operations AHCF-3
1.2.1 Operation of Containment Systems AHCF-3
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes AHCF-4
1.2.3 Preparedness and Prevention AHCF-4
1.2.3.1 Required Equipment AHCF-4
1.2.3.2 Testing and Maintenance of Equipment AHCF-5
1.2.3.3 Access to Communications or Alarm Systems AHCF-5
1.2.4 Hazards Prevention AHCF-5
1.2.4.1 Preventing Hazards in Unloading AHCF-5
1.2.4.2 Preventing Runoff or Flooding AHCF-6
1.2.4.3 Preventing Contamination of Water Supplies AHCF-6
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages AHCF-6
1.2.4.5 Preventing Undue Exposure AHCF-6
1.2.4.6 Preventing Releases to the Atmosphere AHCF-6
1.3 Container Storage Practices AHCF-7
1.3.1 Container Types and Labeling AHCF-8
1.3.2 Container Handling AHCF-8
1.3.2.1 Condition of Containers AHCF-8
1.3.2.3 Compatibility of Waste with Containers AHCF-8
1.4 Treatment Operations AHCF-8
2.0 UNIT DESCRIPTION AND INFORMATION AHCF-9
2.1 Security Procedures and Equipment AHCF-9
2.1.1 Barriers and Means to Control Entry AHCF-9
2.1.2 Warning Signs AHCF-10
2.2 Traffic Pattern, Volume, and Controls AHCF-10
2.2.1 Traffic Patterns AHCF-10
2.2.2 Traffic Volumes AHCF-10
2.2.3 Traffic Control Signals AHCF-10
2.3 Unit Location Information AHCF-11
2.3.1 Seismic Standard AHCF-11
2.3.2 Floodplain Standard AHCF-11
2.4 Topographic Maps AHCF-11
2.5 Groundwater Monitoring AHCF-12

TABLE OF CONTENTS (Concluded)

3.0 WASTE ANALYSIS PLAN AHCF-13
4.0 INSPECTION PLAN AHCF-14
5.0 PERSONNEL TRAINING AHCF-17
6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE AHCF-18
7.0 CLOSURE PLAN AHCF-21
7.1 Estimate of Maximum Waste in Storage AHCF-21
7.2 Closure Conditions AHCF-21
7.3 Closure Schedule AHCF-21
8.0 TREATMENT PLAN AHCF-22
9.0 REFERENCES AHCF-23

LIST OF TABLES

Table No.	Title
1	Fire Suppression System at the Auxiliary Hot Cell Facility
2	Auxiliary Hot Cell Facility Inspection Criteria and Frequency
3	Auxiliary Hot Cell Facility, Emergency Equipment and Locations
4	Auxiliary Hot Cell Facility, Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Auxiliary Hot Cell Facility at Sandia National Laboratories/ New Mexico
2	Location of the Auxiliary Hot Cell Facility (AHCF) in Technical Area (TA) V
3	Auxiliary Hot Cell Facilities, Resource Conservation and Recovery Act-Regulated Waste Management Areas
4	Auxiliary Hot Cell Facility, Traffic Routes and Controls
5	Topographic Map, Auxiliary Hot Cell Facility
6	Auxiliary Hot Cell Facility, Access Control Features
7	Auxiliary Hot Cell Facility, Drainage Control Features
8	Auxiliary Hot Cell Facility, Evacuation Routes
9	Auxiliary Hot Cell Facilities, Emergency Response and Access Information
10	Auxiliary Hot Cell Facility, Emergency Response and Access Information (Detail)

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
AHCF	Auxiliary Hot Cell Facility
DOE	U.S. Department of Energy
ft	foot/feet
HEPA	high-efficiency particulate air
HSWA	Hazardous and Solid Waste Amendments
ID	inner diameter
in.	inch(es)
m^3	cubic meter
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	technical area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO AUXILIARY HOT CELL FACILITY PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Auxiliary Hot Cell Facility (AHCF) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage and treatment operations at the AHCF. 20 NMAC 4.1.500 and .900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this AHCF Part B Permit Application.

In both the SNL/NM General Part A (SNL/NM, 2002) and SNL/NM General Part B (SNL/NM, 2003a) submittals and this module, a Unit to be permitted may sometimes be referred to as a "facility" (e.g., AHCF). The term "facility," as it appears in this context, is used only to denote a building or Unit name and does not imply the regulatory meaning of "facility" as defined in 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00]. However, pursuant to 20 NMAC 4.1.100/40 CFR 260.10 [6-14-00], the SNL/NM site as a whole does meet the regulatory definition of a facility.

The AHCF occupies 5578 square feet in Building 6597 in Technical Area (TA)-V Operations include storage of RCRA-regulated wastes in containers and treating the wastes as needed to render them more suitable for shipment to off-site treatment and/or disposal facilities. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the AHCF. Sandia/DOE currently operate the AHCF under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by New Mexico Environment Department (NMED) (May 2002) and the Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

This section provides general descriptions of the AHCF waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention;
- Container storage practices; and
- Treatment practices.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

The location of the AHCF at SNL/NM is shown on Figure 1. The location of the AHCF within TA-V is shown on Figure 2. The AHCF will have five designated WMAs: the hot cell; the work area around the hot cell; the fume hood; the storage silos; and container storage in the High Bay (Figure 3). The following sections provide descriptions of the storage structure, location, and capacity of each WMA.

1.1.1 Hot Cell

Outside overall dimensions of the hot cell are 16 feet (ft), 8 inches (in.) square and 16 ft, 2 in. high. Inside space dimensions are 100 square feet with a height of 13-ft, 10-in. An 18-in. thick concrete foundation mat supports the hot cell. The hot cell walls are constructed of inner and outer, precast, 8-in. reinforced concrete panels. Threaded rods maintain the separation between inner and outer hot cell walls. The inner and outer wall panels are separated by a 24-in. space filled with common construction-grade sand. The roof is constructed of two 8-in. thick reinforced concrete panels with 12 in. of sand between them. Each individual roof panel is designed to structurally support one 5,000-pound point load. Each roof section supports a roof port and roof plug.

1.1.2 Work Area

The work area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. From time to time, a temporary tent-like room may be erected in the

work area north of the hot cell and east of the permanent shield wall to accommodate large packages. If the package must be handled remotely, the temporary room will be built directly against the permanent shield wall to allow the use of the manipulators. Each time the temporary room is erected, package-specific considerations will determine details of the design; however, basic construction will consist of polyvinyl chloride or metal framing, clear or translucent plastic roof and walls, and plastic doors. The temporary room will operate at a slight negative pressure. A motorized control damper will be opened to allow airflow to the temporary room.

1.1.3 Fume Hood

The 6-ft-wide walk-in fume hood, located north and east of the hot cell, can accommodate two 55-gallon drums placed side by side.

1.1.4 Storage Silos

Four 10-in. inside diameter (ID), 15-ft deep floor silos and two 30-in. ID, 15-ft deep floor silos are located in the work area north of the hot cell and east of the permanent shield wall (Figure 3). These silos have removable locking-type shield plugs. The tops of the silos are raised slightly above the general floor level to reduce the possibility for the entry of water into the silo.

Two additional storage silos are located within the hot cell. Each silo is 10-in. ID. One silo is 15-ft deep and the other is 11-ft, 8-in. deep.

The maximum waste storage capacity of the silos is 1,456 gallons.

1.1.5 Container Storage (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/ 40 CFR, Subpart I)

Containers of RCRA-regulated waste will be stored in the High Bay. Containers holding RCRA-regulated liquid wastes will be stored on portable spill pallets and pans covered with grating. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives and other liquids. The containers of liquids (typically 5- to 30-gallon capacity) will be stored on the grating. Any liquids released from the containers will drain through the grating into the tub. The pallets come in various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b][6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the building, and by the slope of the asphalt pavement and gravel-covered soil surface outside the building that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/ 40 CFR 264.175(b)(4).

The High Bay is also equipped with a system of floor trenches covered with grating. These trenches are not used to provide secondary containment.

The waste storage capacity is 2,200 gallons.

1.2 Unit Operations

The AHCF WMAs will be used to store and/or treat any of the wastes bearing U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002). RCRA-regulated waste constituents are typically solvents, and toxic metals. The RCRA-regulated wastes managed at the AHCF will be primarily those whose characteristics (e.g., exceeding size or weight limitations at other Units, requiring remote handling for personnel protection) make that waste unsuitable for management at the SNL/NM Radioactive and Mixed Waste Management Facility.

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes; preparedness and prevention; and, hazards prevention requirements are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 270.14[b][8][ii] and 270.15[a] and [b]; 20 NMAC 4.1.500/40 CFR 264.175[b][5])

Liquid wastes released from individual containers will accumulate in the spill pallets. Unit personnel will begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel will attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

The floor trenches are not used for secondary containment, and Sandia/DOE do not anticipate that liquid RCRA-regulated wastes would enter the trenches. RCRA-regulated waste liquids would only be released from containers of stored liquid wastes, and the largest single container would contain 122 gallons. The liquid would be contained in the trench, and would be handled as described above upon discovery.

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/ 40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the AHCF. Unit personnel employ the practices described in Section 1.1.2 of the SNL/NM General Part B (SNL/NM, 2003a). Additional AHCF-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the Unit.

- Forklifts are not used for waste movement near treatment operations involving ignitable or reactive wastes to minimize potential sources of ignition while containers are or may be open.

- Wastes are mixed together on a very limited basis during the treatment and repackaging operations at the Unit. Ignitable and reactive wastes are treated or mixed on a case-by-case basis. Unit personnel plan each such operation carefully to identify the hazards and potential consequences as described in Section B.5. Personnel use waste characterization data and/or published chemical information (e.g., NIOSH Pocket Guide to Chemical Hazards or other chemical or engineering handbook) for each waste in the planning process. Personnel then conduct the operations according to the plan in order to control the hazards and prevent uncontrolled reactions. Treatment operations are described in Appendix G of the General Part B (SNL/NM, 2003b).

- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

1.2.3 Preparedness and Prevention (20NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the AHCF.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

Information about fire hydrants is provided in Section 1.1.3.1 of the General Part B (SNL/NM, 2003a). The fire hydrants closest to the AHCF are shown in Figure 11.

The high bay of Building 6597 is equipped with an automatic fire suppression system; summarized below:

Table 1
Fire Suppression System at the Auxiliary Hot Cell Facility

Building	Applicable NFPA Standard[a]	Sprinkler Design Occupancy Classification	System Type	Sprinkler Actuation[b]
6597	13	Storage	Automatic sprinkler, wet pipe	GB/FS

[a] See references
[b] Sprinklers are either glass bulb or fusible solder type, typically designed to open at temperatures of 155ºF or higher.

Information on other required equipment located at the AHCF is provided in Section 6 and Table 3 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the AHCF is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the AHCF is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the AHCF to prevent hazards. Additional information applicable to the AHCF and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

AHCF personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent hazards in unloading. Unit personnel will typically perform loading and unloading activities just outside the rollup door on the north side of the WMA (Figure 6). The pavement is level and in good condition, and there is sufficient room for operating vehicles and equipment.

Drums and other larger containers will typically be strapped together on a pallet before being loaded onto vehicles. Containers will typically be transported within the Unit with drum dollies or pallet jacks.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

The land surrounding the AHCF slopes gently toward the west. Sheet-flow runon of surface water from surrounding areas outside the TA is prevented from entering the TA by a diversion berm east of TA-V that diverts storm water to the north and south.

The floor of the high bay in Building 6597is slightly higher than the surrounding ground, serving to direct storm water away from the building. The asphalt and concrete pavement around the AHCF slopes toward a storm drain that directs stormwater toward the west.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the AHCF will affect water supplies, as described in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a).

The AHCF is equipped with a minimum of 90 minutes of general emergency lighting along the paths of egress. With respect to RCRA-regulated waste management operations, backup power to the chain hoist will be required only during the short periods that the bridge crane is being used for an in-air transfer of RCRA-regulated waste. The bridge crane locks in place and is inoperable during a power outage. Portable generators can provide backup power to the chain hoist whenever the bridge crane is in use. The chain hoist, and tethers if necessary, will be used to lower any suspended packages to a safe configuration until power is restored. No other AHCF systems require redundant power supplies.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

AHCF personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

AHCF personnel employ the practices described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent releases to the atmosphere.

Sandia/DOE do not routinely manage hazardous wastes with organic concentrations ≥10 percent by weight in process equipment identified in 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00]. Equipment used in such service at the AHCF will be used for less than 300 hours per calendar year and is therefore exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264.1052 through 1060 [6-14-00] as noted in 20 NMAC 4.1.500/40 CFR 264.1050(f) [6-14-00]. The equipment use will be noted in the AHCF operating log.

The WMAs at the AHCF are typically used solely for the storage and/or treatment of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the AHCF will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/ 40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposed described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(3) [6-14-00].

The exhaust system for Building 6597 (Zone 2) is separate from that of the Hot Cell, the Fume Hood, and the Temporary Room (Zone 1). The Zone 1 AHCF ventilation system is a stand-alone system. It does not tie into Building 6597 mechanical systems.

The ventilation system shown on Figure 3 serves the Zone 1 components. The system is designed to accommodate air flow from the process areas: The fume hood, the hot cell, and the Temporary Room (if one is set up) through a two-stage high-efficiency particulate air (HEPA) filter train (Figure 3). The ventilation system will maintain airflow from Zone 2 to Zone 1.

Balancing dampers, and flow and pressure instrumentation have been installed for proper airflow balancing to ensure ventilation-system function and worker safety. The dampers will set the airflow at the design set point. Instrumentation allows workers to monitor airflow during operations. The exhaust fan discharges to a vertical exhaust stack.

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR 264 Subpart I)

Container storage practices applicable to the AHCF are presented in the following sections.

1.3.1 Container Types and Labeling

RCRA-regulated waste containers stored at the AHCF are most often strong, tight containers such as steel drums, steel boxes, wooden crates, plastic containers, casks, and cylinders.

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

Routine container handling will not be conducted at the AHCF. Instead, a preliminary assessment of each package will be made to determine a safe and appropriate handling plan. An initial assessment of package contents will be made using process knowledge. Storage containers may be unpacked either behind the shield wall, in the fume hood, or in the hot cell, depending on the nature of the contents.

1.3.2.1 *Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)*

The condition of containers at the AHCF is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

AHCF personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 2003a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than three pallets high. Box-shaped containers may be stacked three high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Compatibility of Waste with Containers (20 NMAC 4.1.500/40 CFR 264.172)

AHCF personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 2003a).

1.4 Treatment Operations

Treatment practices applicable to the AHCF are presented in Section 8 of this module.

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of 20 NMAC 4.1.100–900/ [6-14-00]. 40 CFR 260–266, 268, and 270.The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the AHCF.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The doors to Building 6597 are kept closed and locked. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the SNL/NM Technical Area gates during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the AHCF RCRA-regulated WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The AHCF is located inside TA-V (Figures 1 and 2). TA-V is enclosed by 8-ft-high standard security chain-link fences topped with barbed wire. Regular entries into and exits from TA-V are through Building 6577, the Perimeter Access Building, or through the adjoining vehicle gate.

TA-V access control procedures assure that only properly identified and authorized persons, vehicles, and property are allowed entrance to and exit from TA-V.

2.1.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

Building 6597 and the entrance to the AHCF are posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from any approach to Building 6597, including the AHCF WMAs.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the AHCF include Wyoming Boulevard, Hardin Boulevard (formerly O Street), P Street, and Pennsylvania Avenue. Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. A two-lane paved road to TA-V turns southwestward off Pennsylvania Avenue at a point just over 5 miles south of the Wyoming Entrance gate.

Waste transport vehicles travel along a 2-lane asphalt-paved drive to enter TA-V from the two-lane paved road as shown on Figures A-4 and A-6 in Appendix A (SNL/NM, 2002c) of the SNL/NM General Part B (SNL/NM, 2003b). Vehicles must stop at a gate prior to entering or leaving TA-V. Within TA-V, waste is transported on asphalt- or concrete-paved surfaces (Figure 4).

2.2.2 Traffic Volumes

Traffic volumes on Wyoming Boulevard, Hardin Boulevard, and P Street are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 5 vehicles typically travel to the AHCF per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the AHCF.

2.2.3 Traffic Control Signals

Within TA-V, there are no traffic control signals or signs. Vehicles must stop at the vehicle gate prior to entering or leaving TA-V. Vehicle presence within TA-V is limited to waste transport

and other work vehicles. Therefore, signals or signs are not necessary to control traffic within TA-V.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii]; 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the AHCF are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the AHCF are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).

- Surface waters, including intermittent streams, near the AHCF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).

- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the AHCF is occupied by other Sandia-controlled operations (industrial land use).

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the AHCF) is provided as Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the AHCF (e.g., fences, gates) are shown on Figures 5 and 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the AHCF are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 5 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).

- The location of the AHCF and associated WMA structures, loading and unloading areas, roads, and sanitary sewers at the AHCF are shown on Figures 5 and 6 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]).

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00].

- Locations of the AHCF and AHCF WMAs are shown on Figures 3 and, 5of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the AHCF. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the New Mexico Environment Department at these scales and contour intervals due to the size of the AHCF, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c]; 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of the Sandia/DOE comprehensive Part B permit request. The AHCF is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor is the AHCF likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

In accordance with 20 NMAC 4.1.900/ 40 CFR 270.14[b][2]; 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis"; and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping," [6-14-00], waste analysis requirements applicable to all Units, including the AHCF, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] require that waste management areas (WMAs) and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2003b). AHCF personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 2, with the inspection criteria and frequency. The items listed in the table are inspected in each AHCF WMA.

Automatic fire suppression systems are included in Table 2. Unit personnel check to see that the systems are present. Sandia/DOE personnel also test the systems in accordance with the requirements of NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," as described in Section 1.1.3.2 of the General Part B (SNL/NM, 2003a).

Performing inspections of all areas at the AHCF where RCRA-regulated wastes are handled may expose Unit personnel to unnecessary radiation. In order to maintain the radiation exposure to levels as low as reasonably achievable (ALARA), Sandia/DOE will conduct alternative inspections of the storage silos. Instead of inspecting the silos directly, Unit personnel will visually inspect RCRA-regulated waste containers or packages before they are placed in the silos and when they are removed from the silos. If Unit personnel do not observe any indications of damage to or release from the RCRA-regulated waste items as they are removed from the silos, that will be considered sufficient to determine that there have not been releases of RCRA-regulated wastes. The visual inspection may be conducted from a remote area to maintain ALARA conditions for the Unit personnel.

