PERMIT ATTACHMENTS

ATTACHMENT 1 PERMIT APPLICATION - PART A

ATTACHMENT 2 WASTE ANALYSIS PLAN

ATTACHMENT 3 CONTINGENCY PLAN

ATTACHMENT 4 TRAINING PROGRAM

ATTACHMENT 5 INSPECTIONS

ATTACHMENT 6 HAZARDOUS WASTE STORAGE FACILITY CLOSURE PLAN

ATTACHMENT 1
PERMIT APPLICATION – PART A

RCRA PART A PERMIT APPLICATION: HAZARDOUS WASTE STORAGE FACILITY UNIT WHITE SANDS MISSILE RANGE, NM PERMIT NUMBER NM2750211235

ENCLOSED:

RCRA Subtitle C Site Identification Form
and
Hazardous Waste Permit Information Form

SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.	United States Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION FORM**	
1. Reason for Submittal (See instructions on page 13.) MARK ALL BOX(ES) THAT APPLY	**Reason for Submittal:** ☐ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) ☐ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application ☒ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____) ☐ As a component of the Hazardous Waste Report	
2. Site EPA ID Number (page 14)	**EPA ID Number** N M 2 7 5 0 2 1 1 2 3 5	
3. Site Name (page 14)	**Name:** White Sands Missile Range	
4. Site Location Information (page 14)	**Street Address:** U.S. Highway 70	
	City, Town, or Village: White Sands Missile Range	**State:** NM
	County Name: Dona Ana	**Zip Code:** 88002-5048
5. Site Land Type (page 14)	**Site Land Type:** ☐ Private ☐ County ☐ District ☒ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 14)	**A.** 928110	**B.**
	C.	**D.**
7. Site Mailing Address (page 15)	**Street or P. O. Box:** SFIM-SW-WS-ES, 100 Headquarters Ave (Building 1510)	
	City, Town, or Village: White Sands Missile Range	
	State: New Mexico	
	Country: United States	**Zip Code:** 88002-5048
8. Site Contact Person (page 15)	**First Name:** Thomas **MI:** A.	**Last Name:** Ladd
	Phone Number: 505-678-8966 **Extension:**	**Email address:** laddt@wsmr.army.mil
9. Operator and Legal Owner of the Site (pages 15 and 16)	**A. Name of Site's Operator:** White Sands Missile Range	**Date Became Operator (mm/dd/yyyy):** 07/09/1945
	Operator Type: ☐ Private ☐ County ☐ District ☒ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	
	B. Name of Site's Legal Owner: U.S. Army	**Date Became Owner (mm/dd/yyyy):** 07/09/1945
	Owner Type: ☐ Private ☐ County ☐ District ☒ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	

EPA ID NO: N M 2 7 5 0 2 1 1 2 3 5

OMB#: 2050-0028 Expires 1/31/2006

9. Legal Owner (Continued) Address	Street or P. O. Box: SFIM-SW-SW-GC, 100 Headquarters Ave (Building 100)	
	City, Town, or Village: White Sands Missile Range	
	State: New Mexico	
	Country: United States	Zip Code: 88002-5000

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 16 to 20.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ☒ N ☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or

☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or

☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous Waste

Y ☐ N ☒ e. Mixed Waste (hazardous and radioactive) Generator

Y ☐ N ☒ **2. Transporter of Hazardous Waste**

Y ☒ N ☐ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ☐ N ☒ **4. Recycler of Hazardous Waste (at your site)**

Y ☐ N ☒ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
☐ a. Small Quantity On-site Burner Exemption
☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☒ **6. Underground Injection Control**

B. Universal Waste Activities

Y ☒ N ☐ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	☒	☒
b. Pesticides	☐	☐
c. Thermostats	☒	☒
d. Lamps	☒	☒
e. Other (specify) _____	☐	☐
f. Other (specify) _____	☐	☐
g. Other (specify) _____	☐	☐

Y ☐ N ☒ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ☐ N ☒ **1. Used Oil Transporter**
If "Yes", mark each that applies.
☐ a. Transporter
☐ b. Transfer Facility

Y ☐ N ☒ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
☐ a. Processor
☐ b. Re-refiner

Y ☐ N ☒ **3. Off-Specification Used Oil Burner**

Y ☐ N ☒ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 20.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

*See item 10 on Hazardous Waste Permit Information Form						

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 20.)

13. 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. **(See instructions on page 20.)**

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Col. Donald E. Gentry, Garrison Commander	

OMB #: 2050-0034 Expires 10/31/02

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 35)	First Name: Thomas	MI: A.	Last Name: Ladd
	Phone Number: 505-678-8966		Phone Number Extension:
2. Facility Permit Contact Mailing Address (See instructions on page 35)	Street or P.O. Box: SFIM-SW-WS-ES, 100 Headquarters Ave. (Bldg. 1510)		
	City, Town, or Village: White Sands Missile Range		
	State: NM		
	Country: USA		Zip Code: 88002-5048
3. Legal Owner Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: SFIM-SW-WS-GC, 100 Headquarters Ave. (Bldg. 100)		
	City, Town, or Village: White Sands Missile Range		
	State: NM		
	Country: USA	Zip Code: 88002-5000	Phone Number 505-678-3868
4. Operator Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: SFIM-SW-WS-GC, 100 Headquarters Ave. (Bldg. 100)		
	City, Town, or Village: White Sands Missile Range		
	State: NM		
	Country: USA	Zip Code: 88002-5000	Phone Number 505-678-3868
5. Facility Existence Date (See instructions on page 36)	Facility Existence Date (mm/dd/yyyy): 07/09/1945		

6. Other Environmental Permits (See instructions on page 36)

A. Permit Type (Enter code)	B. Permit Number	C. Description
R	N M 2 7 5 0 2 1 1 2 3 5	Hazardous Waste Storage Facility
R	N M 2 7 5 0 2 1 1 2 3 5	Open Burn/Open Detonation (closed)
R	N M 2 7 5 0 2 1 1 2 3 5	TTF Disposal Surface Impoundment PCC Permit
R		Subtitle D Permit for Main Post
N	N M R 0 5 B 0 5 7	NPDES Multi Sector General Permit
E	P O 8 5	Title V Operating Permit

7. Nature of Business (Provide a brief description; see instructions on page 37)

WSMR is a National Research and Testing Range which supports missile development and test programs for the Army, Navy, Air Force, National Aeronautics and Space Administration (NASA), and other government agencies.

8. Process Codes and Design Capacities (See instructions on page 37)

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 9.*

B. PROCESS DESIGN CAPACITY- *For each code entered in column A, enter the capacity of the process.*

1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code in column B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units for each corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; or Million Btu Per Hour
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces Other Industrial Furnaces Listed In 40 CFR §260.10	
T93		
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

8. Process Codes and Design Capacities (*Continued*)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure (Enter code)	C. Process Total Number of Units	For Official Use Only
X 1	S 0 2	5 3 3 . 7 8 8	G	0 0 1	
1	D 8 3	5 7 0·0 0	G	0 0 1	
2	S 0 1	1 3,2 0 0·0 0	G	0 0 1	
3	X 0 1	1,0 0 0·0 0	N	0 0 1	
4		.			
5		.			
6		.			
7		.			
8		.			
9		.			
1 0		.			
1 1		.			
1 2		.			
1 3		.			

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (*See instructions on page 37 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes*)

Line Number (Enter #s in sequence with Item 8)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure (Enter code)	C. Process Total Number of Units	D. Description of Process
X 1	T 0 4	.			In-situ Vitrification
1		.			
2		.			
3		.			
4		.			

10. Description of Hazardous Wastes (See instructions on page 37)

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. ESTIMATED ANNUAL QUANTITY - *For each listed waste entered in column A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C. UNIT OF MEASURE - *For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	*CODE*	*METRIC UNIT OF MEASURE*	*CODE*
POUNDS	*P*	*KILOGRAMS*	*K*
TONS	*T*	*METRIC TONS*	*M*

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate the waste will be stored, treated, and/or disposed at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of Item 10.D(1).*
3. *Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.*

2. PROCESS DESCRIPTION: *If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	*A. EPA Hazardous Waste No. (Enter code)*	*B. Estimated Annual Quantity of Waste*	*C. Unit of Measure (Enter code)*	*D. PROCESSES*		
				(1) PROCESS CODES (Enter code)		*(2) PROCESS DESCRIPTION (If a code is not entered in D(1))*
X 1	K 0 5 4	900	P	T 0 3 D 8 0		
X 2	D 0 0 2	400	P	T 0 3 D 8 0		
X 3	D 0 0 1	100	P	T 0 3 D 8 0		
X 4	D 0 0 2					Included With Above

10. Description of Hazardous Wastes (*Continued; use additional sheets as necessary*)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D 0 0 1	35,000	P*	S 0 1			"Container Storage"
2	D 0 0 2	16,500	P*	S 0 1			"Container Storage"
3	D 0 0 3	5,000	P*	S 0 1			"Container Storage"
4	D 0 0 4	10,000	P*	S 0 1			"Container Storage"
5	D 0 0 5	10,000	P*	S 0 1			"Container Storage"
6	D 0 0 6	10,000	P*	S 0 1			"Container Storage"
7	D 0 0 7	60,000	P*	S 0 1			"Container Storage"
8	D 0 0 8	70,000	P*	S 0 1			"Container Storage"
9	D 0 0 9	25,000	P*	S 0 1			"Container Storage"
1 0	D 0 1 0	10,000	P*	S 0 1			"Container Storage"
1 1	D 0 1 1	16,500	P*	S 0 1			"Container Storage"
1 2	D 0 1 2	10,000	P*	S 0 1			"Container Storage"
1 3	D 0 1 3	10,000	P*	S 0 1			"Container Storage"
1 4	D 0 1 4	10,000	P*	S 0 1			"Container Storage"
1 5	D 0 1 5	10,000	P*	S 0 1			"Container Storage"
1 6	D 0 1 6	10,000	P*	S 0 1			"Container Storage"
1 7	D 0 1 7	10,000	P*	S 0 1			"Container Storage"
1 8	D 0 1 8	10,000	P*	S 0 1			"Container Storage"
1 9	D 0 1 9	10,000	P*	S 0 1			"Container Storage"
2 0	D 0 2 0	10,000	P*	S 0 1			"Container Storage"
2 1	D 0 2 1	10,000	P*	S 0 1			"Container Storage"
2 2	D 0 2 2	10,000	P*	S 0 1			"Container Storage"
2 3	D 0 2 3	10,000	P*	S 0 1			"Container Storage"
2 4	D 0 2 4	10,000	P*	S 0 1			"Container Storage"
2 5	D 0 2 5	10,000	P*	S 0 1			"Container Storage"
2 6	D 0 2 6	10,000	P*	S 0 1			"Container Storage"
2 7	D 0 2 7	10,000	P*	S 0 1			"Container Storage"
2 8	D 0 2 8	10,000	P*	S 0 1			"Container Storage"
2 9	D 0 2 9	10,000	P*	S 0 1			"Container Storage"
3 0	D 0 3 0	10,000	P*	S 0 1			"Container Storage"
3 1	D 0 3 1	10,000	P*	S 0 1			"Container Storage"
3 2	D 0 3 2	10,000	P*	S 0 1			"Container Storage"
3 3	D 0 3 3	10,000	P*	S 0 1			"Container Storage"

10. Description of Hazardous Wastes (*Continued; use additional sheets as necessary*)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)			D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
34	D034	10,000	P*	S01			"Container Storage"
35	D035	16,500	P*	S01			"Container Storage"
36	D036	10,000	P*	S01			"Container Storage"
37	D037	10,000	P*	S01			"Container Storage"
38	D038	10,000	P*	S01			"Container Storage"
39	D039	16,500	P*	S01			"Container Storage"
40	D040	16,500	P*	S01			"Container Storage"
41	D041	10,000	P*	S01			"Container Storage"
42	D042	10,000	P*	S01			"Container Storage"
43	D043	10,000	P*	S01			"Container Storage"
44	F001	20,000	P*	S01			"Container Storage"
45	F002	35,000	P*	S01			"Container Storage"
46	F003	15,000	P*	S01			"Container Storage"
47	F004	16,500	P*	S01			"Container Storage"
48	F005	16,500	P*	S01			"Container Storage"
49	P015	10,000	P*	S01			"Container Storage"
50	P068	10,000	P*	S01			"Container Storage"
51	P075	10,000	P*	S01			"Container Storage"
52	P098	10,000	P*	S01			"Container Storage"
53	P110	10,000	P*	S01			"Container Storage"
54	U076	10,000	P*	S01			"Container Storage"
55	U080	10,000	P*	S01			"Container Storage"
56	U098	10,000	P*	S01			"Container Storage"
57	U122	10,000	P*	S01			"Container Storage"
58	U125	10,000	P*	S01			"Container Storage"
59	U133	10,000	P*	S01			"Container Storage"
60	U144	10,000	P*	S01			"Container Storage"
61	U151	10,000	P*	S01			"Container Storage"
62	U182	10,000	P*	S01			"Container Storage"
63	U211	10,000	P*	S01			"Container Storage"
64	U220	10,000	P*	S01			"Container Storage"
65	U226	10,000	P*	S01			"Container Storage"
66	U227	10,000	P*	S01			"Container Storage"

10. Description of Hazardous Wastes (*Continued; Additional Sheet*)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)			(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
6 7	U 2 2 8	10,000	P*	S 0 1			"Container Storage"
6 8	U 2 4 8	10,000	P*	S 0 1			"Container Storage"
				*Quantities may or	may not be received,	based on actual test	activities
6 8	D 0 0 3	10	T	X 0 1			Closed
							Post Closure Care Permit
							Application Submitted Dec. 02.
6 9	U 0 8 0	2,900	K	D 8 3			Currently in Post Closure Care;
							surface impoundment has been
							closed

11. Map (See instructions on page 38)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 39)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 39)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 39)

Items 11 through 13 are provided in the Part B Application.