Equipment subject to the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart BB [6-14-00] will be used less than 300 hours per year. Equipment use will be documented during inspections, as appropriate.

Table 2
Auxiliary Hot Cell Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Eye wash / safety shower	Operational and in good condition	Monthly
Spill control equipment	Present, quantities per inventory, and in good condition	Monthly
Personal protective equipment	Present, quantities per inventory, and in good condition	Monthly
Fire alarm pull station(s)	Present, accessible, and in good condition	Monthly
Fire alarm(s)	Present	Monthly
Telephone(s)	Present and operational	Monthly
Fire extinguisher(s)	Present, charged, accessible, and in good condition	Monthly
Fire sprinklers and system	Present, appears to be in good condition, sprinklers not obstructed	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Building / storage area floor	Clean, no spills, cracks, or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Building walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Building ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Building lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, free of cracks, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
Treatment area	Good condition, clean, uncluttered, no spills	Prior to treatment event. Monthly otherwise.
Treatment equipment	Good condition (i.e., no releases or deterioration); fume hood, drum, and room ventilation flows within established parameters	Prior to treatment event. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled.* Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled.* Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled.* Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled.* Weekly otherwise.

Table 2 (Concluded)
Auxiliary Hot Cell Facility Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled.* Weekly otherwise.
Location	Correct aisle space, correct stacking (3 maximum)	Daily for individual containers that were handled. Weekly otherwise.

* Note: Containers will be inspected prior to placement into and immediately following removal from a storage silo.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C. The inspection plan (Appendix C and this section) and inspection records for the current calendar year are maintained in Building 6597 or in the TA-V electronic facility documentation system. Inspection records for previous calendar years are maintained in department offices of AHCF personnel or the SNL/NM Records Center.

5.0 PERSONNEL TRAINING

Training requirements for Unit personnel are specified in 20 NMAC 4.1.900/ 40 CFR 270.14[b][12], and 20 NMAC 4.1.500/40 CFR 264.16, [6-14-00] "Personnel Training." The Sandia/DOE training program is designed and implemented to prepare personnel to operate and maintain safely those areas used for managing RCRA-regulated waste. The training program applies to all employees of the DOE, Sandia, and any subcontractors who have responsibility for the day-to-day management of RCRA-regulated waste at the AHCF.

AHCF personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units" provided as Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

Only the following job descriptions identified in Appendix D, Table D-2 are applicable at the AHCF: Training Director, Project Leader, Emergency Coordinator, Chemist, Field Technician, Special Projects Staff, Inspector, and Unit Operations Support Staff.

Training records for AHCF personnel are maintained in the department offices of AHCF personnel.

6.0 CONTINGENCY PLAN AND EMERGENCY RESPONSE

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia /DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental AHCF-specific information is included in this section, in Figures 8, 9, and 10, and in Tables 3 and 4 of this module.

The AHCF is located in the northeast (high bay) part Building 6597 in TA-V at SNL/NM and is used to repackage, store, and treat RCRA-regulated wastes. Building 6597 is a concrete masonry unit building with a roof height of XXX feet. The AHCF includes five WMAs:

- The hot cell is constructed of precast concrete with a stainless steel lining. A permanent shield wall extends north of the cell. The cell is used for repackaging and treatment.
- The work area is located in the corner of the high bay north and east of the hot cell and the permanent shield wall. Waste management activities in the work area include storage and treatment and may require the use of a temporary room.
- A 6-ft-wide walk-in fume hood, located north and east of the hot cell, can be used for storage and treatment.
- Eight floor silos (six in the work area and two in the cell) can be used for storage.
- Containers of RCRA-regulated waste may also be stored in the area immediately surrounding the cell.

RCRA-regulated wastes bearing the U.S. EPA Hazardous Waste Numbers listed in the General Part A (SNL/NM, 2002) may be stored and/or treated at the AHCF WMAs. Wastes will be segregated according to compatibility groups.

During an emergency, Unit personnel will evacuate the unit as described in Section E.5.2 of the Site-wide Contingency Plan. In addition, Unit personnel may choose to implement a coordinated evacuation of all of TA-V. To notify all TA-V personnel, Unit personnel would activate the TA-V alarm located on the north wall of the high bay area of the building.

During an emergency, Sandia security officers provide unimpeded access for authorized personnel as directed by the IC. Security officers also provide additional emergency assistance as required by the IC. Personnel who are authorized to enter TA-V in case of emergencies are members of the SNL/NM Emergency Response Organization, including medical personnel, the KAFB fire department, and Air Force security police.

Figure 8 presents the evacuation routes for the AHCF. Figures 9 and 10 present emergency response and access information for the AHCF. Table 3 lists the emergency equipment typically available at the AHCF. Table 4 lists the emergency coordinators for the AHCF.

Current copies of the Site-Wide Contingency Plan and this supplemental information are maintained in department offices of AHCF personnel, in the TA-V emergency control room, and at the SNL/NM Emergency Operations Center.

Table 3
Auxiliary Hot Cell Facility, Emergency Equipment and Locations

Building 6597

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Fixed shower/eyewash	Near north entrance
	Absorbent	Near north entrance
	Personal protective equipment	Near north entrance
Internal Communication and Alarm System	Voice communication	
	Fire alarm pull stations (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	One near each exit door
	Audible fire alarms	
External Communication System	Telephones	Building 6597
	Emergency public address system	
	Fire alarm pull stations (pulling handle sends signal to KAFB fire department, does not actuate sprinklers)	One near each exit door
Fire Extinguishers	Portable (A-B-C)	By personnel doors on the east, south, and west walls
Fire Suppression	Automatic wet-pipe sprinkler system with heat-actuated sprinklers	Coverage throughout the high-bay in Building 6597
	Manually-operated fire suppression system (Halon replacement)	Hot Cell
	Sprinkler head	Under fume hood
	Branch line from the Building 6597 sprinkler system	Temporary Room
	Water supplied by fire hydrant	One hydrant, location shown on Figure 9

Table 4
Auxiliary Hot Cell Facility, Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	John Garcia Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 284-3538 (office) (505) 540-5194 (pager)	(505) 243-5914
First Alternate	Jim Andazola Sandia National Laboratories P.O. Box 5800 Albuquerque, New Mexico	(505) 845-3107 (office) (505) 540-8271 (pager)	(505) 892-5120

One or more of these personnel are routinely available during normal work hours (8:00 am to 4:30 pm, Monday through Friday).

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/ 40 CFR 270.14[b][13], and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I, [6-14-00]. General closure information applicable to all RCRA-regulated Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003a). The general closure information includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time at the AHCF is estimated at 3,546 gallons of liquids and/or solids.

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the AHCF:

- RCRA-regulated waste handling and treatment activities involving the opening of waste containers were confined to the interior of the AHCF WMAs. If contamination occurred, it would have been confined to those areas.

- The interior walls and floors of WMAs were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

8.0 TREATMENT PLAN

In accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Section 900 (20 NMAC 4.1.900), adopting by reference the Code of Federal Regulations, Title 40, Part 270 including Section 270.23, revised June 14, 2000, treatment operations for RCRA-regulated wastes treated at the AHCF are described in Appendix G of the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," (SNL/NM, 2003b). The treatment technologies listed below and described in Appendix G may be used to treat RCRA-regulated wastes at the AHCF:

- Macroencapsulation,
- Stabilization,
- Chemical deactivation, and
- Mechanical processing.

The waste management areas at the AHCF, inside Building 6597, that are used for the treatment of RCRA-regulated wastes include the Hot Cell, the Fume Hood, and the Work Area.

All of the treatment at the AHCF will be batch treatment performed on single packages of waste (each package is one drum or less, or a package that can be placed in one of the silos).

The areas and treatment operations will meet the environmental performance standards described in Appendix G of the SNL/NM General Part B (SNL/NM, 2003b).

Treatment effectiveness for each waste stream will be determined through analysis or verification as described in Appendix B of the SNL/NM General Part B SNL/NM, 2003b) and Section 3 of this module.

9.0 REFERENCES

National Fire Protection Association (NFPA), 2002, "Standard for the Installation of Sprinkler Systems," NFPA 13, National Fire Protection Association, Quincy, Massachusetts.

National Fire Protection Association (NFPA), 2002, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," NFPA 25, National Fire Protection Association, Quincy, Massachusetts.

NIOSH Pocket Guide to Chemical Hazards, 1994. US Department of Health and Human Services, National Institute for Occupational Safety and Health.

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A–F in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

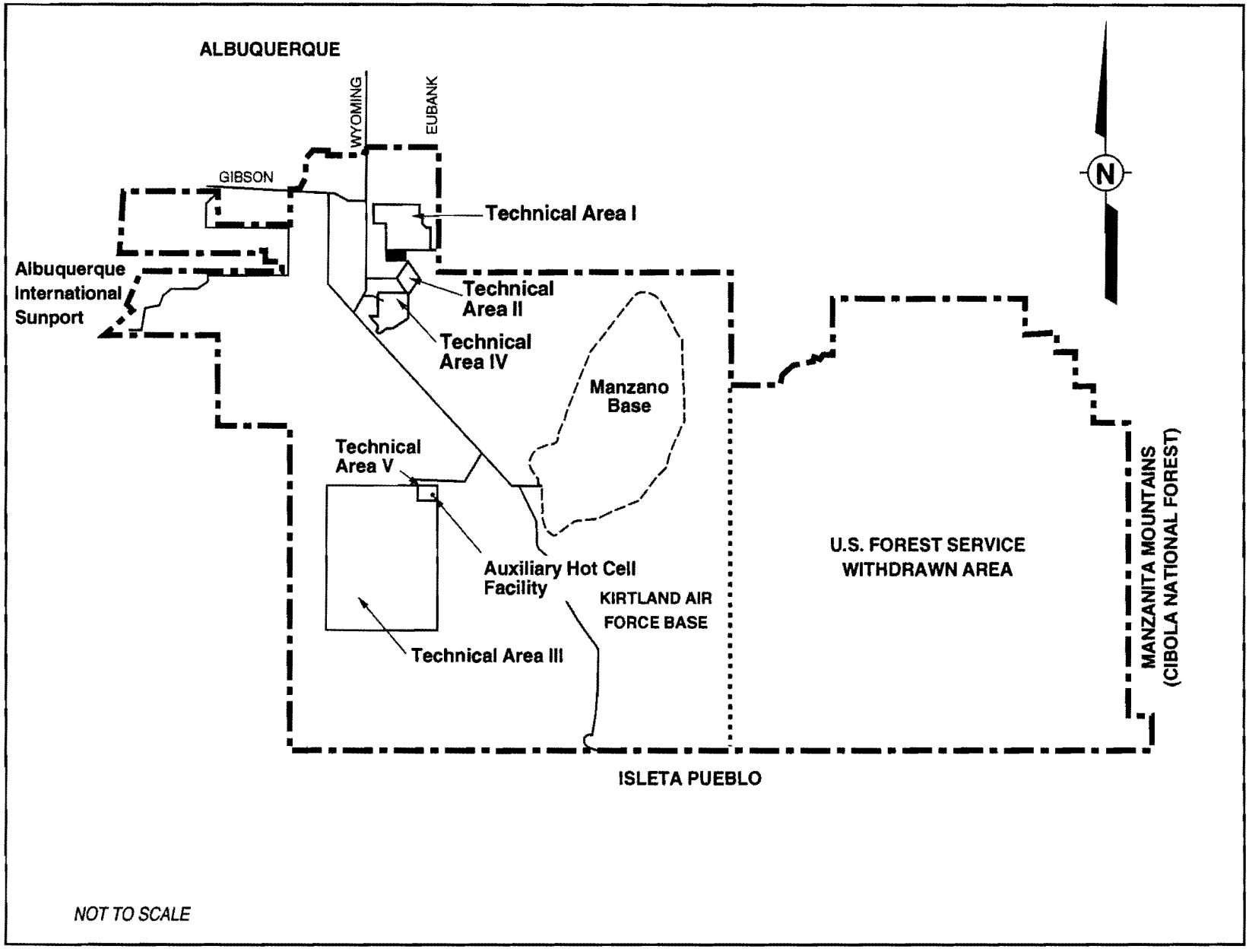


Figure 1
Location Map of the Auxiliary Hot Cell Facility at Sandia National Laboratories/New Mexico

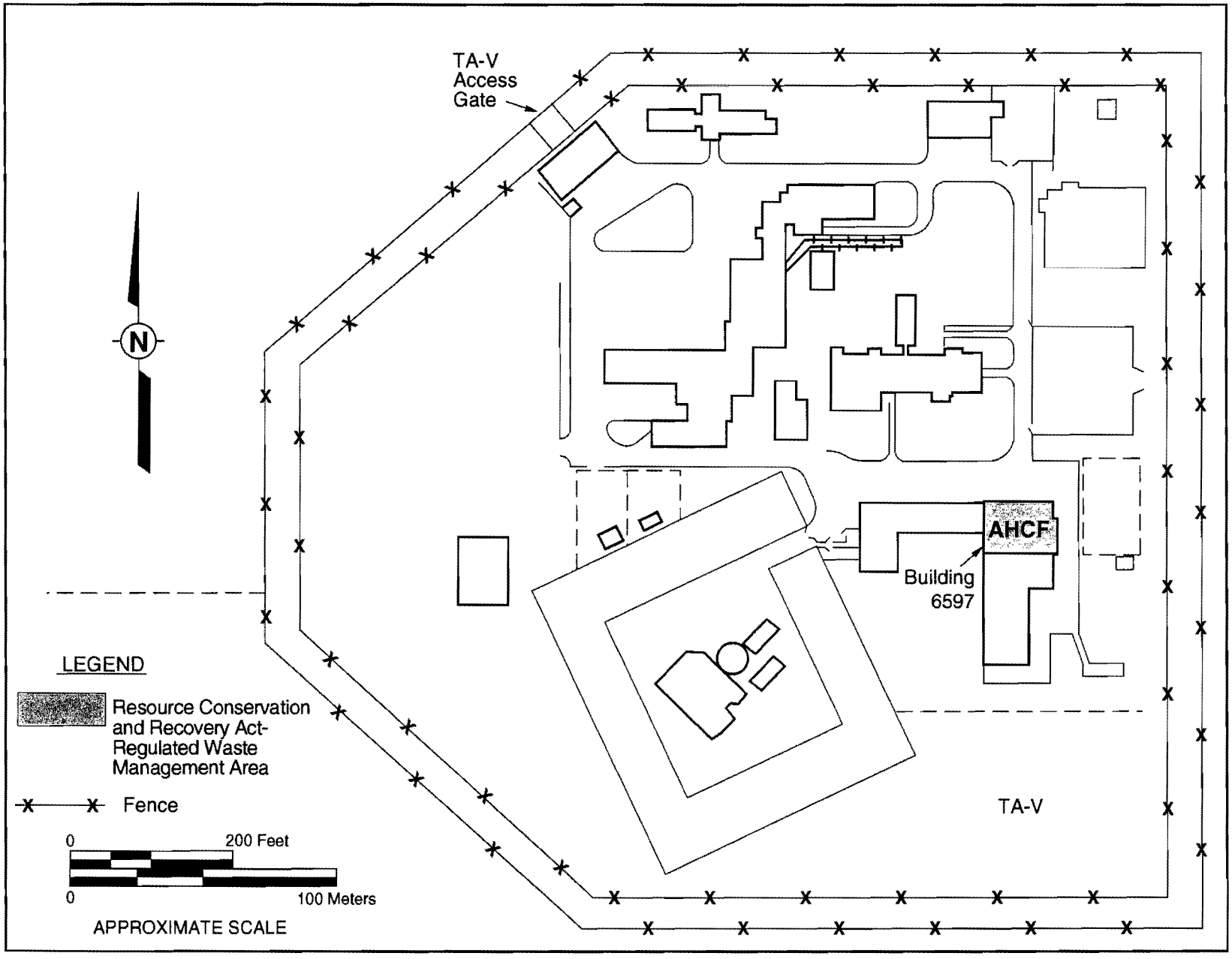
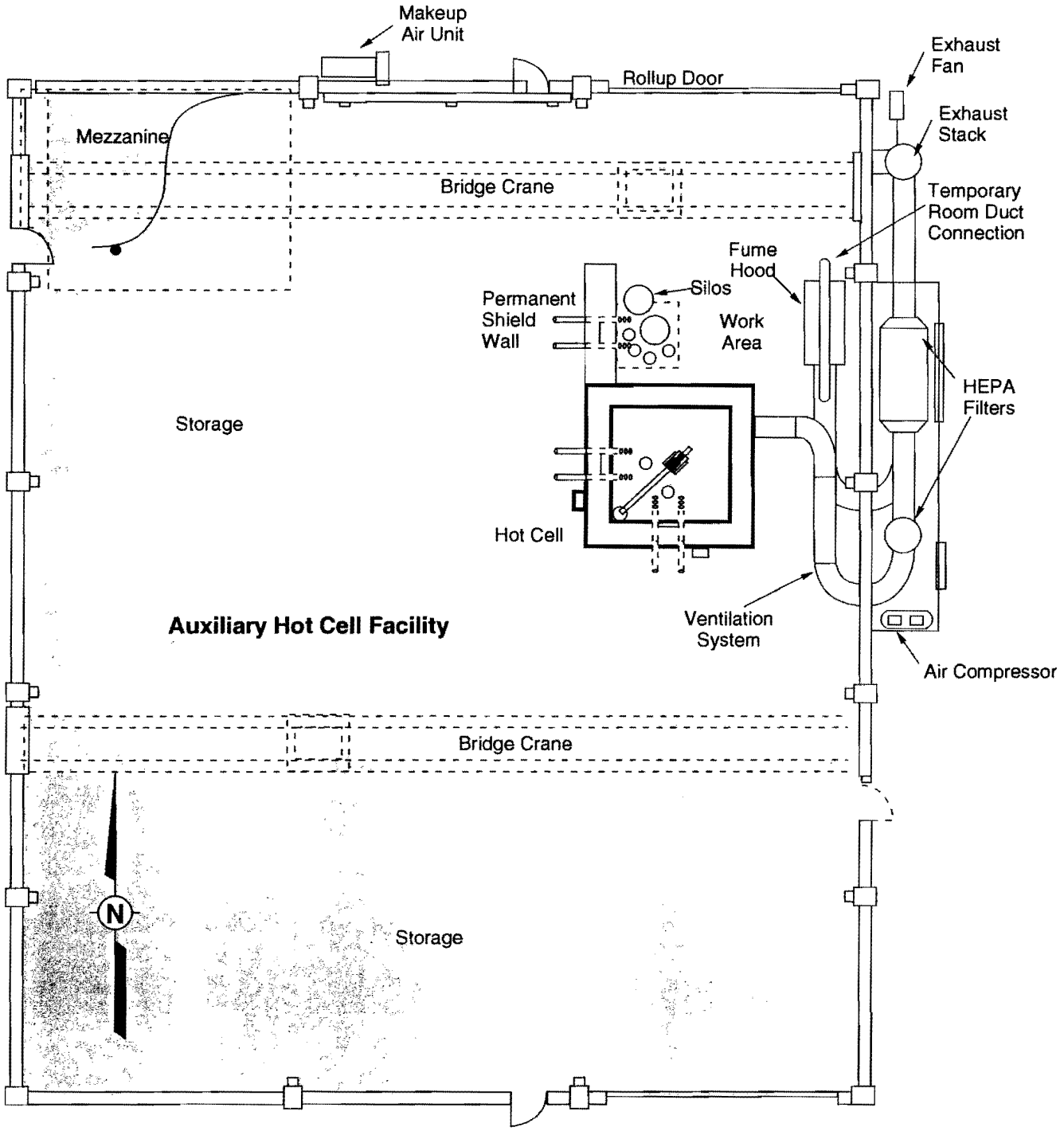