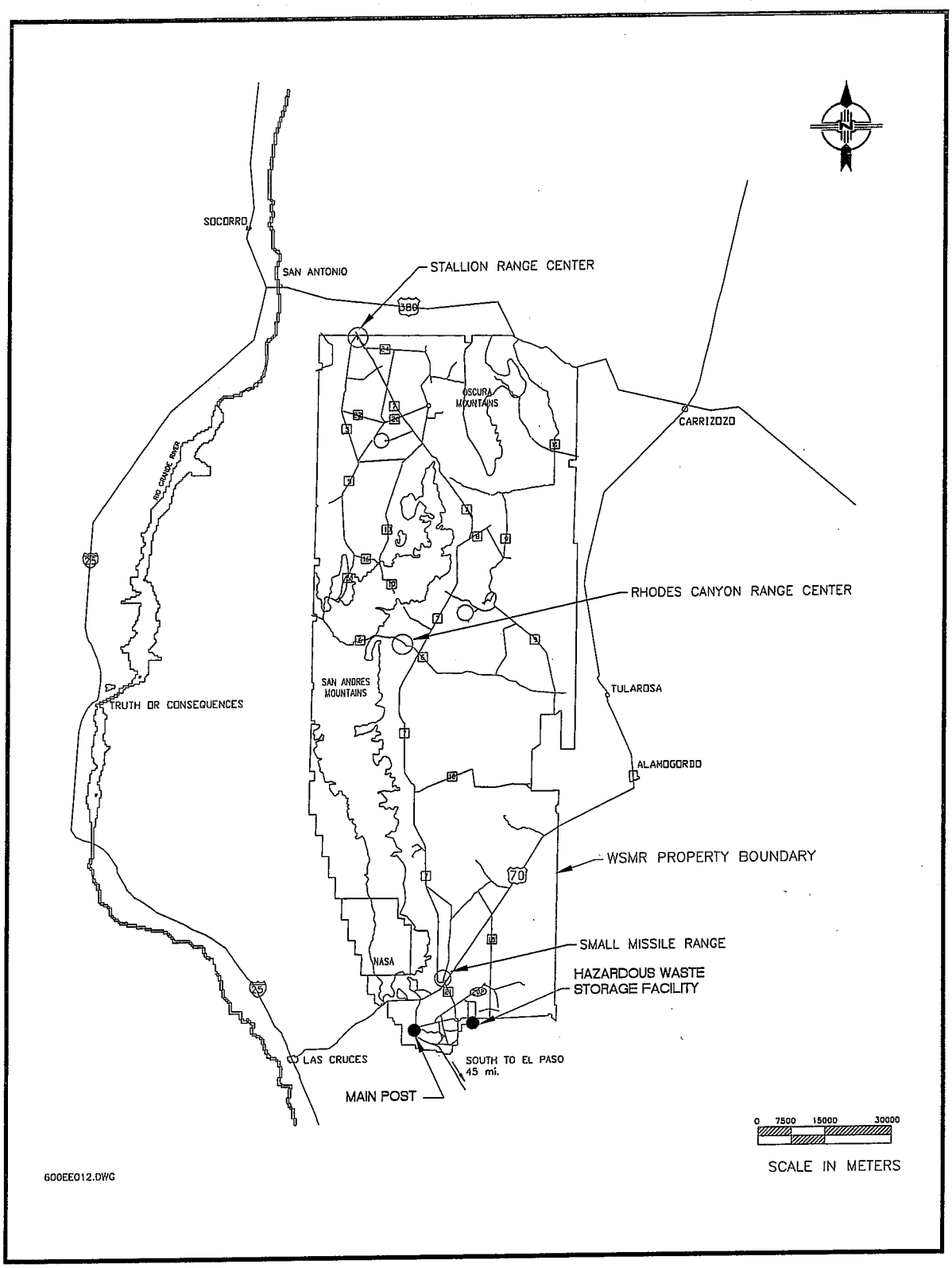

FIGURE 1 - Location of Hazardous Waste Storage Facility

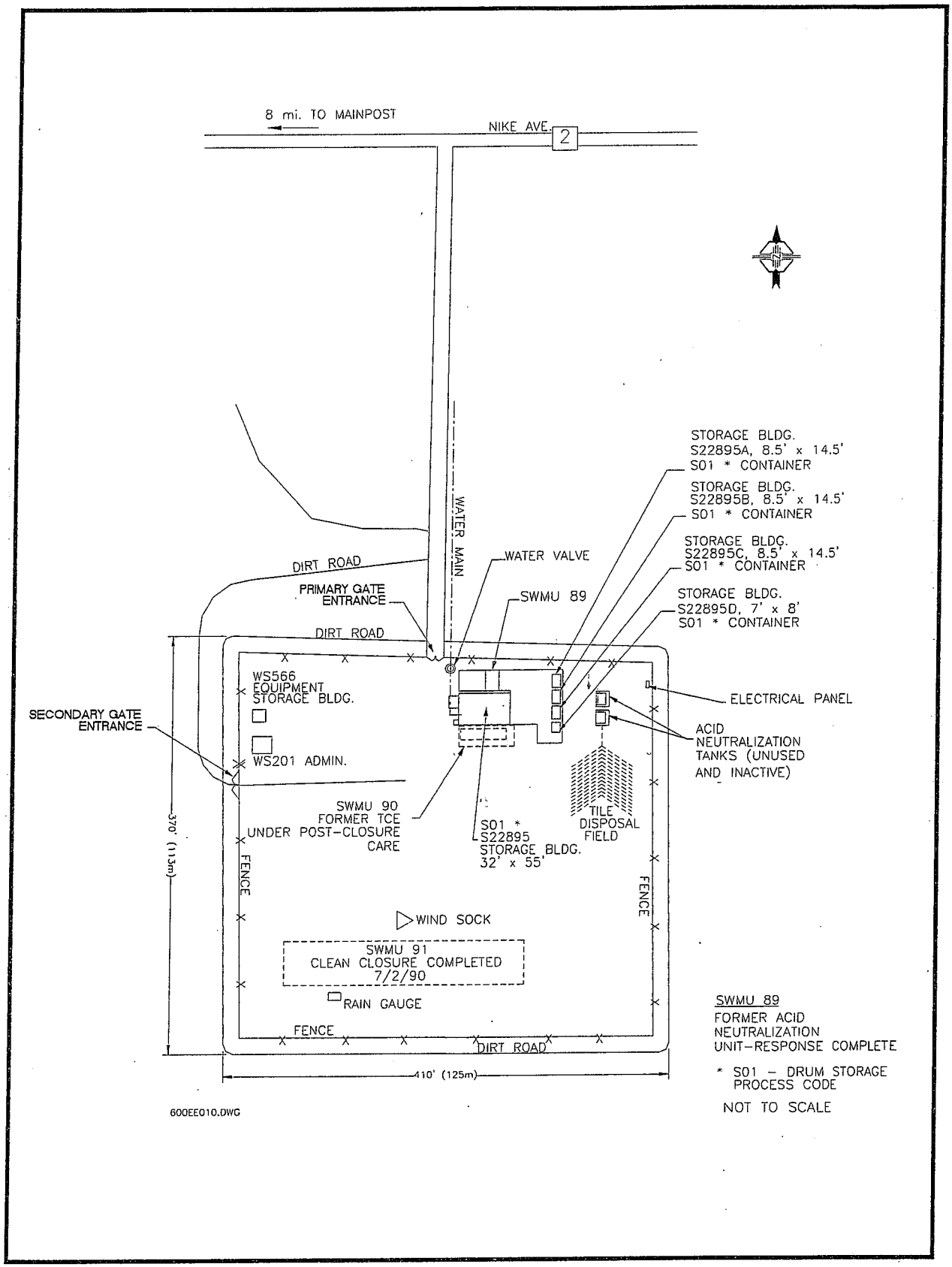

FIGURE 2 - Hazardous Waste Storage Facility Drawing

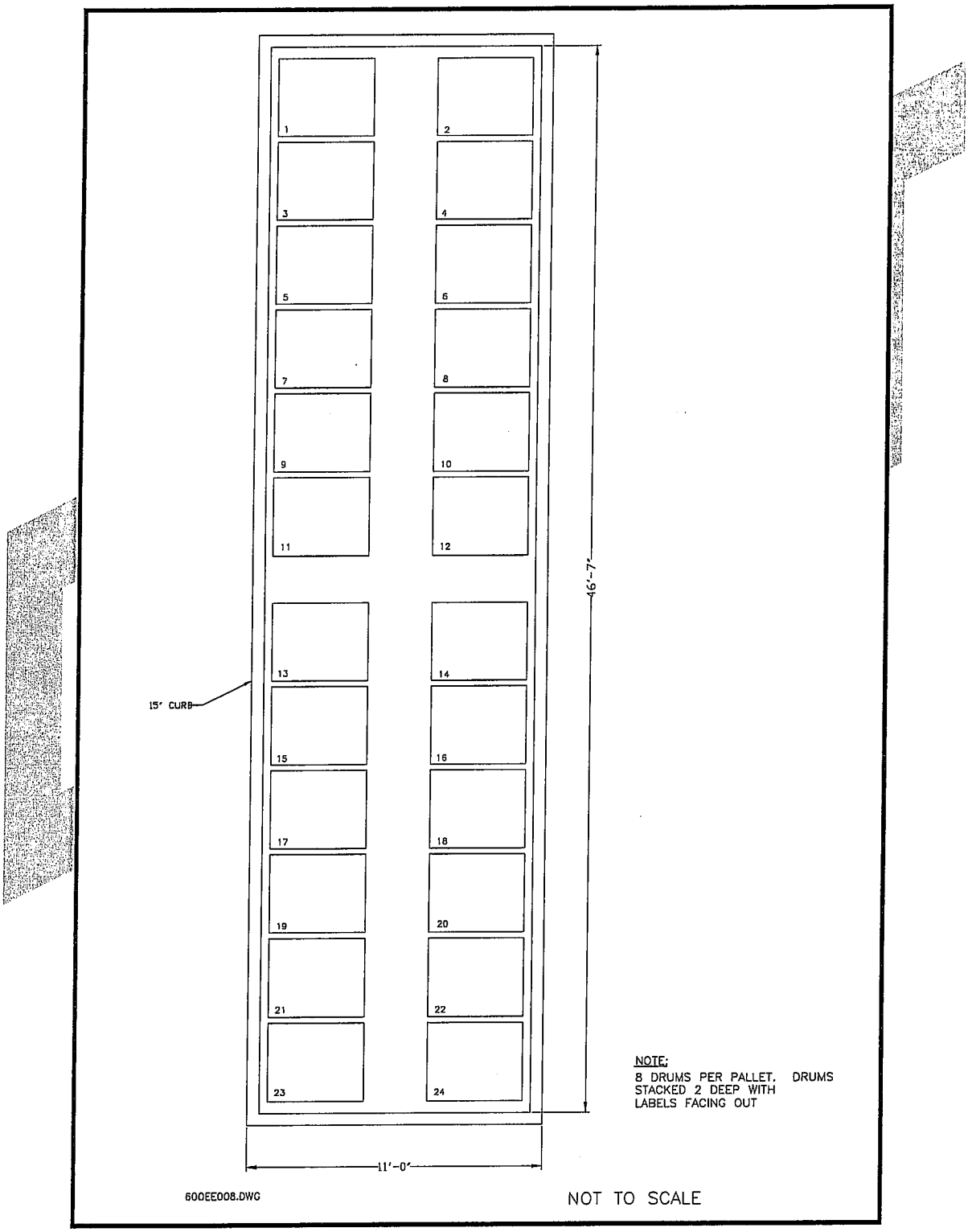

FIGURE 3
Containment Area in Building S22895 at the Hazardous Waste Storage Facility

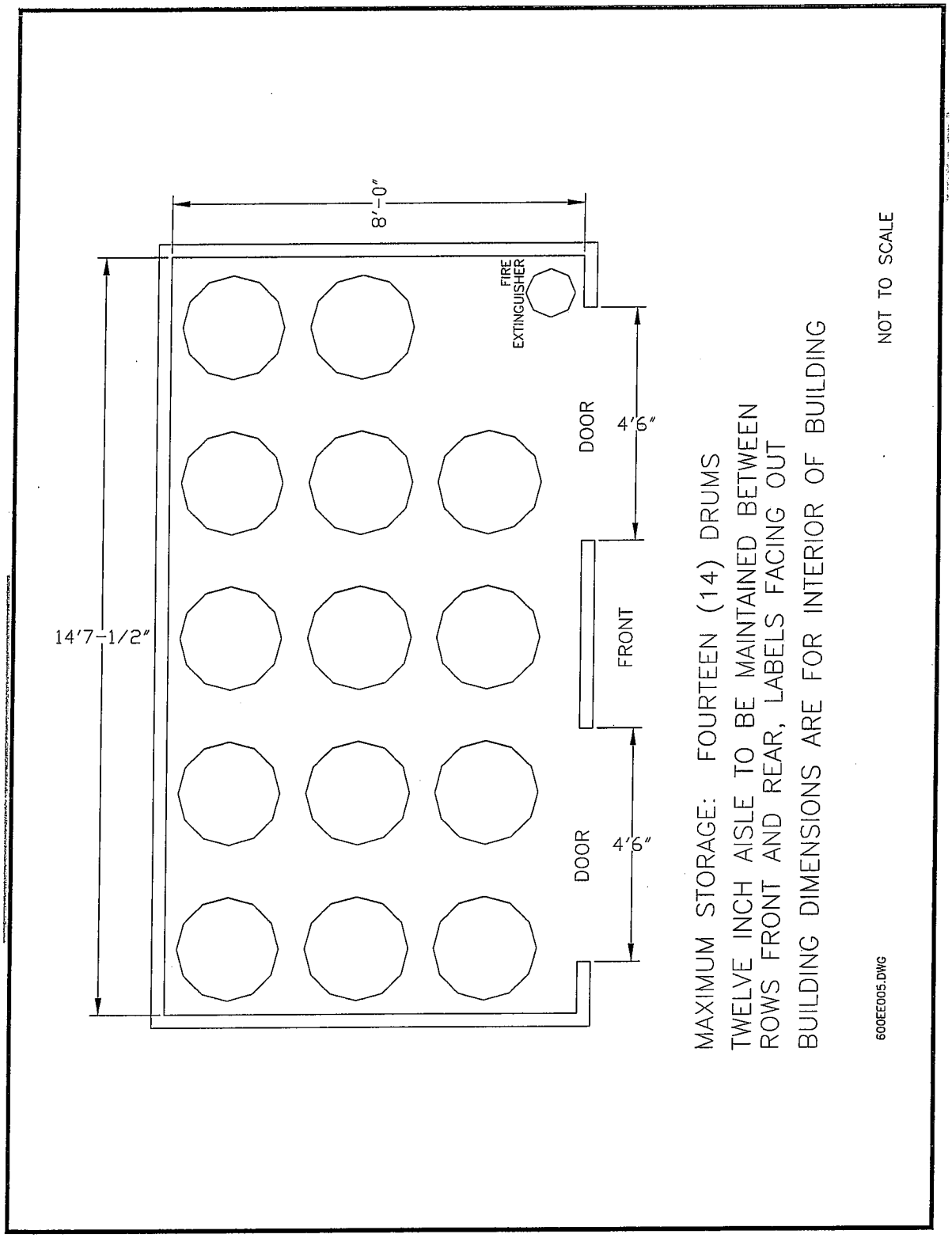

FIGURE 4
Containment Area in Buildings S22895A-C

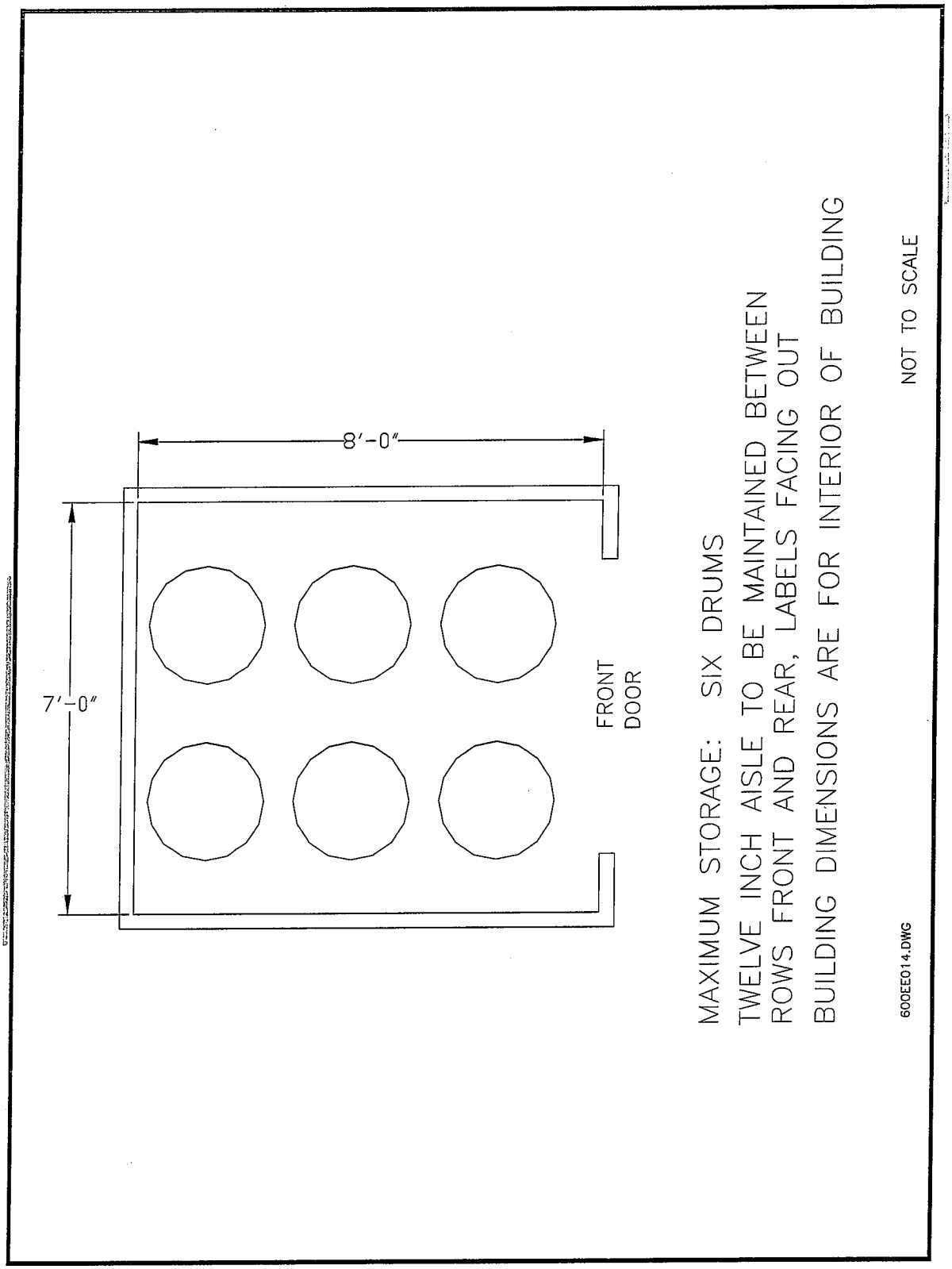

FIGURE 5
Containment Area in Building S22895D

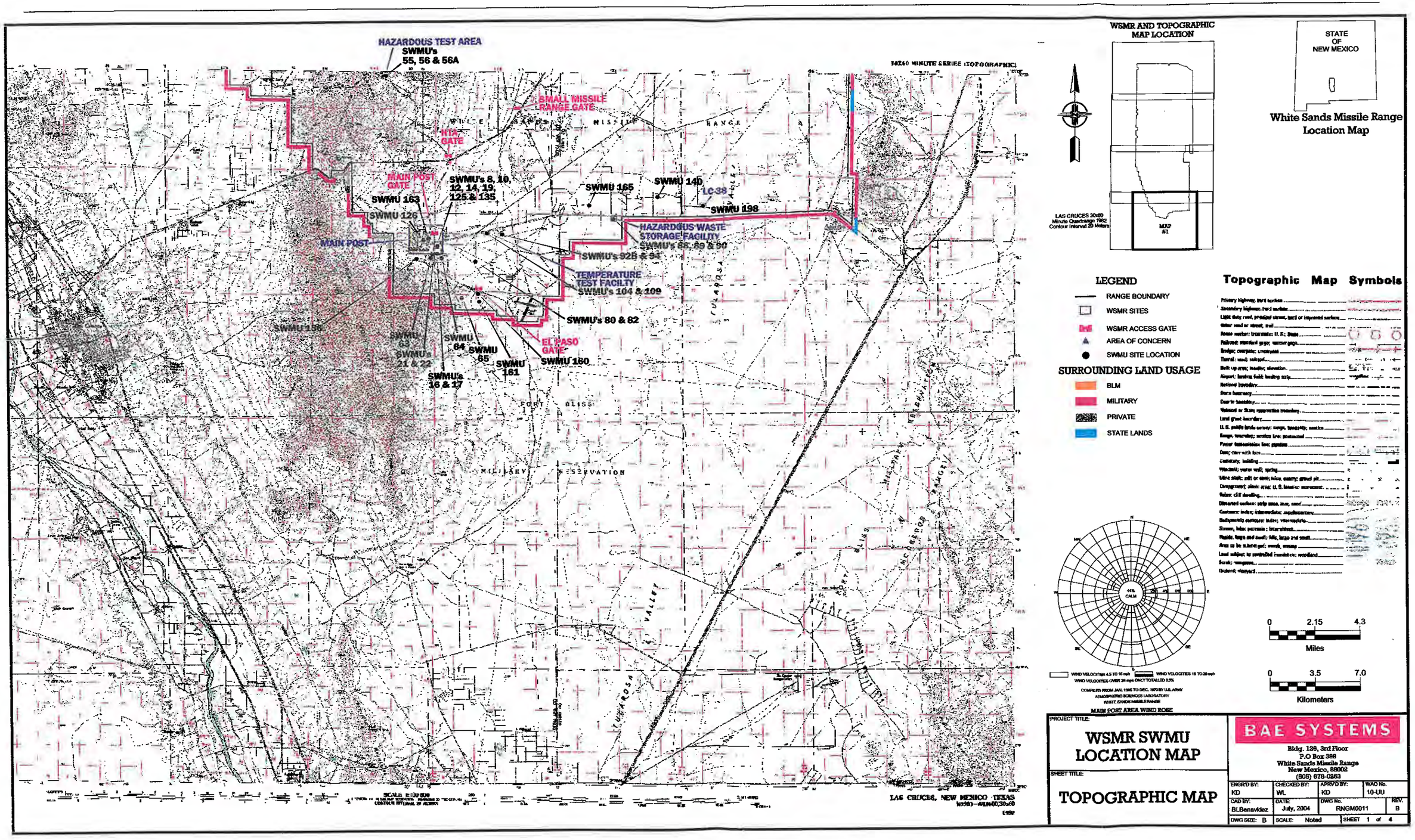

FIGURE 6 - WSMR SWMU Location Map

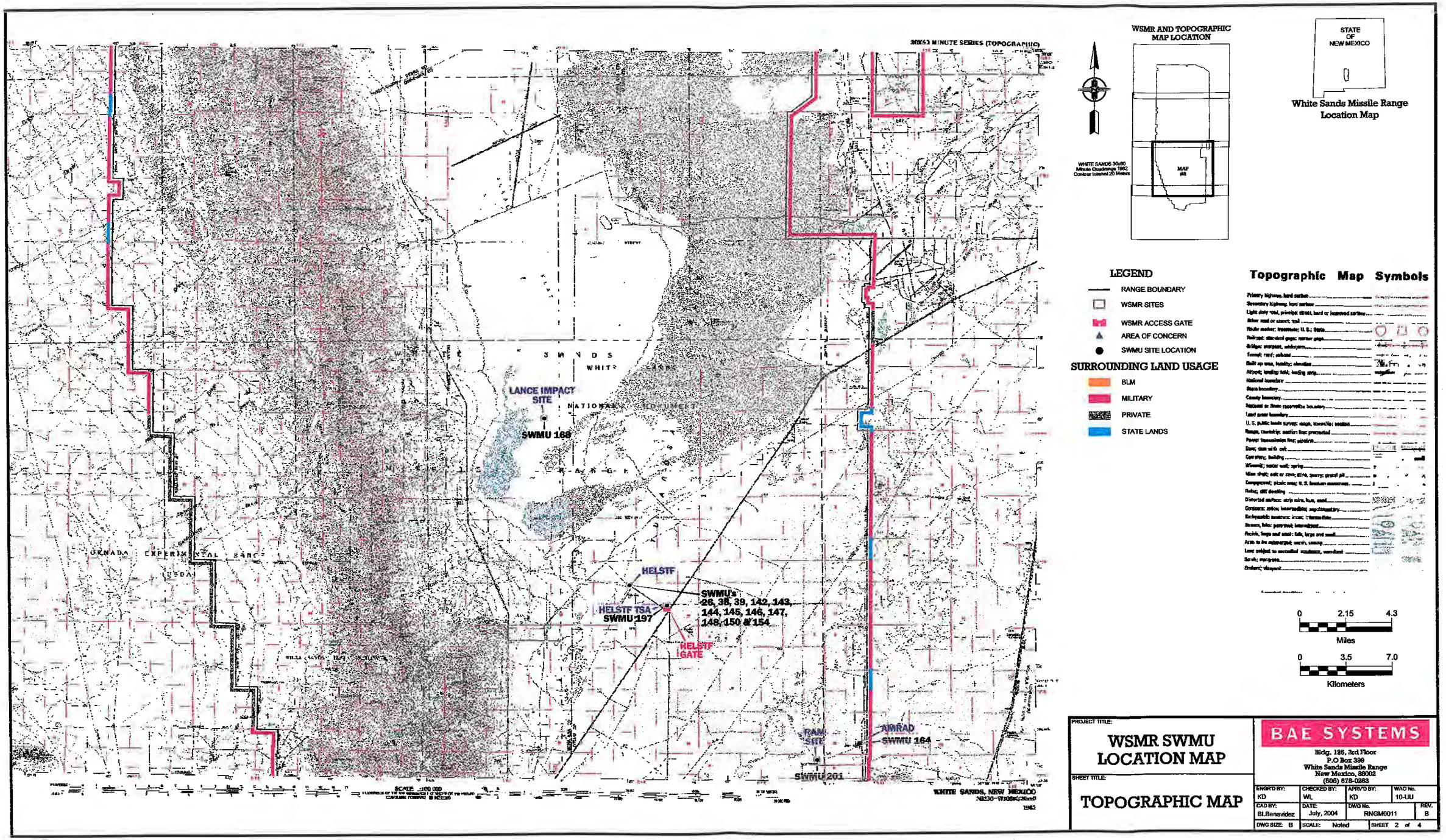

FIGURE 7 - WSMR SWMU Location Map Cont'd

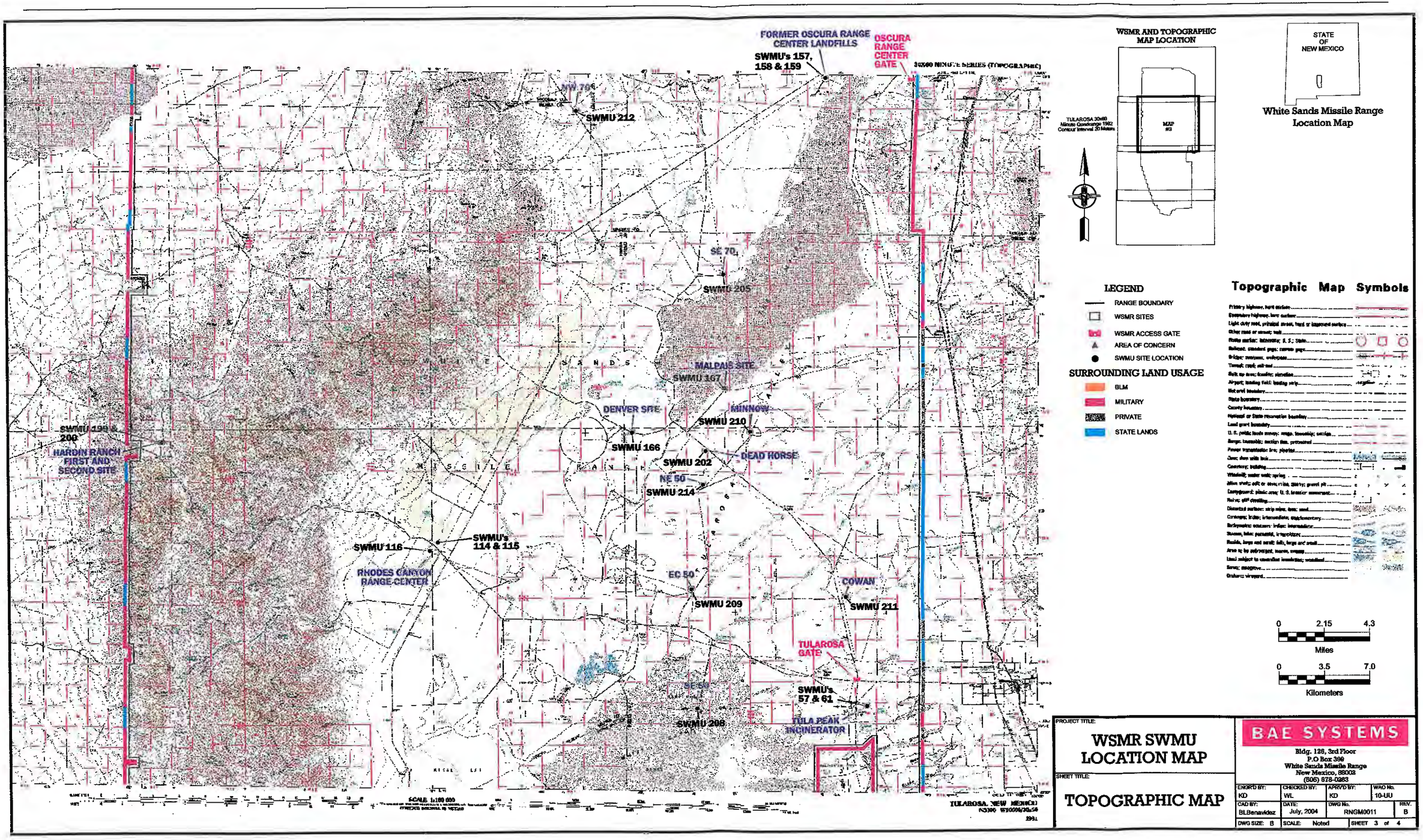

FIGURE 8 - WSMR SWMU Location Map Cont'd

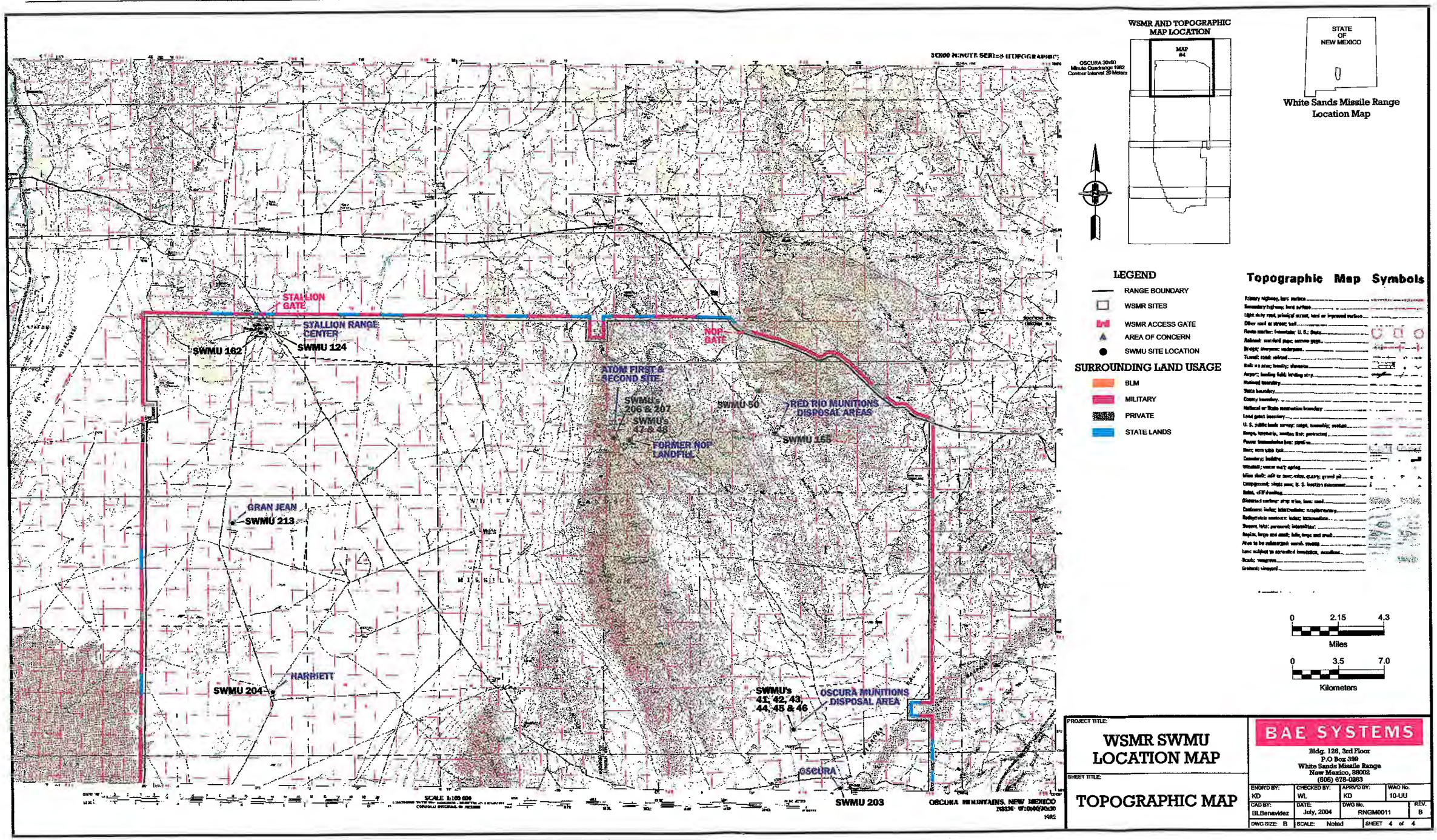

FIGURE 9 - WSMR SWMU Location Map Cont'd

ATTACHMENT 2
WASTE ANALYSIS PLAN

(PERMIT APPLICATION SECTION 2)

2.0 INTRODUCTION

This Waste Analysis Plan (WAP) has been prepared to support the RCRA Permit Application for the Hazardous Waste Storage Facility (HWSF) at WSMR, New Mexico. The HWSF is used to store waste prior to shipment for off-site disposal. A detailed description of the HWSF and a discussion of the facility's design and operation are provided in Attachment 1 of the Permit.

The requirements for a WAP are established in the New Mexico Hazardous Waste Management Regulations at NMAC 20.4.1.500, incorporating 40 CFR 264.13, pursuant to NMAC 20.4.1.900, incorporating 40 CFR 270.14 (b) (2-3). These regulations require waste characterization through acceptable (process) knowledge, analysis, or historical data to provide all the information needed to store, and ultimately dispose of the waste, as required by 20.4.1.300 NMAC, incorporating 40 CFR §264.13 and 40 CFR §268.