Figure 2
Location of the Auxiliary Hot Cell Facility (AHCF) in Technical Area (TA) V



LEGEND

Resource Conservation and Recovery Act-Regulated Waste Management Area

Figure 3
Auxiliary Hot Cell Facility,
Resource Conservation and Recovery Act-Regulated Waste Management Areas

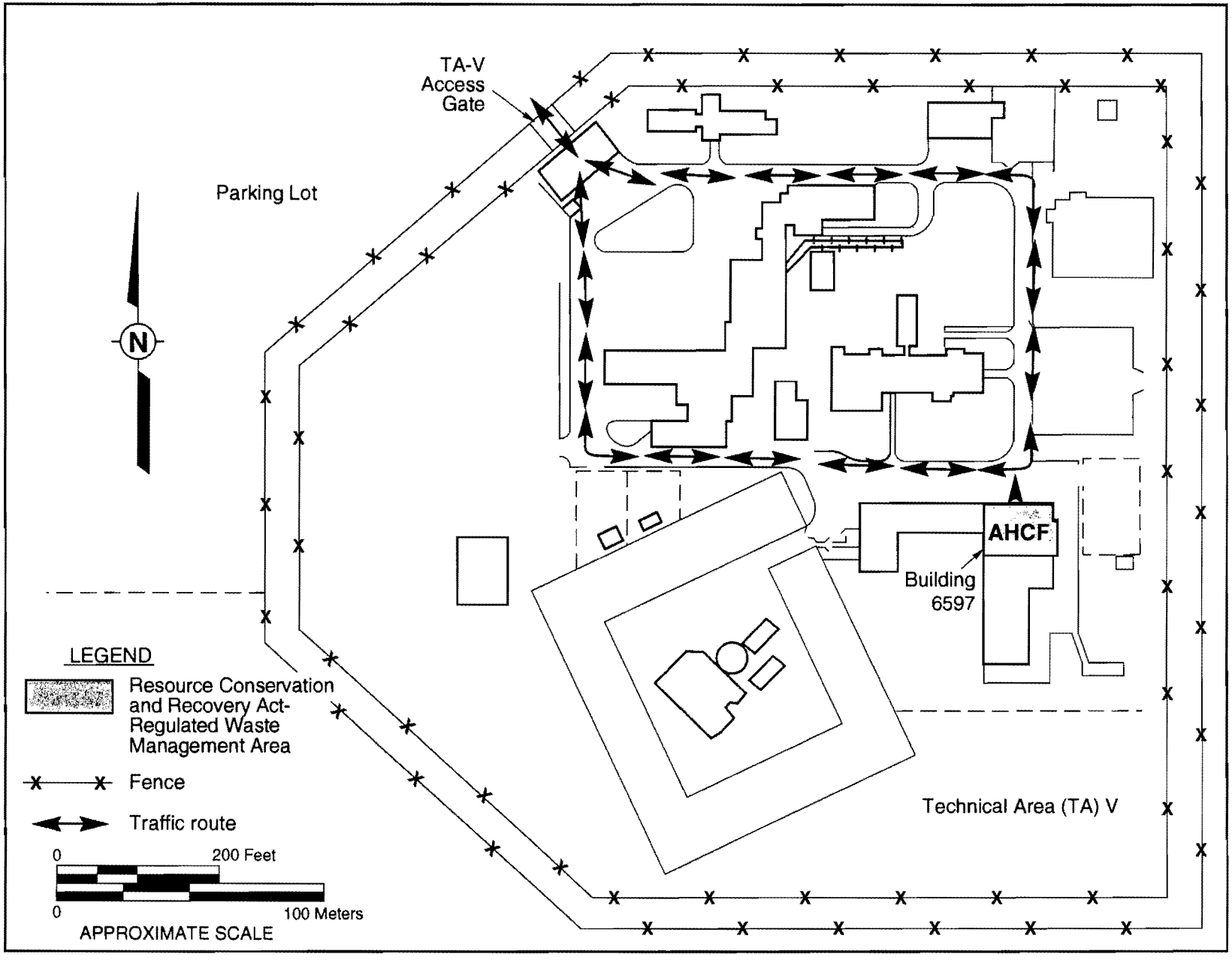


Figure 4
Auxiliary Hot Cell Facility (AHCF), Traffic Routes and Controls

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

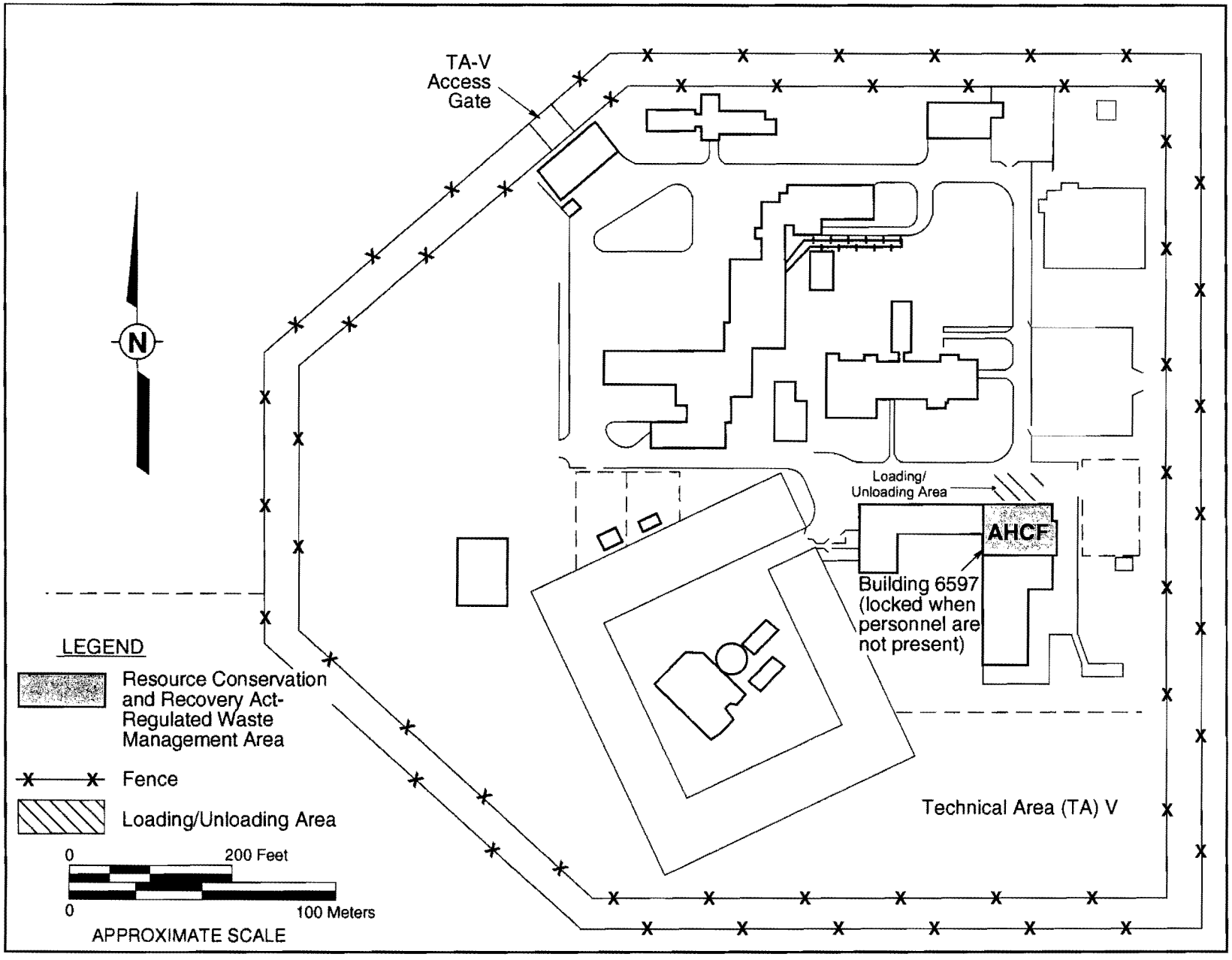


Figure 6
Auxiliary Hot Cell Facility (AHCF), Access Control Features

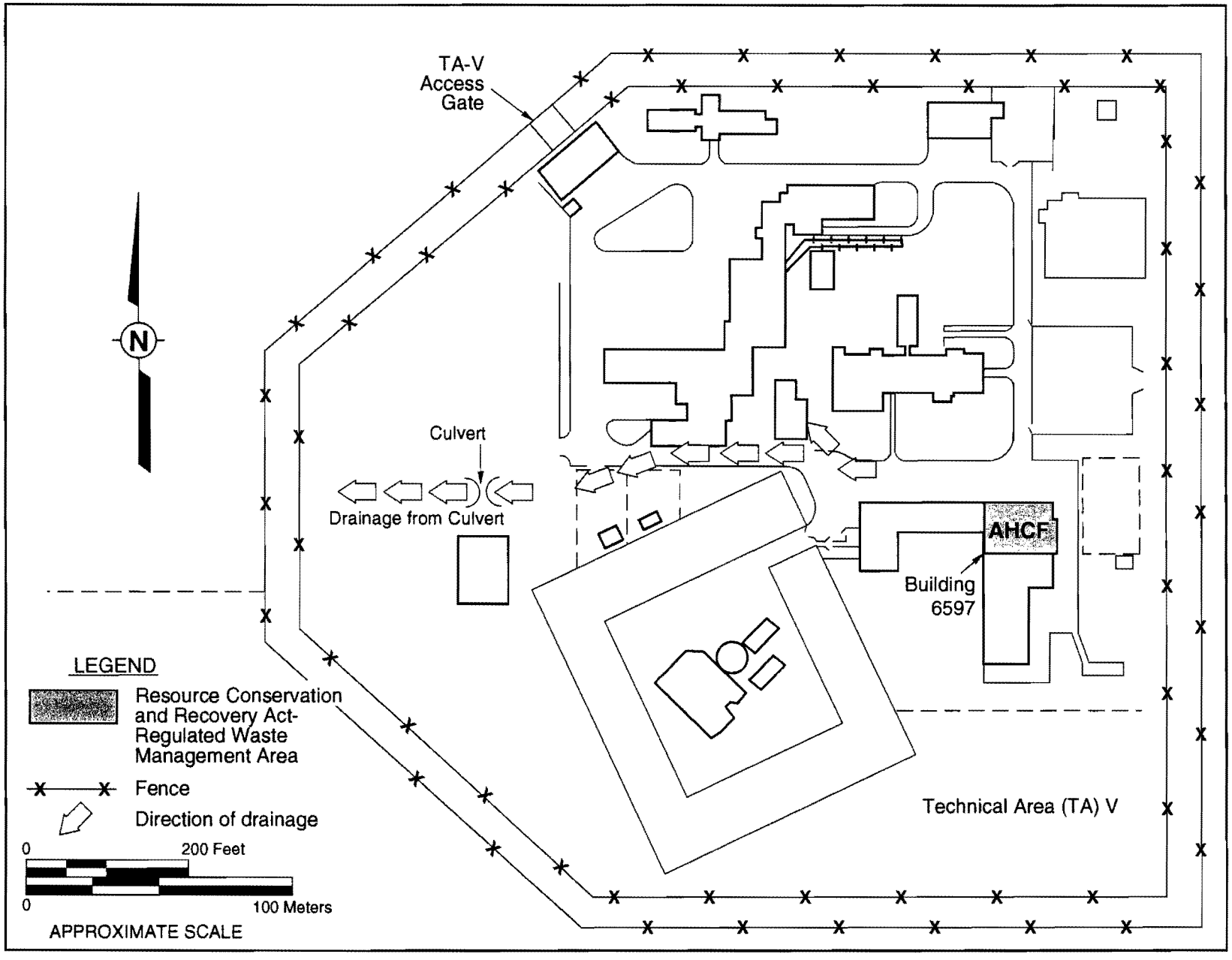


Figure 7
Auxiliary Hot Cell Facility (AHCF), Drainage Control Features

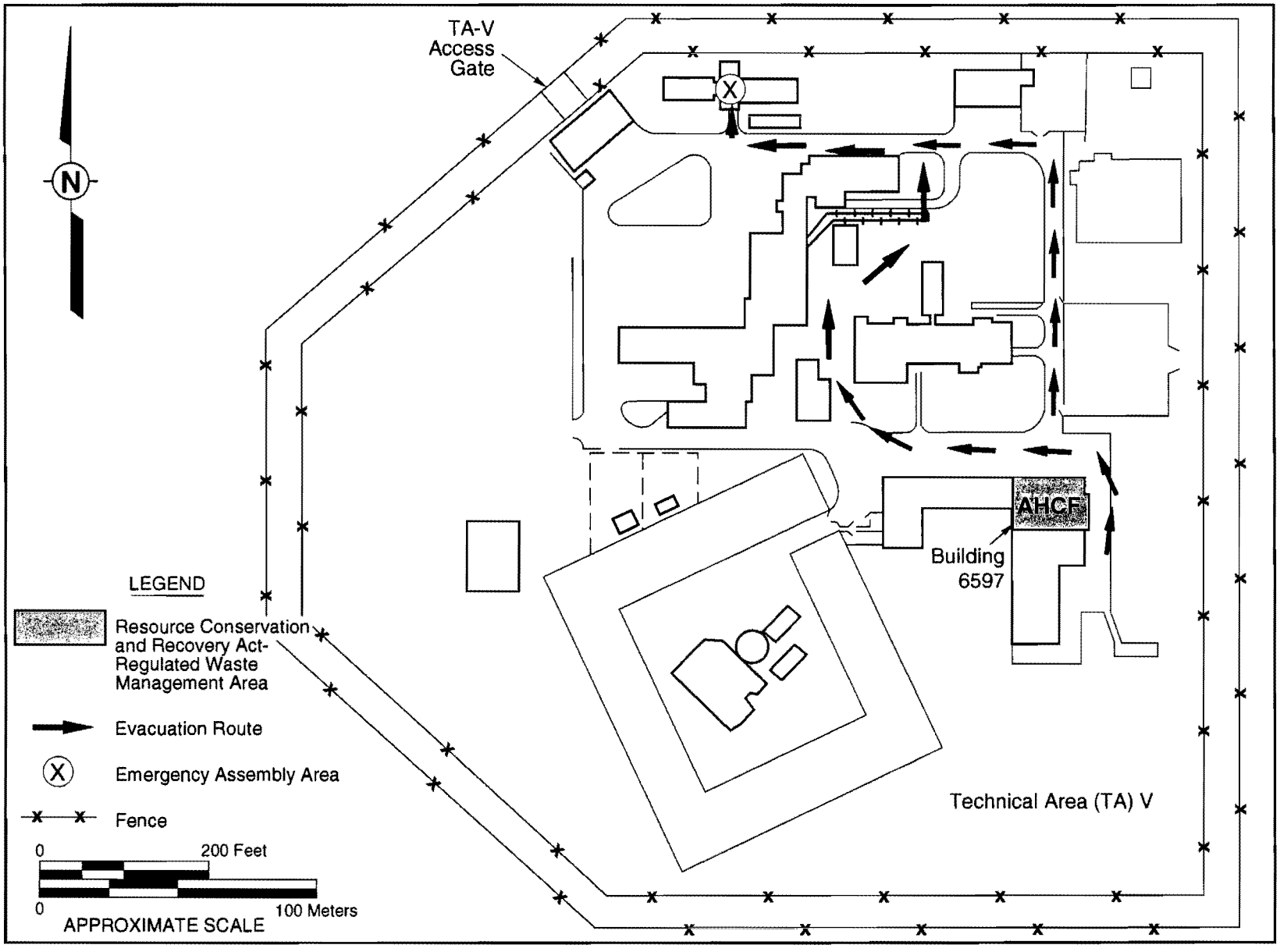


Figure 8
Auxiliary Hot Cell Facility (AHCF), Evacuation Routes

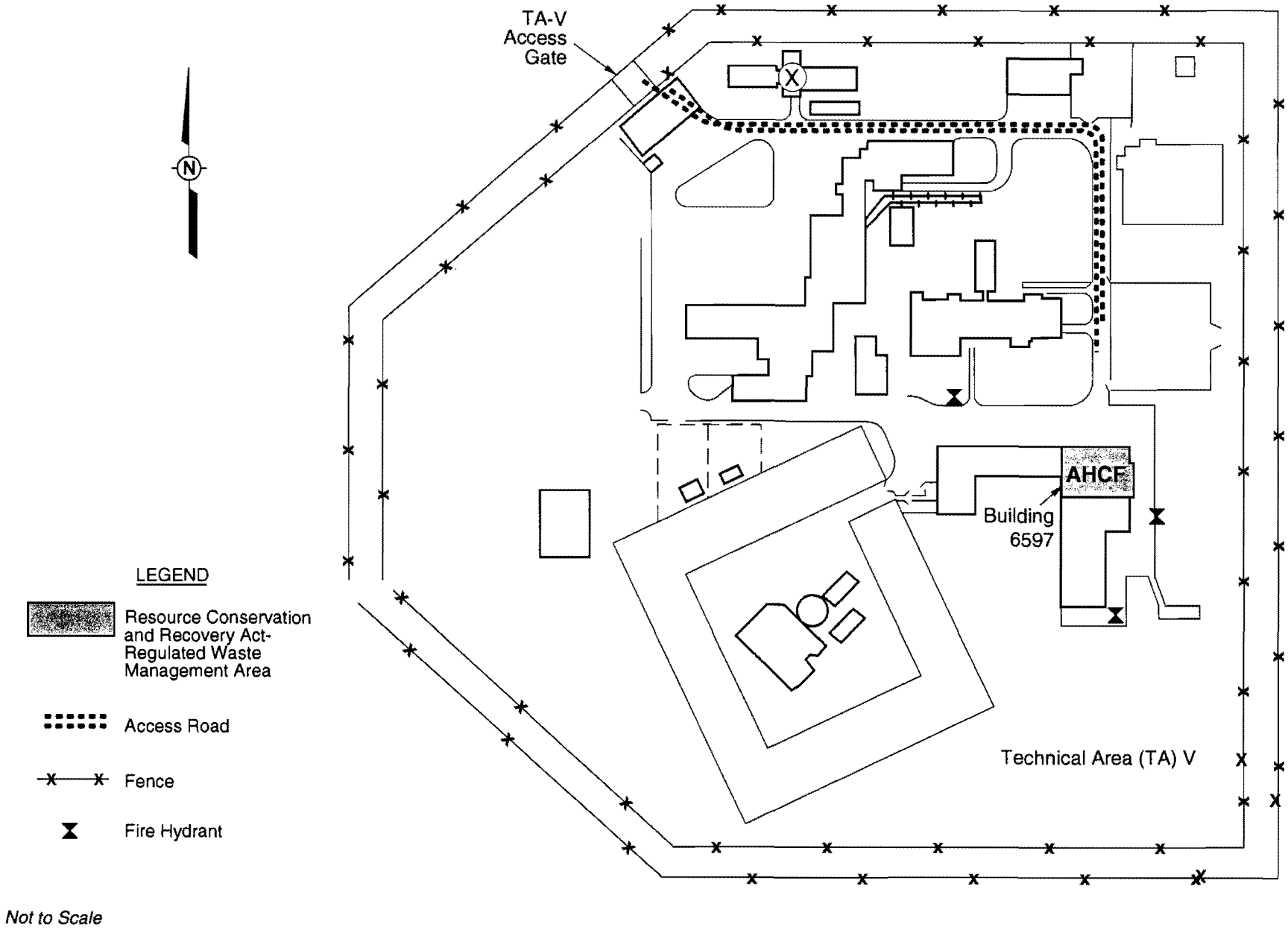
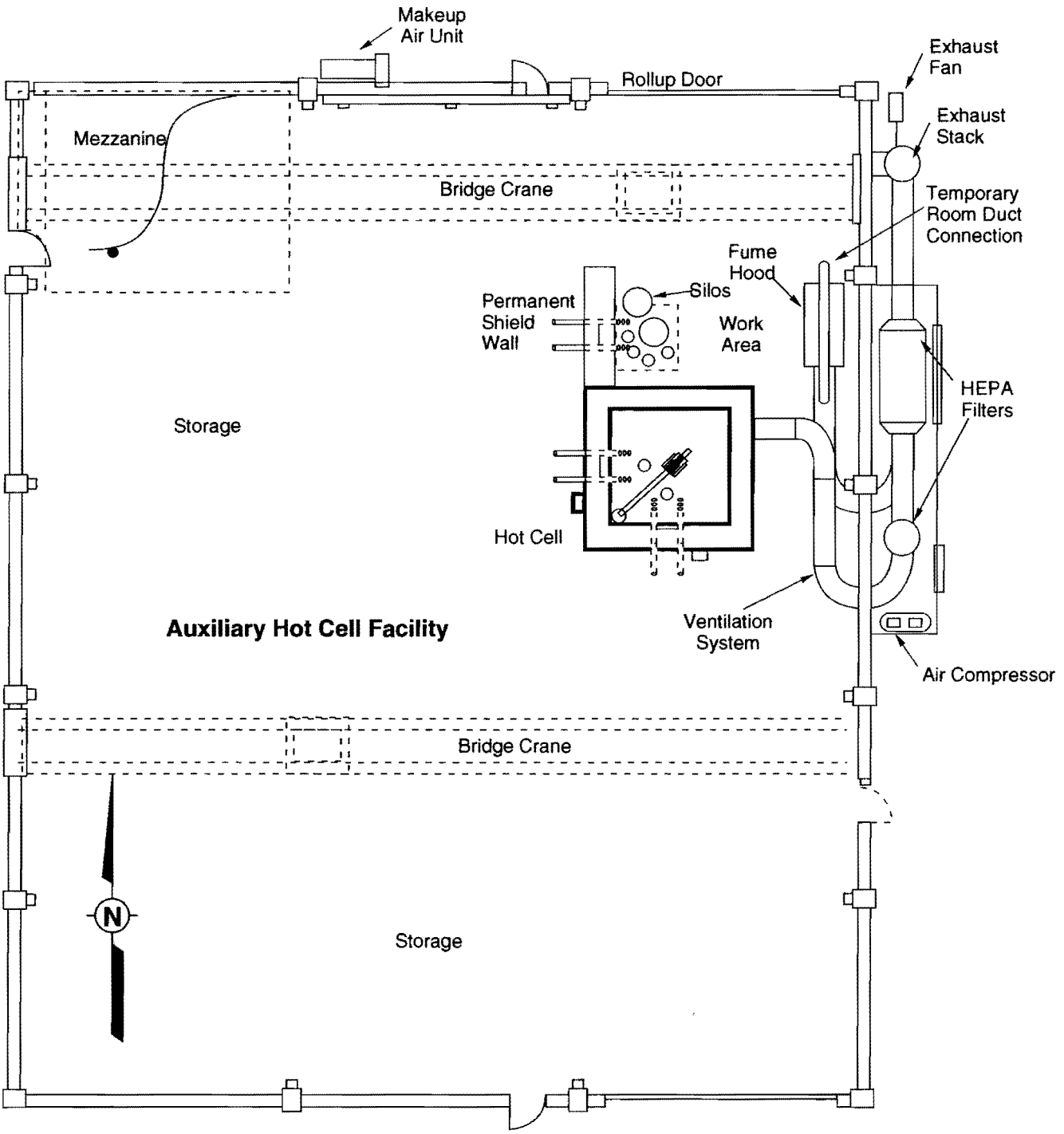


Figure 9
Auxiliary Hot Cell Facility (AHCF), Emergency Response and Access Information



LEGEND

Resource Conservation and Recovery Act-Regulated Waste Management Area

Figure 10
Auxiliary Hot Cell Facility, Emergency Response and Access Information (Detail)

Sandia National Laboratories/New Mexico
Manzano Storage Bunkers
Part B Permit Application

Module VI

Revision 2.0

February 2003

Prepared by
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185

Prepared for
The U.S. Department of Energy

TABLE OF CONTENTS

LIST OF TABLES ..... MSB-iii
LIST OF FIGURES ..... MSB-iv
ACRONYMS AND ABBREVIATIONS ..... MSB-v
1.0 GENERAL UNIT OPERATIONS MSB-1
1.1 Designated Waste Management Areas MSB-1
1.1.1 Type B Bunkers (37034 and 37063) MSB-2
1.1.2 Type C Bunkers (37078 and 37118) MSB-2
1.1.3 Type D Bunkers (37045, 37055, and 37057) MSB-2
1.2 Unit Operations MSB-3
1.2.1 Operation of Containment Systems MSB-3
1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes . MSB-3
1.2.3 Preparedness and Prevention MSB-4
1.2.3.1 Required Equipment MSB-4
1.2.3.2 Testing and Maintenance of Equipment MSB-4
1.2.3.3 Access to Communications or Alarm Systems MSB-4
1.2.4 Hazards Prevention MSB-4
1.2.4.1 Preventing Hazards in Unloading MSB-4
1.2.4.2 Preventing Runoff or Flooding MSB-5
1.2.4.3 Preventing Contamination of Water Supplies MSB-5
1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages MSB-5
1.2.4.5 Preventing Undue Exposure MSB-5
1.2.4.6 Preventing Releases to the Atmosphere MSB-6
1.3 Container Storage Practices MSB-6
1.3.1 Container Types and Labeling MSB-6
1.3.2 Container Handling MSB-6
1.3.2.1 Condition of Containers MSB-7
1.3.2.2 Aisle Space and Storage Configuration MSB-7
1.3.2.3 Capability of Waste with containers MSB-7
2.0 UNIT DESCRIPTION AND INFORMATION MSB-8
2.1 Security Procedures and Equipment MSB-8
2.1.1 Barriers and Means to Control Entry MSB-8
2.1.2 Warning Signs MSB-9
2.2 Traffic Pattern, Volume, and Controls MSB-9
2.2.1 Traffic Patterns MSB-9
2.2.2 Traffic Volumes MSB-9
2.2.3 Traffic Control Signals MSB-9
2.3 Unit Location Information MSB-10
2.3.1 Seismic Standard MSB-10
2.3.2 Floodplain Standard MSB-10
2.4 Topographic Maps MSB-10
2.5 Groundwater Monitoring MSB-11
3.0 WASTE ANALYSIS PLAN MSB-12
4.0 INSPECTION PLAN MSB-13
5.0 PERSONNEL TRAINING MSB-15
6.0 CONTINGENCY PLAN MSB-16

TABLE OF CONTENTS (Concluded)

7.0 CLOSURE PLAN MSB-18
7.1 Estimate of Maximum Waste in Storage MSB-18
7.2 Closure Conditions MSB-18
7.3 Closure Schedule MSB-18
8.0 TREATMENT PLAN MSB-19
9.0 REFERENCES MSB-20

LIST OF TABLES

Table No.	Title
1	Manzano Storage Bunker Inspection Criteria and Frequency
2	Manzano Storage Bunkers Emergency Equipment and Locations
3	Manzano Storage Bunkers Facility Emergency Coordinator List

LIST OF FIGURES

Figure No.	Title
1	Location Map of the Manzano Storage Bunkers at Sandia National Laboratories/New Mexico
2	Location of the Manzano Storage Bunkers at Manzano Base
3	Manzano Storage Bunkers, Type B, Bunkers 37034 and 37063
4	Manzano Storage Bunkers, Type C, Bunkers 37078 and 37118
5	Manzano Storage Bunkers, Type D, Bunkers 37045, 37055, 37057
6	Manzano Storage Bunkers, Traffic Routes and Controls
7	Topographic Map
8	Manzano Storage Bunkers, Access Control Figures
9	Manzano Storage Bunkers, Drainage Control Features
10	Manzano Storage Bunkers, Evacuation Routes
11	Emergency Response and Access Information in the Vicinity of the Manzano Storage Bunkers
12	Emergency Response and Access Information within the Manzano Storage Bunkers

ACRONYMS AND ABBREVIATIONS

20 NMAC 4.1.*X*00	New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart *X*
40 CFR 2*XX.XX*	Code of Federal Regulations, Title 40, Part 2*XX*, Section 2*XX.XX*
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	foot/feet
ft^2	square foot/feet
HSWA	Hazardous and Solid Waste Amendments
in.	inch(es)
MSB	Manzano Storage Bunkers
NMED	New Mexico Environment Department
RCRA	Resource Conservation and Recovery Act
Sandia	Sandia Corporation
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	solid waste management unit
TA	Technical Area
Unit	RCRA-regulated waste management unit
WMA	waste management area

SANDIA NATIONAL LABORATORIES/NEW MEXICO
MANZANO STORAGE BUNKERS
PART B PERMIT APPLICATION

This Sandia National Laboratories/New Mexico (SNL/NM) Manzano Storage Bunkers (MSB) Part B Permit Application is submitted to address the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subparts V and IX (20 NMAC 4.1.500 and .900), revised June 14, 2000 [6-14-00], requirements specific to Resource Conservation and Recovery Act (RCRA)-regulated waste container storage operations at the MSB. 20 NMAC 4.1.500 and .900 adopt by reference, with limited exceptions, all of the Code of Federal Regulations, Title 40, Parts 264 and 270 (40 CFR 264 and 270).