This WAP will be periodically reviewed to ensure the plan is compliant with current regulations and WSMR waste streams. The most recent revision of this waste analysis plan will be maintained at WSMR as part of the required Operating Record. Should the requirement for revision be identified, NMED will be notified and a permit modification to incorporate the revised WAP will be initiated.

2.1 Waste Characterization Objectives

The WAP describes the procedures used to obtain sufficient waste information to operate the HWSF and the hazardous waste sampling and analytical procedures routinely conducted. It addresses the following specific items: 1) waste characteristics; 2) current waste sources; 3) sampling procedures; 4) chemical and physical analysis; 5) incompatible wastes; 6) QA/QC procedures and 7) recordkeeping.

The NMED has established data quality objectives (DQOs) for WAPs, to ensure that regulatory requirements of the Resource Conservation and Recovery Act (RCRA) are met. These DQOs include:

- To determine all information that must be known to treat, store and dispose of the wastes in accordance with New Mexico's Hazardous Waste Regulations 20.4.1.500 NMAC, incorporating 40 CFR §264.13 (a)(l);
- To determine if the waste is hazardous as required by 20.4.1.300 NMAC, incorporating 40 CFR §262. 10 (c) and §262.11;
- To ascertain the hazardous constituents in a waste stream to identify all applicable hazardous waste codes and all underlying hazardous constituents as required by 20.4.1.300 NMAC, incorporating 40 CFR §262.11, 20.4.1.800 NMAC, incorporating §268.7 (a)(2), and §268.9 (a);
- To ascertain whether the waste must be treated before it can be land disposed as required by 20.4.1.800 NMAC, incorporating 40 CFR §268.7 and §268.9;
- To ascertain whether a routine waste generating process has changed sufficiently to create a new waste stream and alternative regulatory requirements as required by 20.4.1.800 NMAC, incorporating 40 CFR §264.13 (a)(3)(i), §268.7 (a)(3)(iii), and §268.7 (b)(3)(ii));

- To facilitate appropriate waste packaging for transportation as required by 20.4.1.300 NMAC, incorporating 40 CFR §262.10 (h);
- To ascertain the presence and concentration of wastes constituents that might cause unlawful air emissions as required by 40 CFR §270.25 (a), §264.179, §264.200, §264.13 (b)(6), §264.601 (c)(l), §264.1050, and §264.1082;
- To ensure that wastes are not inappropriately diluted to avoid LDR treatment requirements as required by 20.4.1.800 NMAC, incorporating 40 CFR §268.3;
- To determine the presence of prohibited waste as required by 40 CFR §268.50;
- To determine the presence of free liquids in wastes as required by 40 CFR §270.15 (b)(1), §264.13 (b)(6);
- To ascertain waste/waste and waste/container compatibility characteristics as required by 40 CFR §270.15, §270.16, §264.172, §264.177, and §264.199; and
- To ascertain waste ignitability and reactivity characteristics as required by 40 CFR §270.16 (j), §264.17 (a), and §264.198 (a).