Sandia Corporation (Sandia) and the U.S. Department of Energy (DOE), as co-operators of the SNL/NM site, are providing this module to address details and/or requirements that supplement those provided in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application" (SNL/NM, 2003a), hereinafter referred to as the SNL/NM General Part B. Together, information provided in this module and in the SNL/NM General Part B (SNL/NM, 2003a) meet the applicable requirements specified in 20 NMAC 4.1.500/ 40 CFR 264 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270 [6-14-00].

Sandia/DOE also submitted a "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application" (SNL/NM, 2002), hereinafter referred to as the SNL/NM General Part A, included as Part 1 of this comprehensive Part B permit request. The SNL/NM General Part A (SNL/NM, 2002) serves as a companion document to the SNL/NM General Part B (SNL/NM, 2003a) and Unit-specific Part B modules, including this MSB Part B Permit Application.

The MSB are a set of seven units, each with approximately 1600 to 2500 square feet of space. They are located in the Manzano Area on Kirtland Air Force Base (KAFB) and are used for storage of RCRA-regulated wastes in containers. All of the RCRA-regulated wastes listed in the General Part A (SNL/NM, 2002) may be managed at the MSB. Sandia/DOE currently operate the MSB under interim status in accordance with the terms of the Part A (SNL/NM, 2002) approved by the New Mexico Environment Department (NMED) (May 2002) and the most recent Part B permit request submitted to NMED (February 6, 2002).

1.0 GENERAL UNIT OPERATIONS

This section provides descriptions of the MSB waste management areas (WMAs) and specific waste management practices. The information in this section complements the information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a).

Specific information included in this section includes:

- Unit operations, including: containment systems; requirements for ignitable, reactive, and incompatible wastes; preparedness and prevention; hazards prevention; and
- Container storage of RCRA-regulated wastes.

The specific information provided and documents referenced in this section, together with the general information provided in Section 1.0 of the SNL/NM General Part B (SNL/NM, 2003a), address the applicable RCRA-regulated waste management facility requirements of 20 NMAC 4.1.500/40 CFR 264, Subparts I, AA, BB, and CC [6-14-00], and 20 NMAC 4.1.900/40 CFR 270.14 and 270.15 [6-14-00].

1.1 Designated Waste Management Areas

The location of the MSB at SNL/NM is shown on Figure 1. The MSB include seven Units: Bunkers 37034, 37045, 37055, 37057, 37063, 37078, and 37118 (Figure 2). The MSB are owned by KAFB and leased to the DOE.

In each MSB bunker, containers holding RCRA-regulated liquid wastes are stored on portable spill pallets and pans. These are commercially available units consisting of a tub made of a heavy-duty inert material such as polyethylene or polypropylene with a heavy-duty inert plastic grating cover. They are designed to be resistant and impervious to corrosives and other liquids. The containers of liquids (typically 5- to 30-gallon capacity) are stored on the grating. Any liquids released from the containers drain through the grating into the tub. The pallets come in various sizes and capacities, they are designed for use with 55-gallon drums or other standard containers, and they meet the requirements of 20 NMAC 4.1.900/40 CFR 270.15[a] and [b] [6-14-00] and 20 NMAC 4.1.500/40 CFR 264.175(b)(1-3).

The pallets come in various sizes and capacities; Each pallet has sufficient capacity to hold the contents of the largest container of liquid stored on it. Containers are not stacked on each other on the pallets. Because the spill pallets are designed to hold containers of liquids, the weight of the containers does not exceed the load-bearing capacity of the grating or the pallet.

The containers are stored indoors and are protected from precipitation by the bunkers, and by the slope of the concrete paved surface outside the door that directs storm water away from the doorways, meeting the requirements of 20 NMAC 4.1.500/40 CFR 264.175(b)(4).

The MSB are constructed of concrete (walls, roof, and floor) and are covered by earthen materials. The walls and roof of each bunker are rounded. There are three types of bunkers: Type B (37034 and 37063); Type C (37078 and 37118); and Type D (37045, 37055, and

37057). The following sections provide descriptions of specific bunker storage structures, locations, and capacities.

1.1.1 Type B Bunkers (37034 and 37063)

Type B bunkers consist of an access tunnel leading to a main chamber that is used for storage of RCRA-regulated wastes. Figure 3 provides a typical floor plan for a Type B bunker. The Type B access tunnel is approximately 20 feet (ft) long, 12 ft wide, and 12.5 ft high. The concrete walls of the access tunnel are 1 ft thick. The main chamber is 81 ft long, 26.5 ft wide, and 12.8 ft high. The concrete walls of the main chamber are 8 inches (in.) thick. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface above and around each bunker is sloped so water drains away from the bunker. Access to the WMA of each bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber.

Based on the available floor space (2,100 square feet [ft^2]) in each of the Type B bunkers, each bunker can hold a maximum of 25,080 gallons of RCRA-regulated wastes.

1.1.2 Type C Bunkers (37078 and 37118)

Type C bunkers do not have an access tunnel and consist entirely of a main chamber used for storage of RCRA-regulated wastes. Figure 4 is a typical floor plan of a Type C bunker. The main chamber is approximately 80 ft long, 27 ft wide, and 12.8 ft high. The concrete walls are 1.3 ft thick. A 6-in. drain tile is located outside the bunker perimeter. Access to the main chamber is through a set of double doors 8 ft wide and 9.5 ft high. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped so water drains away from the bunker.