2.2 Waste Analysis Approach

2.2.1 Acceptable (Process) Knowledge

The HWSF receives waste that is generated from numerous buildings and shops on WSMR. For many of these waste streams, acceptable (process) knowledge can be used to make a waste characterization using data developed under 40 CFR Part 261, or existing published or documented data on the waste or on waste generated by a similar process, as specified in 40 CFR §264.13(a)(2). For example, the generator of a waste stream may know and be able to document that none of the constituents in a given waste are hazardous. For other waste streams, analytical samples have been historically collected and used to make waste characterizations.
The characterization for a waste stream, whether it is based on acceptable (process) knowledge or historical data, is reevaluated any time the process generating the waste is changed.

Some wastes turned in to the HWSF cannot be characterized by one of the above methods. Samples of these wastes are collected and analyzed to draw conclusions about the waste characteristics and disposal requirements. Many of these waste streams are generated in the course of fulfilling the mission of WSMR. Subsequent wastes from the same process are then characterized by the results of the initial sample. In accordance with 40 CFR §264.13 (a)(3) and 40 CFR §264.13(b)(4), additional samples from the same waste stream are collected when:

- There is reasonable doubt about the identity of the waste;
- The process generating the waste has changed such that the characteristics of the waste may change; or
- Confirmation is needed that the analysis is current.

2.2.2 Identification/EPA Classification of the Hazardous Waste Managed

Many of the activities conducted at WSMR, in support of its diverse missions, generate waste streams with the potential to be hazardous. The potentially hazardous waste streams can be assigned to one or more of the ten waste generating activity groups identified at WSMR.
The activity groups and their corresponding waste streams consist of:

- Research, Development, Testing and Evaluation (RDT&E) Support
  -non-latex paint waste
  -solvent waste
  -solder waste
  -contaminated solid waste - such as rags and disposable equipment or components
  -laser dye
  -shop floor sweeping compound waste

- Environmental Restoration Activities – investigation derived and remediation wastes
  - purge water
  - diesel fuel recovered from the subsurface, contaminated with solvents
  - personal protective and sampling equipment
  - rags contaminated with solvents and oil
  - soils, with various contaminants from solid waste management units (SWMUs)

- Vehicle Maintenance
  -spent solvents from parts cleaning
  -used fuel filters
  -rags and absorbents contaminated with solvents, oils and grease
  -non-latex paint and solvent waste from minor touch-up paint jobs
  -shop floor sweeping compound waste

- Equipment Maintenance
  -used fuel filters
  -rags contaminated with solvents, oils and grease
  -non-latex paint and solvent waste from minor touch-up paint jobs
  -shop floor sweeping compound waste

- Fabrication Shop Operations
  -non-latex paint waste
  -solvent waste
  -rags contaminated with solvents and oil
  -solder waste
  -shop floor sweeping compound waste

- Laboratory Activities
  -spent solvent /acid wastes
  -rags contaminated with solvents
  -spent fluoride reagent
  -unused (out-of-date) chemicals – to be lab-packed

- Photographic Operations
  -flammable photo developing solutions
  -corrosive photo developing solutions

- Facility Maintenance
  -non-latex paint and solvent waste
  -rags contaminated with solvents and oils

- Paint and Solvent Recovery from Aerosol Can Recycling
  -waste paint and paint-related waste
  -solvent waste
  -liquid residue drained from the controlled puncturing of spent aerosol cans
  -rags contaminated with non-latex paint waste
  -rags contaminated with solvent waste
  -debris contaminated with non-latex paint or solvent wastes

- Universal Waste Group
  -spent fluorescent bulbs
  -used batteries (all types and sizes)
  -mercury-containing thermostats

Activities within a group generate similar types of wastes by virtue of having similar functions. Through the analysis and characterization of numerous waste streams, the constituents likely to be found in each of the major activity groups can be identified. The knowledge of the processes and the associated waste streams is used to select the appropriate analytical parameters for sampling and avoid unnecessary sampling.

To ensure that all waste characterization information is accurate, the following determinations will be made:

- Whether the waste was characterized at the point of generation, in compliance with 20.4.1.800 NMAC, incorporating 40 CFR §§ 268.7(a)(3) and 268.9(c);
- Whether routinely generated wastes are re-evaluated annually to ensure that the characterization is accurate and current and in compliance with 40 CFR § 264.13(a)(3); and
- Whether generators have appropriately identified when the processes or activities that routinely generate the waste have changed; in compliance with 20.4.1.500 NMAC, incorporating 40 CFR 264.13(a)(3)(i).

The major waste categories, the specific waste type, their respective parameters of concern for analysis, and EPA waste codes are outlined in Table 2-1 in accordance with 40 CFR §264.13(b)(1) and (2). This table may not be a comprehensive list of all specific wastes, but provides the framework for making decisions on chemical analyses for common WSMR waste streams. Many of the waste streams listed in Table 2-1 can be characterized by acceptable (process) knowledge, on the basis of historical sampling and analytical data or other appropriate documentation such as MSDSs, eliminating the need for additional analyses. The Universal Waste spent batteries, mercury-containing thermostats, and fluorescent bulbs waste streams are managed in accordance with the universal waste regulations.

Table 2-1. Major Waste Categories and Parameters of Concern.

Waste Generation Activity	Waste Generated	Basis for Hazard Classification	Parameters for Analyses and EPA Waste Codes[1]	LDR (WW or NWW)[2]
Research, Development, Testing and Evaluation (RDT&E)Support Organizations: Ground Based Electro Optical Deep Space Surveillance System(GEODSS) Army Research Lab (ARL) High Energy Laser System Test Facility (HELSTF) Navy (NAVY) Deputy for the Air Force (USAF) Material Test Directorate (MT) Public Works (P) Range Operations (RO) PEO STRICom (PEO STRI) Directorate of Logistics (LG) Survivability, Vulnerabilty Assessment Directorate (SV)	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Rags contaminated with solvents and oil (I,T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Solder waste (C)	MSDS	Corrosivity (D002), silver (D011), lead (D008)	NWW
	Spent Laser dye solution (I)	KOP[3], MSDS	Ignitability (D001), solvents (VOCs and SVOCs)	NWW
	Used shop floor sweeping compound (T)	KOP[3], MSDS	RCRA metals	NWW
Installation Remediation Activity Organizations: PEO STRICom (PEO STRI) Environmental Division (PW-ES)	Contaminated purge water (Listed)	KOP[3]	RCRA metals, solvents (VOCs and VOCs) (F002), (F003), (F005)	WW
	Contaminated fuel / solvents (I, listed)	KOP[3]	Ignitability(D001), solvents (VOCs and SVOCs)	NWW
	Contaminated soil (Listed)	KOP[3]	RCRA metals, solvents (VOCs and SVOCs) (F002), (F003), (F005)	NWW
	Rags and debris contaminated with solvents and oil (I,T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Used shop floor sweeping compound (T)	KOP[3], MSDS	RCRA metals	NWW
Vehicle Maintenance Organizations: Directorate for Community Activities and Housing (CA) MT Defense Threat Reduction Agency (DTRA) US Army National Guard Unit (USANG) NAVY PW LG	Rags contaminated with solvents, oil and grease (I,T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Used fuel filters (I)	KOP[3], Historical Test Data	Ignitability (D001), benzene (D018)	NWW
	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Used shop floor sweeping compound (T)	KOP[3], MSDS	RCRA metals	NWW
Equipment Maintenance Organizations: HELSTF PEO STRI PW DTRA LG	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Rags contaminated with solvents, oil and grease (I,T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Used fuel filters (I)	KOP[3] & Historical Test Data	Ignitability (D001), benzene (D018)	NWW
	Used shop floor sweeping compound (T)	KOP[3], MSDS	RCRA metals	NWW
Fabrication Shop Operations Organizations: HELSTF MT USAF	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Rags contaminated with solvents and oil (I,T, listed)	KOP[3], MSDS, and Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Solder waste (C)	MSDS	Corrosivity (D002), RCRA metals	NWW
	Used shop floor sweeping compound (T)	KOP[3], MSDS	RCRA metals	NWW
Laboratory Activities Organizations: HELSTF Massachusetts Institute of Technology and Lincoln Labs (MIT/LL) MT SV	Spent solvent wastes (I,T,listed)	MSDS	Ignitability (D001), solvents (VOCs and SVOCs)	NWW
	Corrosives (C,T)	MSDS	Corrosivity (D002), RCRA metals	NWW
	Rags contaminated with solvents (I,T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Labpacks of expired chemicals (I, C, T, listed)	KOP[3], MSDS,	Ignitability (D001), corrosivity (D002), RCRA metals, solvents (VOCs and SVOCs)	NWW

Waste Generation Activity	Waste Generated	Basis for Hazard Classification	Parameters for Analyses and EPA Waste Codes[1]	LDR (WW or NWW)[2]
Photographic Operations Organization: RO	Flammable liquids (I,T)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), silver (D011), solvents (VOCs and SVOCs)	NWW
	Flammable corrosives (C,T)	KOP3, MSDS, Historical Test Data	Ignitability (D001), silver (D011), solvents (VOCs and SVOCs)	NWW
Facility Maintenance Organizations: Range-wide	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Rags contaminated with solvents and oil (I,T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
Paint and Solvent Recovery from Aerosol Can Recycling Organizations: Public Works Range Operations Contractor LG	Paint waste and solvent waste (I, T, listed)	KOP[3], MSDS, Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
	Rags and debris contaminated with paint and solvent wastes (I,T, listed)	KOP[3], Historical Test Data	Ignitability (D001), RCRA metals, solvents (VOCs and SVOCs)	NWW
Universal Wastes Organizations: Range-wide	Spent fluorescent bulbs (T)	Historical Test Data	Mercury (D009), cadmium (D006),and lead (D008)	NWW
	Spent batteries (C,T)	MSDS	Corrosivity (D002), Cadmium (D006), Chromium (D007), Lead (D008)	NWW
	Mercury-containing thermostats	KOP[3]	Mercury (D009)	NWW

[1] RCRA hazardous constituents and/or properties. Analysis may include full TCLP metals, if appropriate.
[2] Refer to 40 CFR § 268.2 (d) and (f) for the definitions of wastewater (WW) and non-wastewater (NWW).
[3] KOP is defined as knowledge of process or acceptable knowledge.
C = corrosive I = ignitable T = toxic R = reactive Listed = EPAF-and U- or P-listed wastes

2.2.3 Hazardous Waste Management Procedures

WSMR has implemented specific procedures, subject to modification and improvement, for managing and tracking hazardous wastes. These procedures ensure that hazardous waste is properly managed and tracked from the time it is generated through the time that it leaves the HWSF for disposal, until the signed manifest is ultimately returned.

The Hazardous Waste Management Center (HWMC) is responsible for waste management on WSMR, including the operation of the HWSF. The waste management process includes the use of Satellite Accumulations Points (SAPs) located across the range, in the areas where waste is first generated and accumulated. From the SAP, waste is usually moved to a Less-Than-90-Day Storage Accumulation Facility (<90-Day). The Waste Profile is reviewed to ensure the waste stream characterization is valid. If the waste stream requires a re-evaluation due to a process change and/or annual review, or is a new waste stream, data is collected (sampling, MSDS or user knowledge), the waste stream is evaluated, waste codes are determined, and a new Hazardous Waste Profile is generated. The hazardous waste containers are moved from the <90-Day to the HWSF for storage until they are picked up by the waste disposal contractor for transportation off-site. For existing SAPs, most waste streams are well-described and do not vary. For a few, the waste streams are variable and require sampling for each container. Should the wastes produced at a particular activity change, that change would be identified by the SAP Manager and/or the Environmental Compliance Officer (ECO) and new documentation prepared. Job descriptions and roles for personnel performing hazardous waste duties are provided in Chapter 11.

Figure 2-l shows the flow diagram for the procedure used to evaluate a waste stream. The diagram details the process used to characterize a waste to develop a Hazardous Waste Profile document; a copy of the most current revision of that document is provided as a separate exhibit. The Waste Profile Form is used as a guidance to ensure an accurate waste description and

characterization. This form is patterned after models provided in EPA and other guidance, to ensure that all required data is collected. This form and other waste tracking documents are provided as examples for informational purposes only and not for incorporation in this permit application.

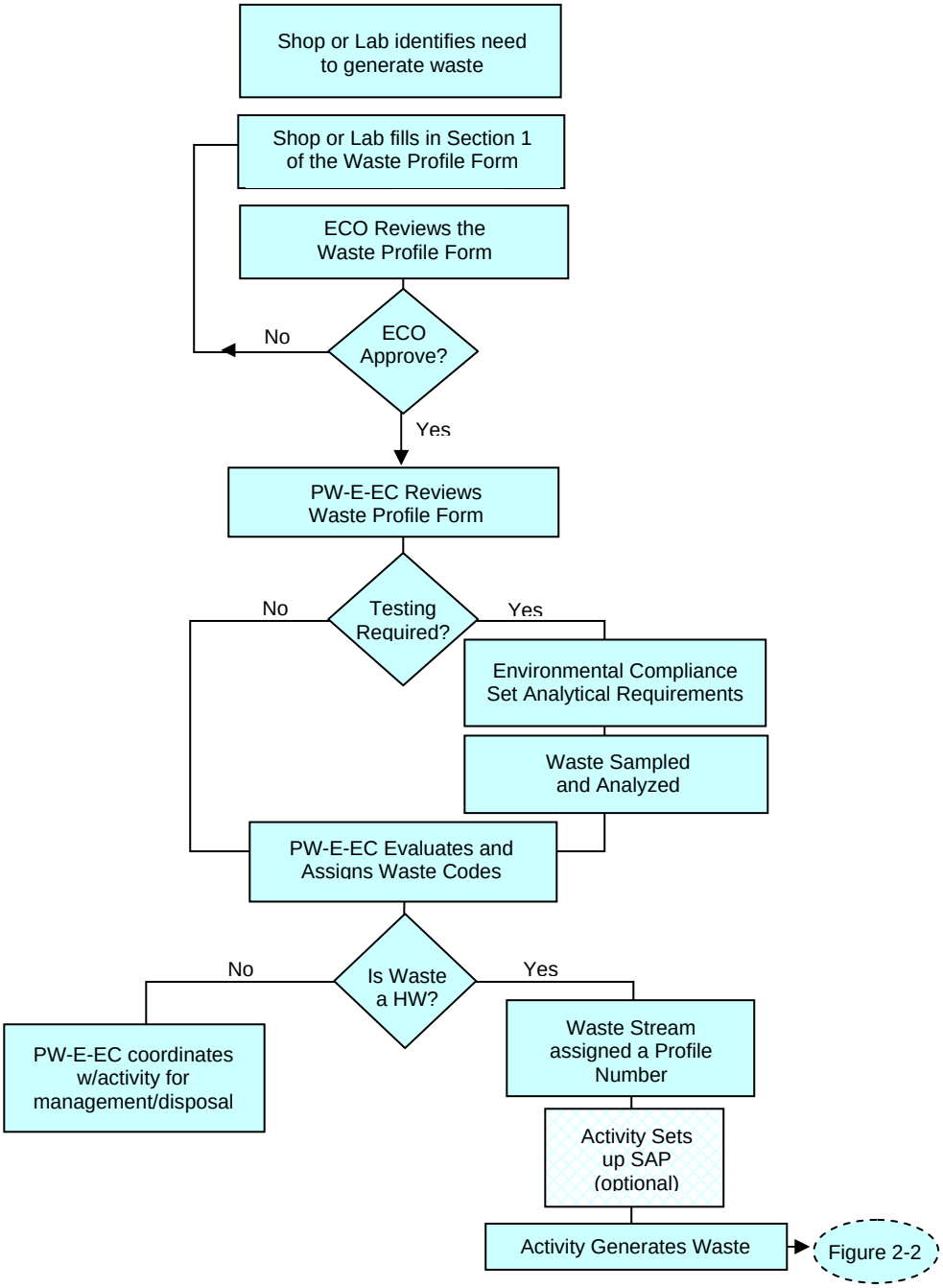

Figure 2-1. Flow Diagram for Evaluating Waste Streams

Figure 2-2 provides a flow diagram outlining the procedures and decisions for moving waste from the SAPs to the <90-Day and/or the HWSF, through treatment and disposal at a TSDF, and ultimately to the signed manifest returned to WSMR. The ultimate disposal of hazardous waste is controlled by contracts through the Defense Reutilization and Marketing Office (DRMO).