Based on the available floor space (approximately 2,400 ft^2) in each of the Type C bunkers, each bunker can hold a maximum of 35,200 gallons of RCRA-regulated wastes.

1.1.3 Type D Bunkers (37045, 37055, and 37057)

Type D bunkers consist of an access tunnel leading to a main chamber. Only the main chamber is used for storage of RCRA-regulated wastes. Figure 5 is a typical floor plan of a Type D bunker. Type D access tunnels vary in length from 76 feet to 110 feet and are 9 ft wide and 11 to 12 ft high. The concrete walls of the access tunnel are 1 ft thick. The main chamber in each bunker is approximately 61 ft long, 26.5 ft wide, and 12.5 ft high. Access to the WMA of each bunker is through two sets of double doors that are 9 ft high and 9 ft wide. One set is at the entrance to the access tunnel, and the other set is at the entrance to the main chamber. Each bunker is covered by at least 2 ft of earthen fill over a 6-in. thick roof of waterproofed concrete. The soil surface over and around each bunker is sloped so water drains away from each bunker.

Based on the available floor space (1,600 ft^2) in each of the Type D bunkers, each bunker can hold a maximum of 18,480 gallons of RCRA-regulated wastes.

1.2 Unit Operations

The MSB WMAs are used to store any of the RCRA-regulated wastes bearing U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers listed in the SNL/NM General Part A (SNL/NM, 2002).

The MSB are not continuously occupied. All personnel sign in on a log upon entering each bunker and sign out when they leave. Waste handling personnel work in pairs and maintain contact with each other. All personnel are trained to check that everyone has signed out and exited the bunker before turning off the lights and closing and locking the doors.

General information regarding: containment systems; management of ignitable, reactive, and incompatible wastes; preparedness and prevention, and hazards prevention requirements are addressed in Section 1.1 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific information is provided in the following sections.

1.2.1 Operation of Containment Systems (20 NMAC 4.1.500/40 CFR 264.175[b][5]; 20 NMAC 4.1.900/40 CFR 270.14[b][8][ii] and 270.15[a] and [b])

Unit personnel begin taking action to evaluate and remove accumulated liquids in the spill pallets upon discovery. Personnel attempt to identify the source if possible. Accumulated liquid containing RCRA-regulated wastes may be sampled and analyzed as needed before removal to determine the most appropriate method of removing the liquid from the containment. The liquid is then pumped into containers or collected onto absorbent material, picked up, and placed in containers. Containerized liquids are characterized in accordance with the Waste Analysis Plan provided as Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

1.2.2 Requirements for Ignitable, Reactive, and Incompatible Wastes (20 NMAC 4.1.500/40 CFR 264.17, 264.176, and 264.177; 20 NMAC 4.1.900/ 40 CFR 40 CFR 270.14[b][9] and 270.15[c] and [d])

Any of the ignitable or reactive wastes listed in the General Part A (SNL/NM, 2002) may be managed at the MSB. Unit personnel employ the practices described in Section 1.1.2 of the SNL/NM General Part B (SNL/NM, 2003a). Additional Unit-specific features, precautions, and practices include:

- Ignitable and reactive wastes are segregated from other wastes. Water-reactive wastes are not routinely stored in the bunkers.
- Containers are kept closed during storage at the bunkers.
- Containers of wastes are labeled and segregated according to compatibility criteria in 40 CFR 264 Appendix V. The liquids in containers that are stored together on a spill

pallet must be compatible with each other. The spill pallet provides an independent containment system. Likewise, only compatible solids are stored together on a pallet. The pallets of wastes are segregated into different rows and areas; each row or area containing only compatible wastes.

1.2.3 Preparedness and Prevention (20 NMAC 4.1.500/40 CFR 264, Subpart C and 20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address required equipment, testing and maintenance of equipment, and access to communications or alarm systems at the MSB.

1.2.3.1 Required Equipment (20 NMAC 4.1.500/40 CFR 264.32)

The MSB are not equipped with automatic fire suppression systems. As noted in Table 2, fire-fighting services are provided by the KAFB fire department tanker trucks. Information on other required equipment located at the MSB is provided in Section 6 and Table 2 of this module.

1.2.3.2 Testing and Maintenance of Equipment (20 NMAC 4.1.500/40 CFR 264.33)

Information on equipment testing and maintenance at the MSB is provided in Appendix C of the SNL/NM General Part B (SNL/NM, 2003b) and in Section 4 of this module.

1.2.3.3 Access to Communications or Alarm Systems (20 NMAC 4.1.500/40 CFR 264.34)

Information about the types and locations of communications or alarm systems at the MSB is provided in Section 1.1.3.3 of the SNL/NM General Part B (SNL/NM, 2003a) and in Section 6 of this module. Personnel at the Unit typically maintain contact with the emergency coordinator and other Radioactive and Mixed Waste Management Facility (RMWMF) personnel through 2-way radios or cellular phones.

1.2.4 Hazards Prevention (20 NMAC 4.1.900/40 CFR 270.14[b][8])

The following sections address the procedures, equipment, and structures used at the MSB to prevent hazards. Additional information applicable to the MSB and all other Units at SNL/NM is included in Section 1.1.4 of the SNL/NM General Part B (SNL/NM, 2003a).

1.2.4.1 Preventing Hazards in Unloading (20 NMAC 4.1.900/40 CFR 270.14[b][8][i])

MSB personnel employ the practices described in Section 1.1.4.1 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent hazards in unloading. Loading and unloading activities take place on the paved areas immediately outside the bunkers. The surface is sloped gently away

from the door, the pavement is in good condition in the area, and there is sufficient room for operating vehicles.

Containers are typically strapped together or tied down on a pallet before being moved. Containers are moved with a forklift from the storage areas through the access tunnels to the loading areas at each bunker. Containers may be moved with a drum dolly or hand truck within each bunker.

Waste handling personnel work in pairs at the Unit, and maintain contact with one another. Because the Unit is not routinely occupied, personnel are trained to be particularly aware of weather conditions and other operations that could affect waste movement, and to exercise caution in operating equipment such as forklifts.

1.2.4.2 Preventing Runoff or Flooding (20 NMAC 4.1.900/40 CFR 270.14[b][8][ii])

Sheet-flow run-on of surface water from surrounding areas and runoff from the MSB are prevented from entering/leaving the WMAs by the design and construction of the bunkers. The MSB are constructed of concrete and covered by earthen materials. The slope of the earthen materials covering the bunkers prevents run-on of storm water or snow melt. The interior roof and side walls of each bunker are protected by a waterproof membrane. In Type B and Type C bunkers, a 6-ft drain tile is located on the exterior perimeter, so any water that percolates through the earthen fill is drained away from the bunkers. The drive at the front of each bunker is level or sloped slightly away from the bunker doors.

1.2.4.3 Preventing Contamination of Water Supplies (20 NMAC 4.1.900/40 CFR 270.14[b][8][iii])

Sandia/DOE do not anticipate that RCRA-regulated waste management activities at the MSB will affect water supplies, as described in this section (containment) and in Section 1.1.4.3 of the SNL/NM General Part B (SNL/NM, 2003a)

1.2.4.4 Mitigating Effects of Equipment Failure or Power Outages (20 NMAC 4.1.900/ 40 CFR 270.14[b][8][iv])

General measures that are available to Unit personnel are described in Section 1.1.4.4 of the General Part B (SNL/NM, 2003a). RCRA-regulated waste management activities at the MSB will be suspended in response to equipment failures of power outages affecting those WMAs.

Electrical power is not required for the safe operation of the MSB WMAs. Equipment and/or power failures will not result in a loss of RCRA-regulated waste containment.

1.2.4.5 Preventing Undue Exposure (20 NMAC 4.1.900/40 CFR 270.14[b][8][v])

MSB personnel employ the practices described in Section 1.1.4.5 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent undue exposure.

1.2.4.6 Preventing Releases to the Atmosphere (20 NMAC 4.1.900/40 CFR 270.14[b][8][vi]; 20 NMAC 4.1.500/40 CFR 264.179 and Subparts AA, BB, and CC)

MSB personnel employ the practices described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2002b) to prevent releases to the atmosphere.

The WMAs at the MSB are typically used solely for the storage of "radioactive mixed waste" or "remediation waste" and are therefore not subject to 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] requirements in accordance with 20 NMAC 4.1.500/40 CFR 264.1080 [6-14-00]. Non-radioactive, non-remediation RCRA-regulated wastes that are managed at the MSB will be segregated from mixed radioactive waste and remediation waste, and will be managed separately.

Non-radioactive, non-remediation RCRA-regulated wastes containing less than 500 parts per million by weight volatile organics are exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00]. The process for establishing the exemption is described in Section 1.1.4.6 of the SNL/NM General Part B (SNL/NM, 2003a).

Containers of non-radioactive, non-remediation RCRA-regulated wastes that are not identified as being exempt from the requirements of 20 NMAC 4.1.500/40 CFR 264, Subpart CC [6-14-00] are stored in primary containers that 1) have a design capacity of less than or equal to 0.1 cubic meter (m^3) or 2) are U.S. Department of Transportation-approved and have a design capacity of greater than 0.1 m^3 but less than 0.46 m^3. Container covers are maintained in closed and sealed conditions but may be opened for the purposes described in 20 NMAC 4.1.500/40 CFR 264.1086(c)(1)–(5) [6-14-00].

1.3 Container Storage Practices (20 NMAC 4.1.900/40 CFR 270.15 and 20 NMAC 4.1.500/40 CFR, Subpart I)

Container storage practices applicable to the MSB are presented in the following sections.

1.3.1 Container Types and Labeling

MSB personnel use the containers types and labeling practices described in Section 1.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2 Container Handling (20 NMAC 4.1.500/40 CFR 264.173)

MSB personnel employ the container handling practices described in Section 1.2.2 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.1 Condition of Containers (20 NMAC 4.1.500/40 CFR 264.171)

The condition of containers at the MSB is maintained as indicated in Section 1.2.2.1 of the SNL/NM General Part B (SNL/NM, 2003a).

1.3.2.2 Aisle Space and Storage Configuration (20 NMAC 4.1.500/40 CFR 264.35)

MSB personnel employ the aisle space and storage configuration as described in Section 1.2.2.2 of the SNL/NM General Part B (SNL/NM, 2003a). Aisle width is typically 2.5 feet; this is adequate for unobstructed movement of Unit and emergency response personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of Unit operation in an emergency.

Drums and drum-shaped containers that are stacked are stored on pallets, and are not stacked more than two pallets high. Box-shaped containers may be stacked two high without pallets. Containers of solids may also be stored directly on the floor. Containers of liquids are stored on spill pallets and are not stacked.

1.3.2.3 Capability of Waste with containers (20 NMAC 4.1.500/40 CFR 264.172)

MSB personnel ensure waste compatibility with containers as indicated in Section 1.2.2.3 of the SNL/NM General Part B (SNL/NM, 20023a).

2.0 UNIT DESCRIPTION AND INFORMATION

The information provided in this section is submitted to address the applicable requirements of the 20 NMAC 4.1.100–.900/ [6-14-00]. 40 CFR 260–266, 268, and 270.The following subject areas are addressed in this section:

- Unit-specific security procedures and equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4] and 270.14[b][19][viii] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.14 [6-14-00]);
- Unit-specific traffic patterns, volume, and controls (20 NMAC 4.1.900/40 CFR 270.14[b][10] [6-14-00]);
- Unit-specific location information for compliance with the seismic standard and floodplain requirements (20 NMAC 4.1.900/40 CFR 270.14[b][11] [6-14-00], and 20 NMAC 4.1.500/40 CFR 264.18[a] and [b] [6-14-00]);
- Unit-specific topographic map requirements (20 NMAC 4.1.900/40 CFR 270.14[b][19] [6-14-00]); and
- Unit-specific groundwater monitoring and protection information (20 NMAC 4.1.900/ 40 CFR 270.14[c] [6-14-00]; 20 NMAC 4.1.500/40 CFR 264.90[a] [6-14-00]).

An SNL/NM site-wide facility description addressing additional regulatory requirements is provided in Appendix A of SNL/NM General Part B (SNL/NM, 2003b).

2.1 Security Procedures and Equipment (20 NMAC 4.1.900/40 CFR 270.14[b][4]; 20 NMAC 4.1.500/40 CFR 264.14)

The following sections describe the security provisions provided at SNL/NM to prevent unknowing or unauthorized entry onto the active portions of the MSB.

2.1.1 Barriers and Means to Control Entry (20 NMAC 4.1.500/40 CFR 264.14[b][2][i] and [ii])

The doors of the individual bunkers are locked except when personnel are present. As noted in Appendix A of the General Part B (SNL/NM, 2003b), Sandia security personnel periodically monitor the SNL/NM RCRA-regulated Units during non-operational hours.

Unit personnel have Sandia-issued badges. Individuals who do not have Sandia-issued badges are escorted. These procedures limit access to the MSB WMAs in accordance with 20 NMAC 4.1.500/40 CFR 264.14(b)(2) [6-14-00].

The MSB are located within the Manzano Base area. The Manzano Base is surrounded by 8-ft, chain-link fences (Figures 1, 2, and 8). Entrance to the Manzano Base area, whether by personnel or vehicles, is through one controlled gate. Manzano Base access control

procedures are designed to assure that only properly authorized persons, vehicles, and property are allowed access to the bunkers.

2.1.2 Warning Signs (20 NMAC 4.1.500/40 CFR 264.14[c])

The entrance to each bunker is posted with "Danger: Unauthorized Personnel Keep Out" (or functionally equivalent) signs. The signs contain the warning in English and Spanish and are legible from a distance of 25 ft and can be seen from the paved access road approach to the MSB. Additional signs are not necessary because employees and visitors do not approach the MSB from any other direction.

2.2 Traffic Pattern, Volume, and Controls (20 NMAC 4.1.900/40 CFR 270.14[b][10])

General traffic pattern information, traffic volumes, and traffic control signals for the SNL/NM facility are provided in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b).

2.2.1 Traffic Patterns

The primary traffic routes used to transport RCRA-regulated wastes to the MSB include Wyoming Boulevard, and Pennsylvania Avenue as shown on Figure A-4 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b). Pennsylvania Avenue crosses Tijeras Arroyo over the Manzano Bridge. The MSB are located approximately 1 mile east of the exit road leading to the entrance of TA-III and TA-V and at the end of Pennsylvania Avenue. Within Manzano Base, waste is transported to the MSB on 2-lane asphalt-paved roads (Figure 6).

2.2.2 Traffic Volumes

Traffic volumes on Wyoming Boulevard, and Eubank Boulevard are generally light to moderate. Traffic volumes on Pennsylvania Avenue are generally light. Vehicle types are generally cars, light- and medium-duty trucks, and vans. Flatbed trucks or trailers also use primary traffic routes to transport waste containers.

Fewer than 10 vehicles typically travel to the MSB per week. These include flatbed trucks and trailers carrying supplies and containers of RCRA-regulated waste to and from the MSB.

2.2.3 Traffic Control Signals

A stop sign is located approximately 50 ft west of the Manzano Base entrance gate. Traffic control signals within Manzano Base include stop signs, yield signs, and posted speed limits. Traffic routes and controls at Manzano Base are shown on Figure 6.

2.3 Unit Location Information (20 NMAC 4.1.900/40 CFR 270.14[b][11])

2.3.1 Seismic Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][i and ii] and 20 NMAC 4.1.500/40 CFR 264.18[a])

The WMAs at the MSB are not located within 3,000 ft of any faults with Holocene displacements (see Section A.4.2 in Appendix A [SNL/NM, 2002c] of the SNL/NM General Part B).

2.3.2 Floodplain Standard (20 NMAC 4.1.900/40 CFR 270.14[b][11][iii]; 20 NMAC 4.1.500/40 CFR 264.18[b])

The WMAs at the MSB are not located within the 100-year floodplain boundary (see Section A.4.3 in Appendix A of the SNL/NM General Part B [SNL/NM, 2003b]).

2.4 Topographic Maps (20 NMAC 4.1.900/40 CFR 270.14[b][19])

Topographic maps and figures are provided herein or referenced to meet the requirements of 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00]. Due to the large amount of information, it is not provided on a single map. The maps clearly show the map scale, the date of preparation, and a north arrow (20 NMAC 4.1.900/40 CFR 270.14[b][19][i] and [vi] [6-14-00]). The maps and figures used to fulfill these regulatory requirements include the following:

- An SNL/NM-wide 100-year floodplain map is provided as Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][ii] [6-14-00]).

- Surface waters, including intermittent streams, near the MSB are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][iii] [6-14-00]).

- Surrounding land uses are shown on Figures A-2 and A-8 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/ 40 CFR 270.14[b][19][iv] [6-14-00]). The area surrounding the MSB is occupied by test facilities.

- Wind roses for SNL/NM are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][v] [6-14-00]).

- Legal boundaries of SNL/NM (including the MSB) are shown on Figure A-2 in Appendix A of the General Part B (SNL/NM, 2003b) (20 NMAC 4.1.900/40 CFR 270.14[b][19][vii] [6-14-00]).

- Access control features at the MSB (e.g., fences, gates) are shown on Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][viii] [6-14-00]).

- Supply wells, monitoring wells, test wells, springs, and surface-water sampling stations near the MSB are shown on Figure A-2 in Appendix A of the SNL/NM General Part B (SNL/NM, 2003b) and Figure 7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][ix] [6-14-00]).

- Locations of Manzano Base and the MSB WMAs, access roads, and loading and unloading areas are shown on Figure 8 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] [6-14-00]). There are no sanitary sewers in the vicinity of the MSB.

- Drainage control features (e.g., run-on/runoff, drainage barriers) are shown on Figure 9 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][x] and [xi] [6-14-00]).

- Locations of Manzano Base and MSB WMAs are shown on Figure7 of this module (20 NMAC 4.1.900/40 CFR 270.14[b][19][xii] [6-14-00]).

Contour lines on all topographic maps are in intervals sufficient to detail natural drainage at SNL/NM and in the vicinity of the MSB. As provided for in 20 NMAC 4.1.900/40 CFR 270.14(b)(19) [6-14-00], SNL/NM has submitted the maps to the NMED at these scales and contour intervals due to the size of the MSB, the extent of the SNL/NM facility, and the topographic relief in the area.

2.5 Groundwater Monitoring (20 NMAC 4.1.900/40 CFR 270.14[c] and 20 NMAC 4.1.500/40 CFR 264.90[a])

Groundwater monitoring information is provided in Part 3 of this comprehensive Part B permit request. The MSB is not a regulated unit. There have been no releases of RCRA-regulated waste in the past, nor are the MSB likely to affect groundwater quality during normal operations or during unusual events.

3.0 WASTE ANALYSIS PLAN

In accordance with 40 CFR 270.14[b][2], 20 NMAC 4.1.500/40 CFR 264.13, "General Waste Analysis", and 20 NMAC 4.1.800/40 CFR 268.7, "Waste Analysis and Record-Keeping" [6-14-00], waste analysis requirements applicable to all Units, including the MSB, are addressed in Appendix B of the SNL/NM General Part B (SNL/NM, 2003b).

4.0 INSPECTION PLAN

20 NMAC 4.1.500/40 CFR 264.15 and 264.33 [6-14-00] and 20 NMAC 4.1.900/40 CFR 270.14(b)(5) [6-14-00] required that WMAs and associated systems be inspected on a regular basis and in accordance with procedures to assure their integrity, maintenance, and safe operation.

Unit personnel perform periodic inspections to identify malfunctions, signs of deterioration, operator errors, and discharges or spills that may be causing or may lead to a release of RCRA-regulated waste constituents to the environment or may pose a threat to human health. The inspections are performed on a regular schedule based on the likelihood of equipment or system failure and associated consequences. The inspections include safety and emergency equipment, security devices, and operating and structural equipment related to RCRA-regulated waste management activities to ensure that human health and the environment will be protected.

The general Sandia/DOE inspection plan and schedule that meets these requirements are described in the "Site-Wide Inspection Plan", provided as Appendix C of the SNL/NM General Part B (SNL/NM, 2003b). Unit personnel conduct inspections in accordance with the site-wide plan.

Specific items and areas that are inspected are listed in Table 1, with the inspection criteria and frequency.

The results of inspections by Unit personnel (including any corrective actions required and taken) are recorded on forms identical or similar to the ones presented in Appendix C of the General Part B (SNL/NM, 2003b). The inspection plan (Appendix C and this section) is maintained at the RMWMF. Inspection records for the current calendar year are maintained at each bunker. Inspection records for previous calendar years are maintained at the RMWMF or the SNL/NM Records Center.

Table 1
Manzano Storage Bunker Inspection Criteria and Frequency

Inspected Item	Inspection Criteria	Inspection Frequency
SAFETY AND EMERGENCY EQUIPMENT		
Portable eye wash	Operational, accessible, in good condition	Monthly
Spill control equipment	Present, quantities per inventory, accessible, in good condition	Monthly
Smoke alarm	Present	Monthly
Fire extinguisher	Present, charged, accessible, and in good condition	Monthly
OPERATING AND STRUCTURAL EQUIPMENT		
Bunker floor	Clean, no spills or excessive wear	Weekly when wastes are managed. Monthly otherwise.
Bunker walls	Not leaking or spalling, in good condition	Weekly when wastes are managed. Monthly otherwise.
Bunker ceiling	Not leaking or spalling, and in good condition	Weekly when wastes are managed. Monthly otherwise.
Bunker lights	Operational and in good condition	Weekly when wastes are managed. Monthly otherwise.
Loading and unloading areas	Good condition, safe working surface, no spills	Daily when wastes are managed. Monthly otherwise.
Waste handling equipment	Good condition, in good repair, operational	Daily when wastes are managed. Monthly otherwise.
SECURITY DEVICES		
Warning signs	Present and in good condition	Monthly
Doors	Present, operational, in good condition	Monthly
Locks	Present, operational, in good condition	Monthly
STORED CONTAINERS		
Integrity	Good condition (i.e., no bulging, leaks, corrosion, or deterioration)	Daily for individual containers that were handled. Weekly otherwise.
Closed	Correct lid/cover placement (i.e., properly closed and sealed)	Daily for individual containers that were handled. Weekly otherwise.
Labeling	Correct information, correct location, legible	Daily for individual containers that were handled. Weekly otherwise.
Secondary Containment (liquid waste)	Adequate volume, free of liquids, good condition (i.e., no cracks, excessive wear)	Daily for individual containers that were handled. Weekly otherwise.
Storage Conditions	Waste compatible with container, container located with compatible wastes	Daily for individual containers that were handled. Weekly otherwise.
Location	Correct aisle space, correct stacking (2 maximum)	Daily for individual containers that were handled. Weekly otherwise.

5.0 PERSONNEL TRAINING

Training requirements for Unit personnel are specified in 20 NMAC 4.1.900, 40 CFR 270.14[b][12], and 20 NMAC 4.1.500/40 CFR 264.16 [6-14-00], "Personnel Training." The Sandia/DOE training program is designed and implemented to prepare personnel to operate and safely maintain those areas used for managing RCRA-regulated waste at the MSB.

All job descriptions identified in Appendix D, Table D-2 of the SNL/NM General Part B (SNL/NM, 2003a) are applicable at the MSB. MSB personnel receive training in accordance with the "Site-Wide Personnel Training Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act- Regulated Waste Management Units" as provided in Appendix D of the SNL/NM General Part B (SNL/NM, 2003b).

Training records for MSB personnel are maintained at the Radioactive and Mixed Waste Management Facility at SNL/NM.

6.0 CONTINGENCY PLAN

Emergency response requirements for RCRA-regulated units are specified in 20 NMAC 4.1.500/40 CFR 264, Subpart D [6-14-00], "Contingency Plan and Emergency Procedures," and in 20 NMAC 4.1.900/40 CFR 270.14(b)(7) [6-14-00]. The Sandia/DOE Site-Wide Contingency Plan is included as Appendix E of the SNL/NM General Part B (SNL/NM, 2003b). Supplemental MSB-specific information is included in this section, Figures 10-12, and in Tables 2 and 3 of this module.

The U.S. Department of Energy and Sandia Corporation use the seven bunkers of the MSB to store containers of RCRA-regulated waste. The MSB are located approximately 1 mile east of the road leading to the entrance of TA-III and -V at the end of Pennsylvania Avenue. The WMAs at the MSB include: Type B bunkers (37034 and 37063); Type C bunkers (37078 and 37118); and Type D bunkers (37045, 37055, and 37057). Bunkers are constructed of concrete (walls, roof, and floor) and are covered by earthen materials.

RCRA-regulated wastes bearing the U.S. EPA listed in the General Part A Permit (SNL/NM, 2002), may be stored at the MSB WMAs. Waste is segregated based on compatibility groups within each bunker.

Figure 10 presents evacuation routes for the MSB. Figures 11 and 12 present emergency response and access information for the MSB. Table 2 lists the emergency equipment typically available at the MSB. Table 3 lists the emergency coordinators for the MSB.

Current copies of the Site-Wide Contingency Plan and this supplemental information are maintained at each bunker, at the RMWMF and at the SNL/NM Emergency Operations Center.

Table 2
Manzano Storage Bunkers,
Emergency Equipment and Locations

Category	Description/Capabilities	Location
Spill Control and Decontamination Equipment	Portable Eyewash	By inner door inside each bunker
	Absorbents	By inner door inside each bunker
Internal Communication and Alarm System	Voice command Portable 2-way radio	Operating personnel typically carry radios.
	Smoke Alarms	• Smoke detectors and alarms inside each bunker • Strobe light on front outside each bunker
External Communication System	Mobile Telephone or Portable Radio	Taken to bunkers by personnel
Fire Extinguishers	Portable (A-B-C)	By entrance door outside each bunker
Fire Suppression	Water to Extinguish Fires	Kirtland Air Force Base (KAFB) tanker truck at the KAFB fire station in the Manzano administrative area

Table 3
Manzano Storage Bunkers,
Facility Emergency Coordinator List

February 18, 2003

Facility Emergency Coordinator		Office Phone	Home Phone
Primary	Jeff Jarry Sandia National Laboratories P. O. Box 5800 Albuquerque, NM 87185	(505) 284-3080 (office) (505) 561-1138 (pager)	(505) 452-3337
First Alternate	Mike Spoerner Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2813 (office) (505) 540-5296 (pager)	(505) 828-3441
Second Alternate	Phil Zelle Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 844-2486 (office) (505) 540-7437 (pager)	(505) 292-5097
Third Alternate	Mary Ann Krauss Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185	(505) 845-9997 (office) (505) 540-5228 (pager)	(505) 299-0793

One or more of the listed personnel are routinely available at the Radioactive and Mixed Waste Management Facility during normal work hours (7:00 am to 5:30 pm, Monday through Thursday) and can be contacted by radio or telephone during those hours.

The emergency coordinators are informed of planned work activities at the beginning of each work day; this includes activities at Units that are not routinely staffed (such as the MSB).

7.0 CLOSURE PLAN

Applicable closure requirements are specified in 20 NMAC 4.1.900/, 40 CFR 270.14[b][13], and 20 NMAC 4.1.500/40 CFR 264, Subparts G and I [6-14-00]. General closure information applicable to all Units at SNL/NM and general sampling and analytical procedures to be used during closure activities are presented in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b). The general closure information includes closure performance standards; an SNL/NM facility description; amendment of the Closure Plan; closure certification and report; and survey plat and post-closure requirements. Unit-specific information is included in this section.

7.1 Estimate of Maximum Waste in Storage

The maximum total inventory of RCRA-regulated waste in storage at any time in the MSB is approximately 176,000 gallons of liquids and/or solids. WMAs are located at the bunkers shown in Figure 2.

7.2 Closure Conditions

In addition to the general assumptions listed in Section F.4 in Appendix F of the SNL/NM General Part B (SNL/NM, 2003b), closure activities specified in this plan assume the following conditions were met during the operational life of the MSB:

- RCRA-regulated waste handling activities involving the opening of waste containers at the MSB were confined to the interiors of the bunkers. If contamination occurred, it would have been confined to those areas; and

- The interior walls and floors of RCRA-regulated waste management areas were maintained to retain their integrity by following established maintenance and inspection procedures and breaches of protective coatings did not occur.

7.3 Closure Schedule

8.0 TREATMENT PLAN

Sandia/DOE do not perform treatment of RCRA-regulated wastes requiring a permit at the MSB.

9.0 REFERENCES

Sandia National Laboratories/New Mexico (SNL/NM), 2002, "Sandia National Laboratories/New Mexico General Part A Permit Renewal Request/Application," Revision 3.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003a, "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), 2003b, Appendices A-F (Site-Wide Waste Analysis Plan for Sandia National Laboratories/New Mexico Resource Conservation and Recovery Act-Regulated Waste Management Units) in the "Sandia National Laboratories/New Mexico General Part B Permit Renewal Request/Application," Revision 1.0, Sandia National Laboratories/New Mexico, Albuquerque, New Mexico.

SNL/NM, see Sandia National Laboratories/New Mexico.

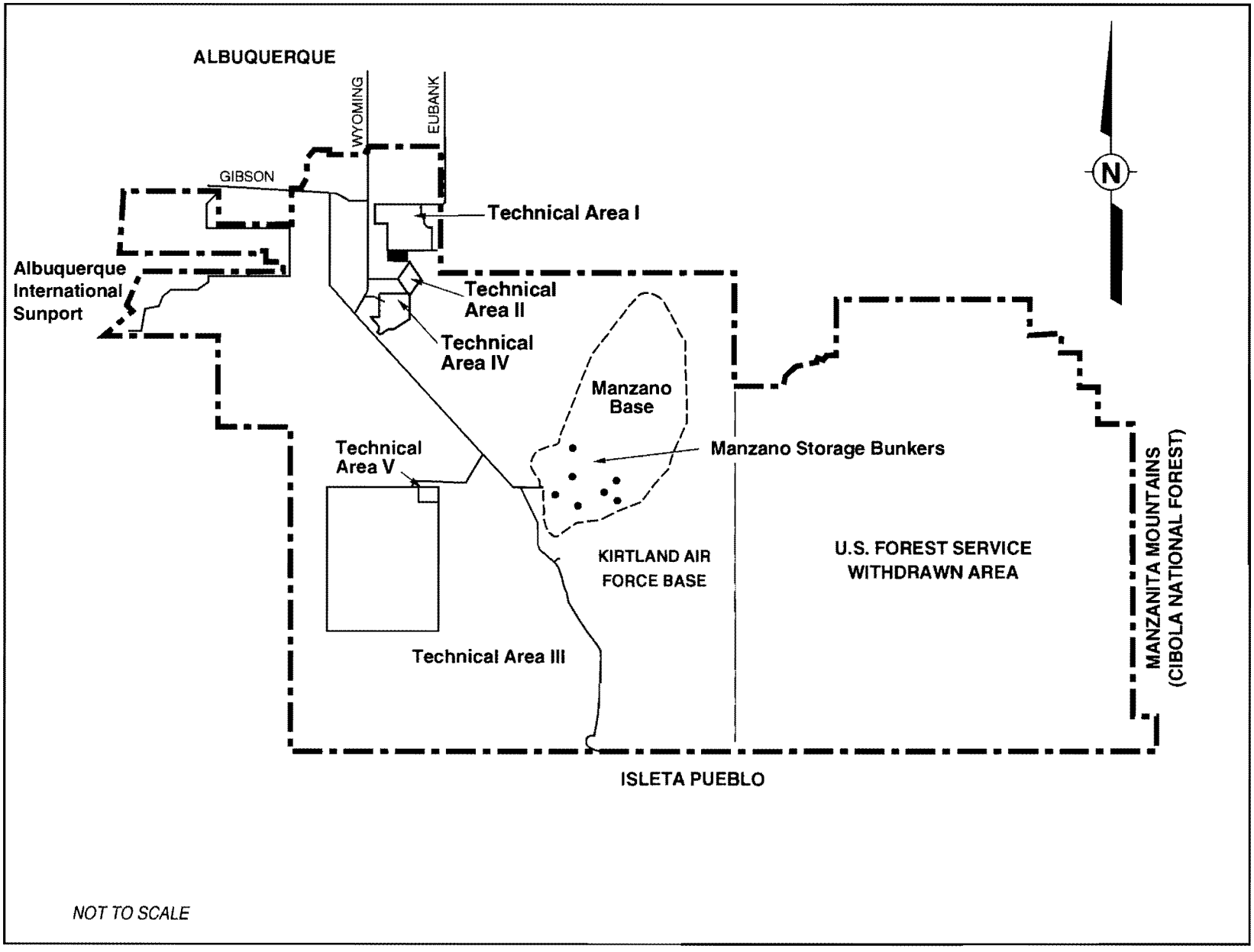


Figure 1
Location Map of the Manzano Storage Bunkers at Sandia National Laboratories/New Mexico

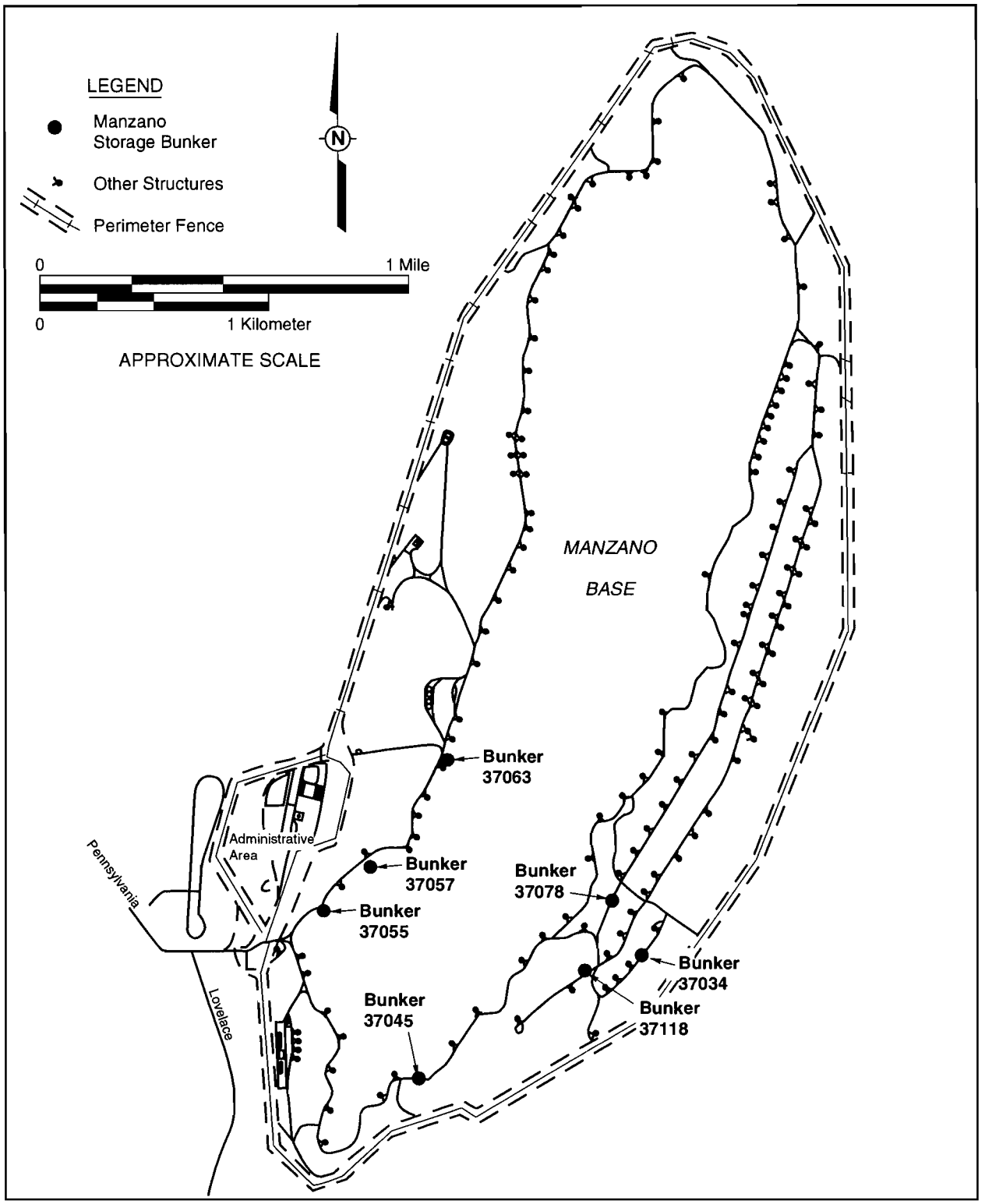


Figure 2
Location of the Manzano Storage Bunkers at Manzano Base

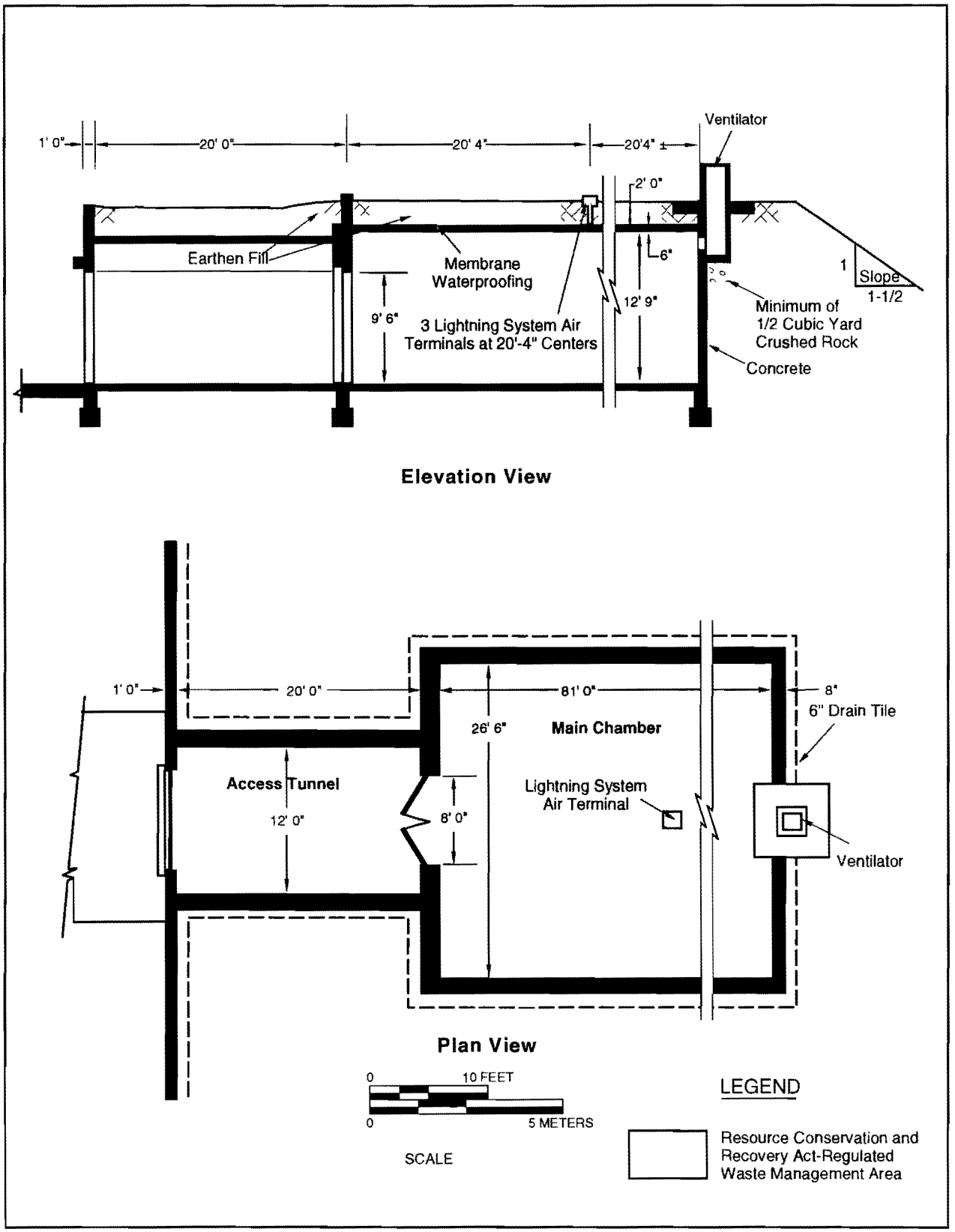


Figure 3
Manzano Storage Bunkers, Type B,
Bunkers 37034 and 37063

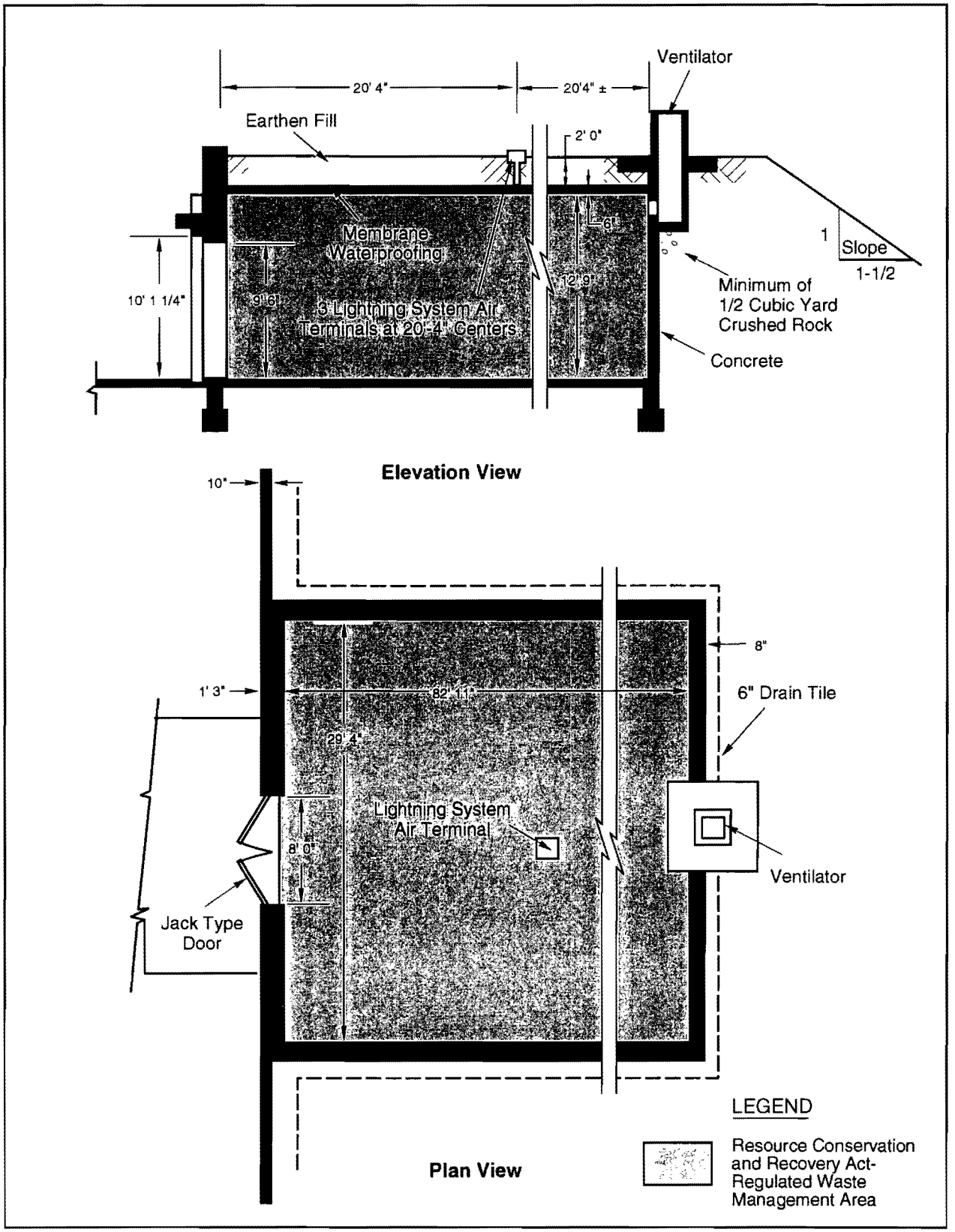


Figure 4
Manzano Storage Bunkers, Type C, Bunkers 37078 and 37118

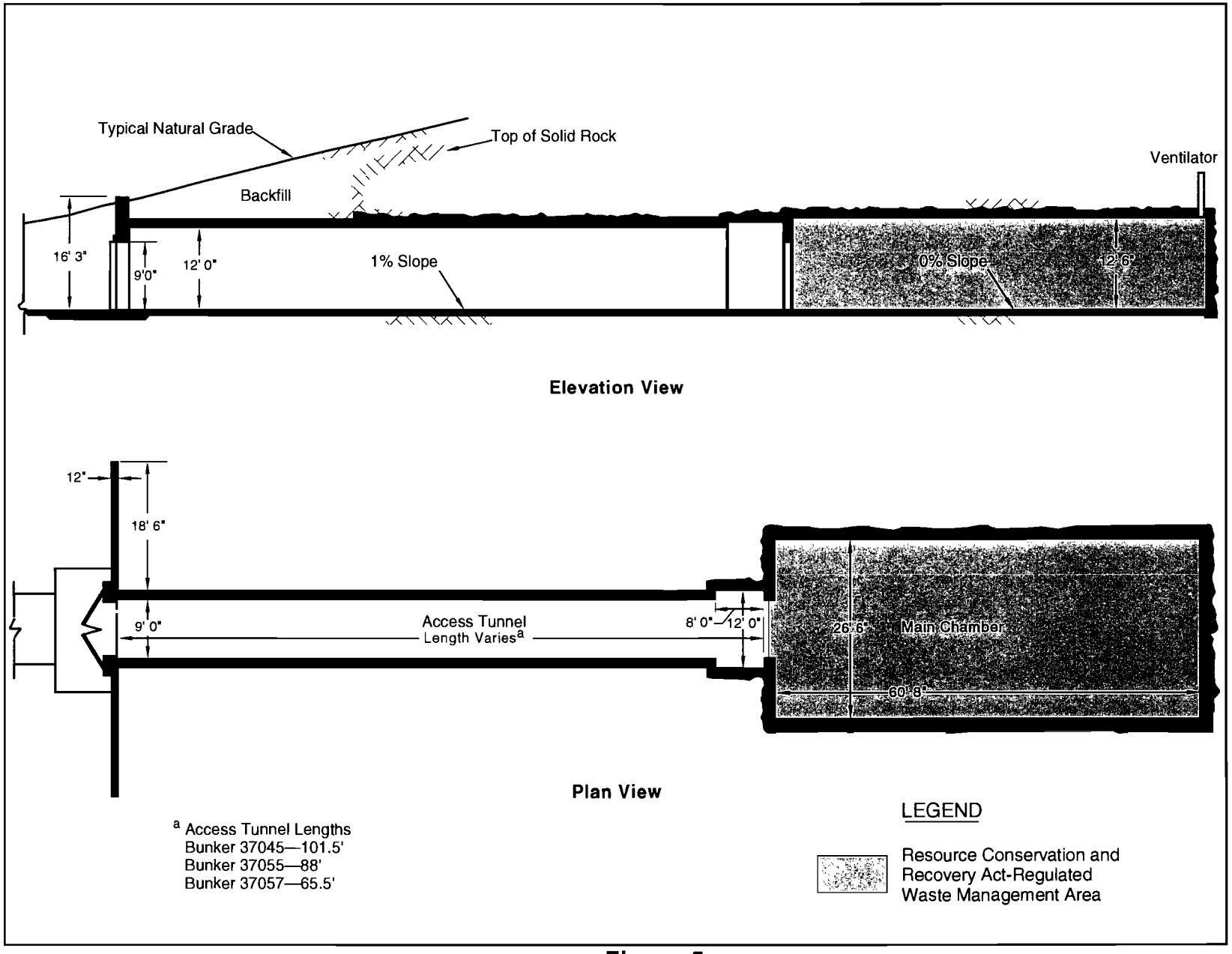


Figure 5
Manzano Storage Bunkers, Type D
Bunkers 37045, 37055, and 37057

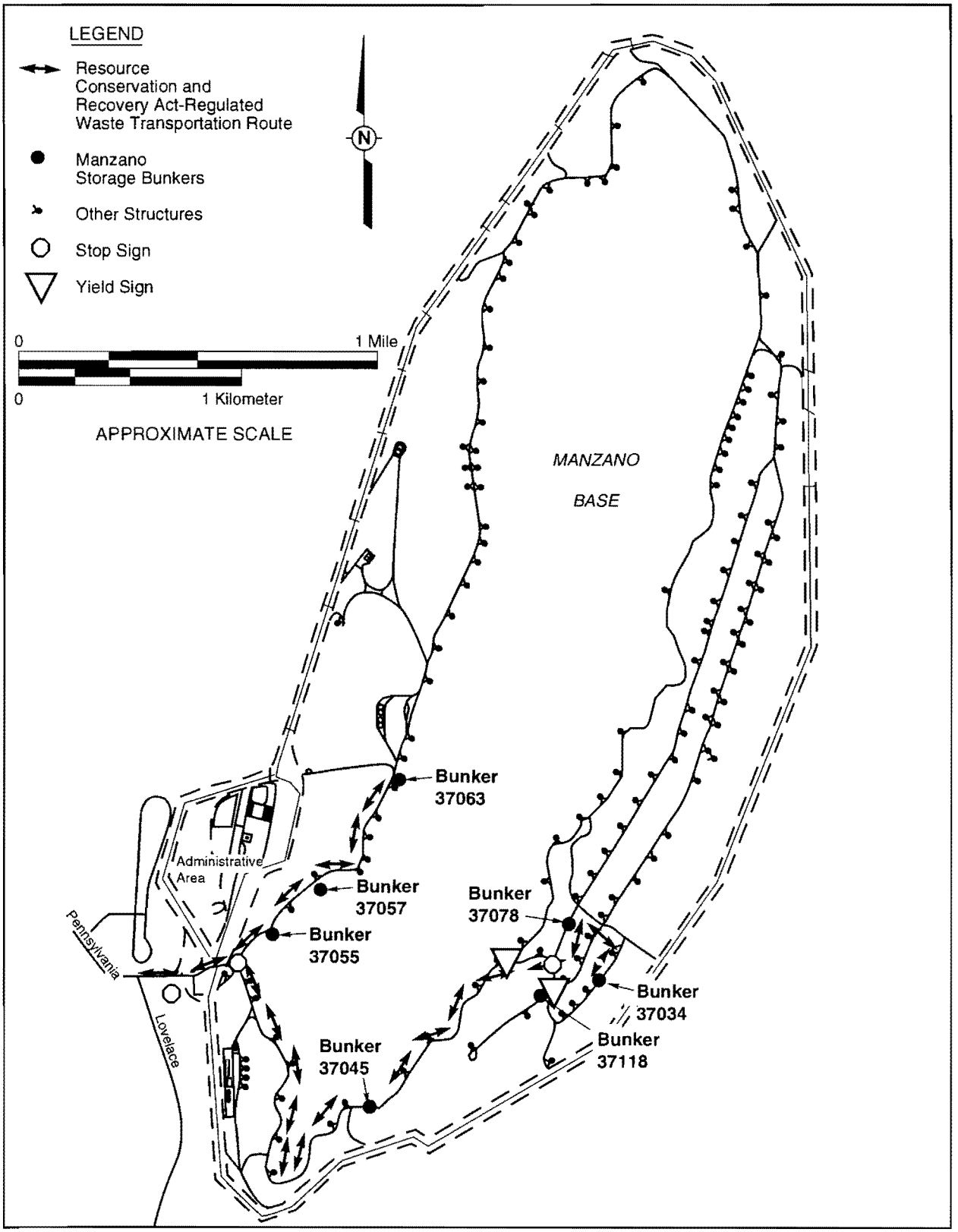


Figure 6

Manzano Storage Bunkers, Traffic Routes and Controls

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

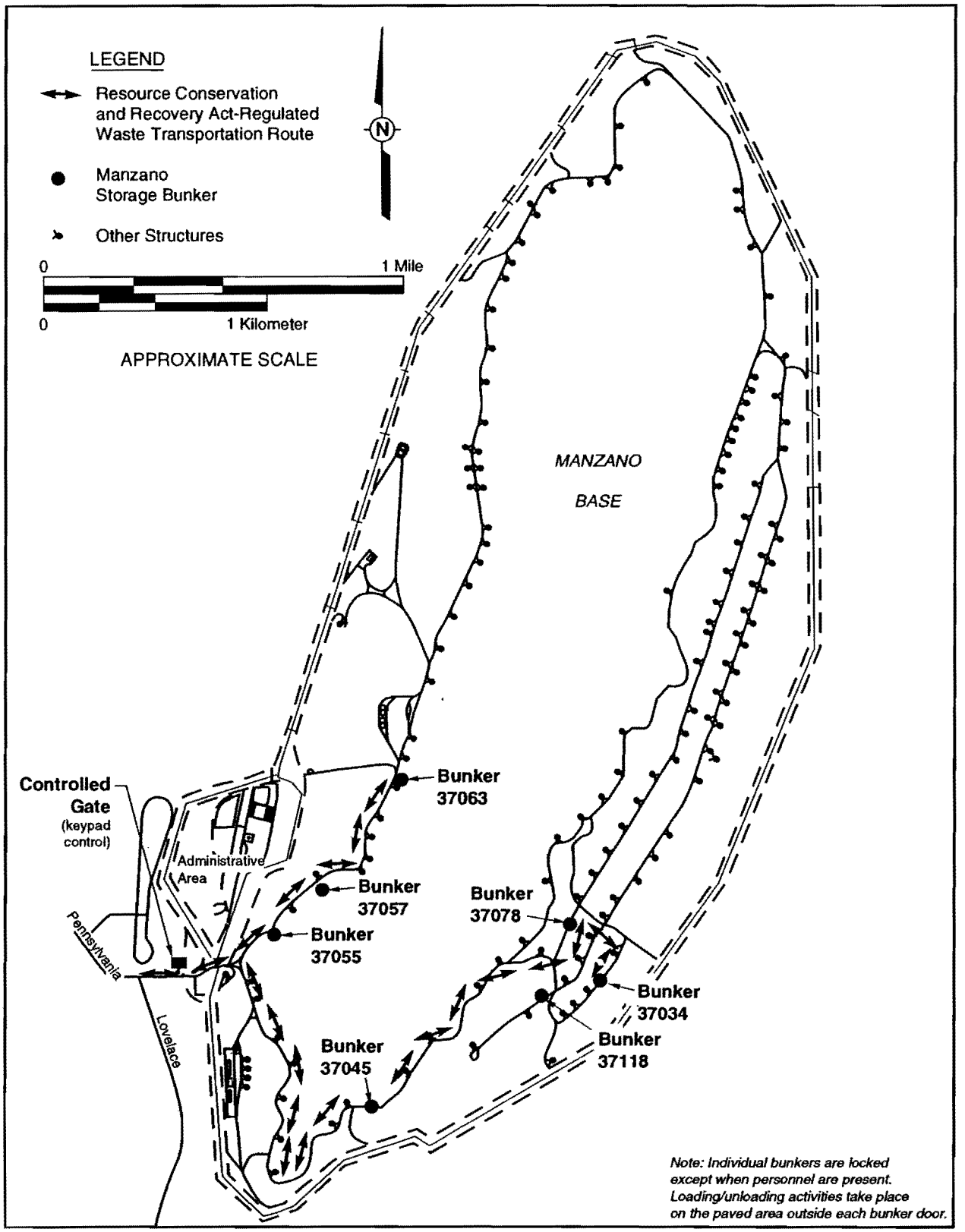


Figure 8

Manzano Storage Bunkers, Access Control Features

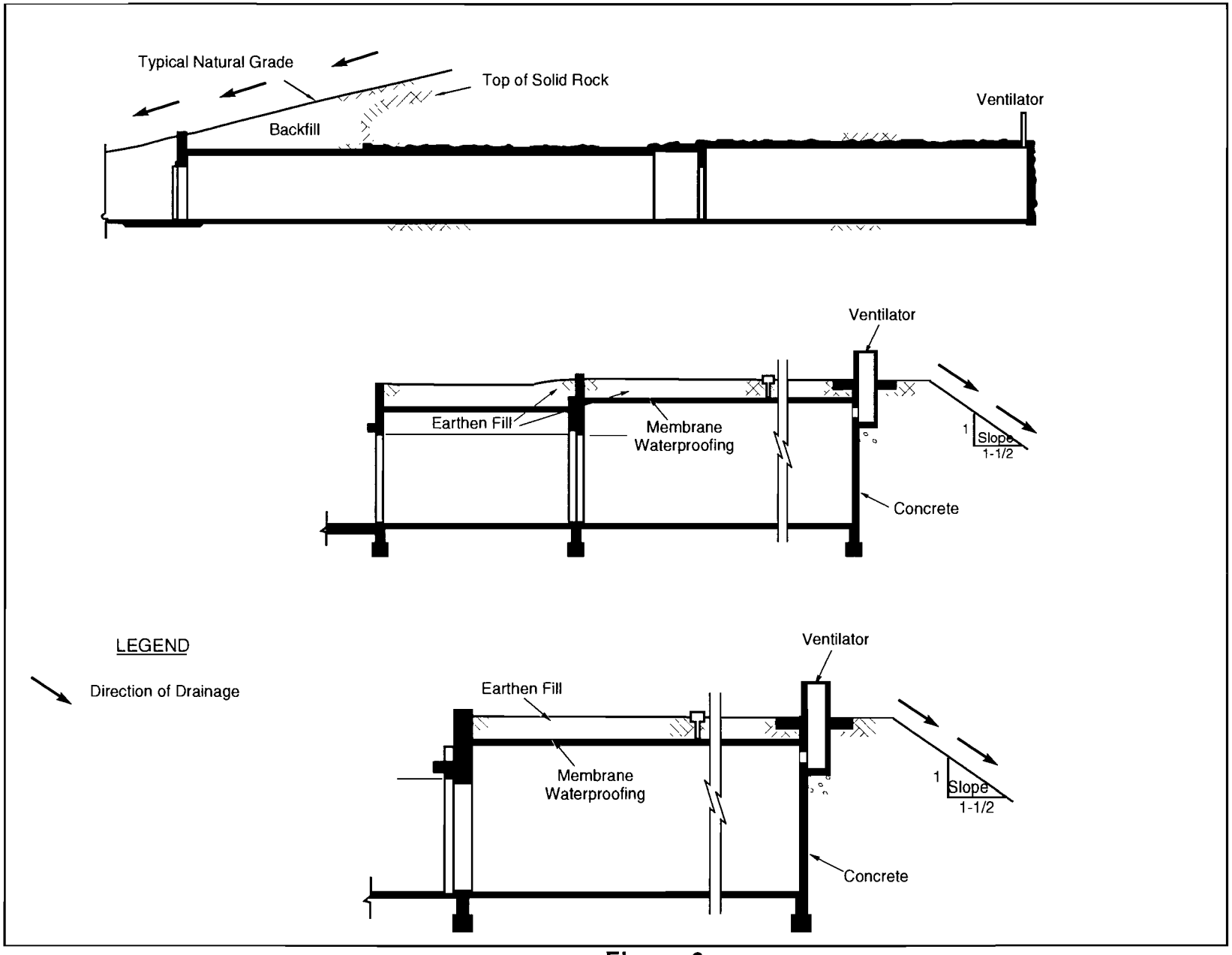


Figure 9
Manzano Storage Bunkers, Drainage Control Features

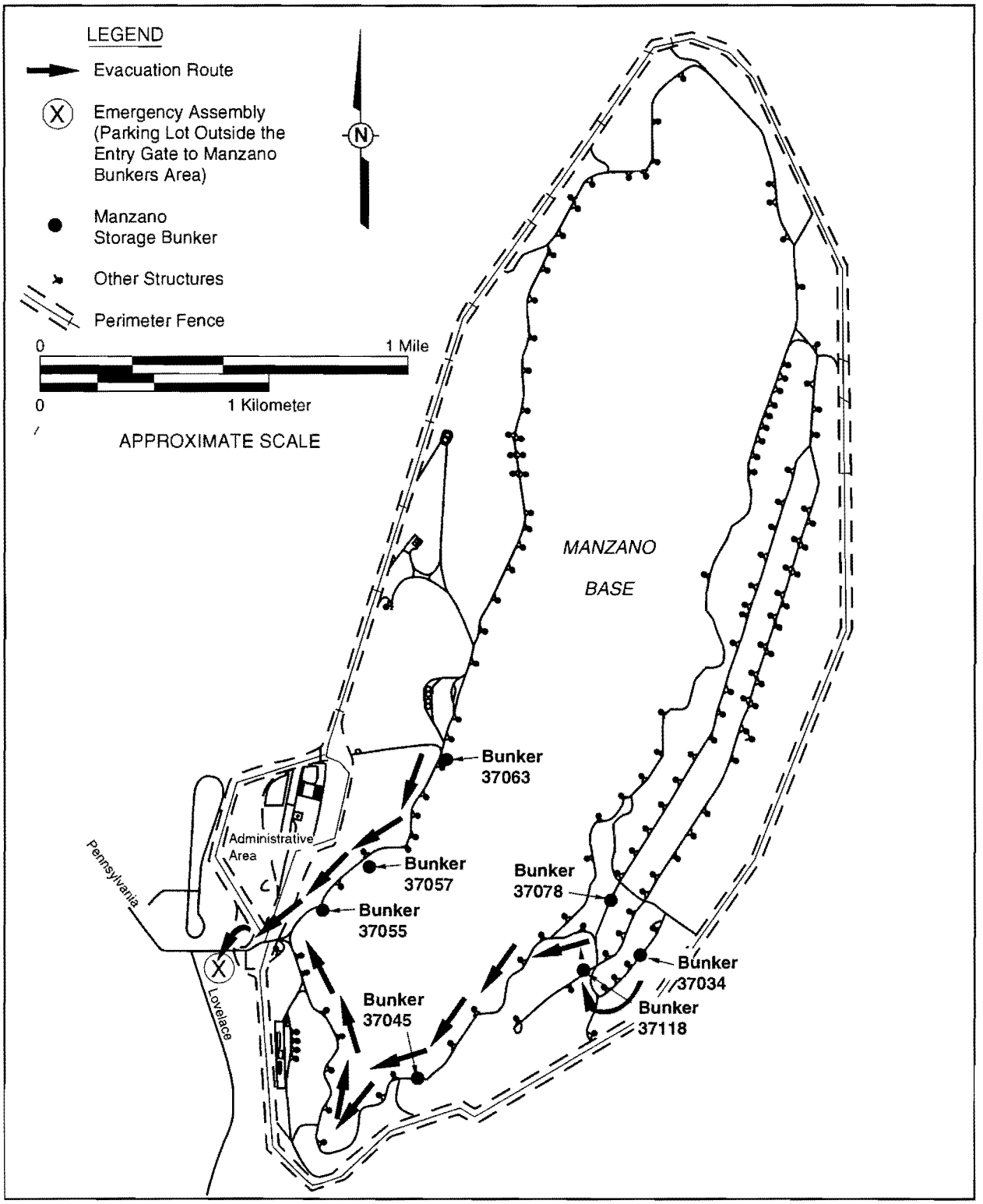


Figure 10
Manzano Storage Bunkers, Evacuation Routes

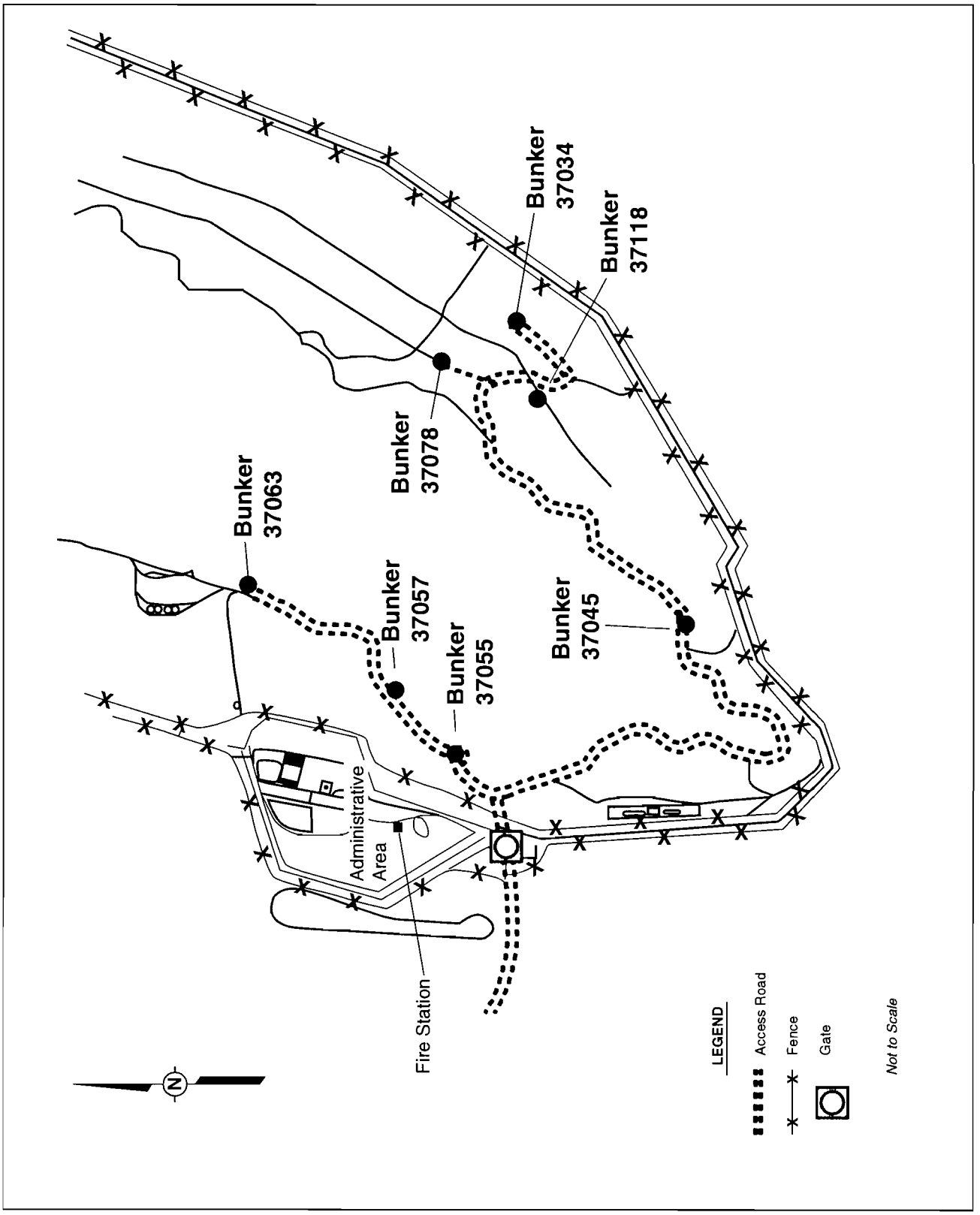


Figure 11
Emergency Response and Access Information in the Vicinity of the Manzano Storage Bunkers

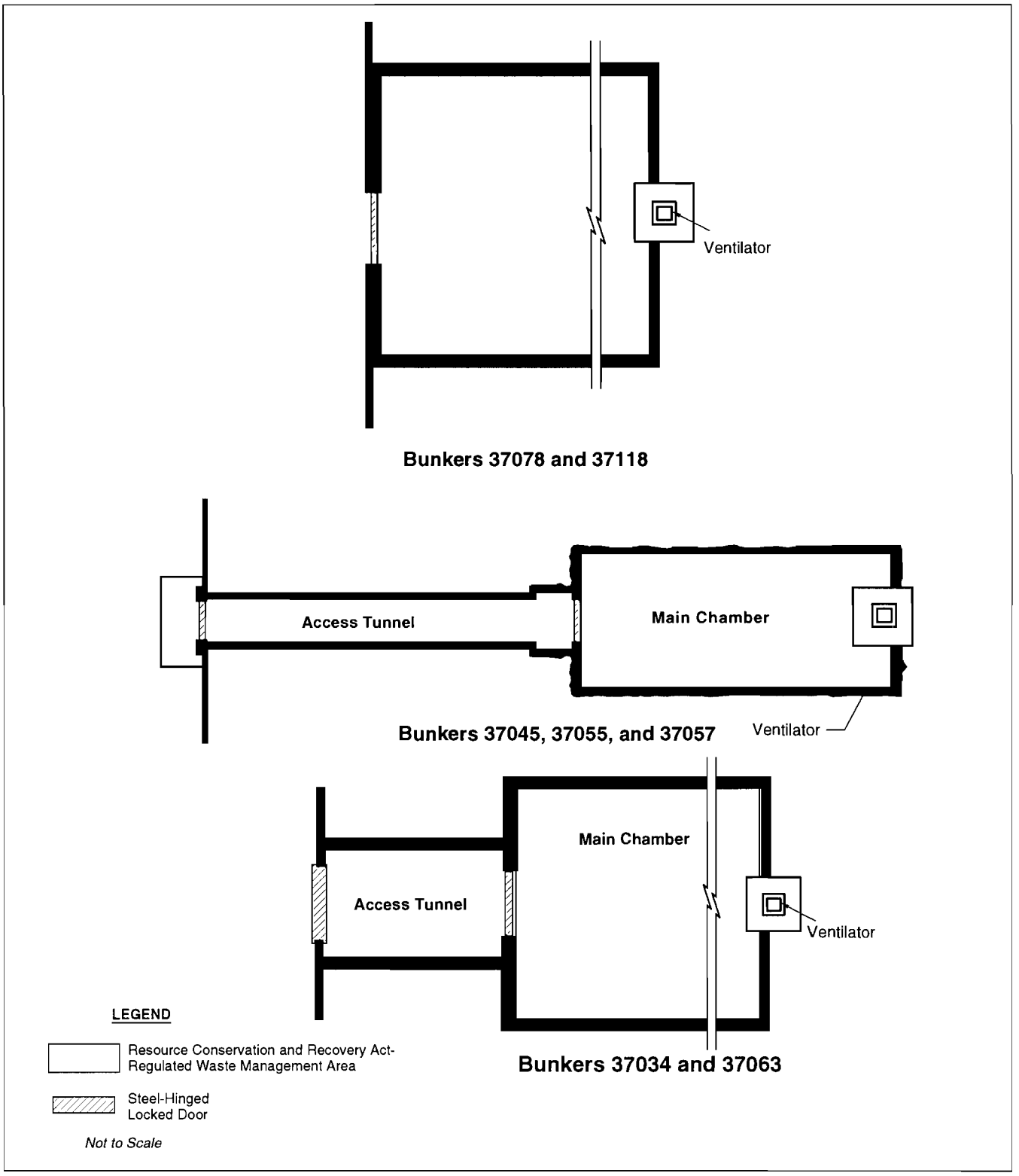


Figure 12
Emergency Response and Access Information at the Manzano Storage Bunkers

PART 3

ADDITIONAL INFORMATION REQUIREMENTS PROTECTION OF GROUNDWATER

This part addresses information required by 20 NMAC 4.1.900/40 CFR 270.14(c), "Additional information requirements." This provision 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 surface impoundment, waste pile, and land treatment unit or landfill that received hazardous waste after July 26, 1982.

Using this definition, the Chemical Waste Landfill (CWL) qualifies as a regulated unit. The CWL is an inactive landfill located in the southeastern corner of Technical Area (TA) III at Sandia National Laboratories in New Mexico (SNL/NM).

The CWL qualified for interim status under 20 NMAC 4.1.900/40 CFR 270.70 and is now closing under interim status. The closure process is governed by the CWL Final Closure Plan and Post-Closure Permit Application (SNL/NM, December 1992), fulfilling the requirements of 20 NMAC 4.1.600/40 CFR 265 Subpart G. The approved CWL Closure Plan contains the details of the groundwater monitoring program.

REFERENCE

Sandia National Laboratories/New Mexico (SNL/NM), December 1992. The Chemical Waste Landfill Closure Plan and Post-Closure Permit Application, Sandia National Laboratories, Albuquerque, New Mexico.

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

Attachment E

Floodplain Maps Used in Comprehensive Part B Permit Request

TO VIEW THE MAP/MAPS ASSOCIATED WITH THIS DOCUMENT PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT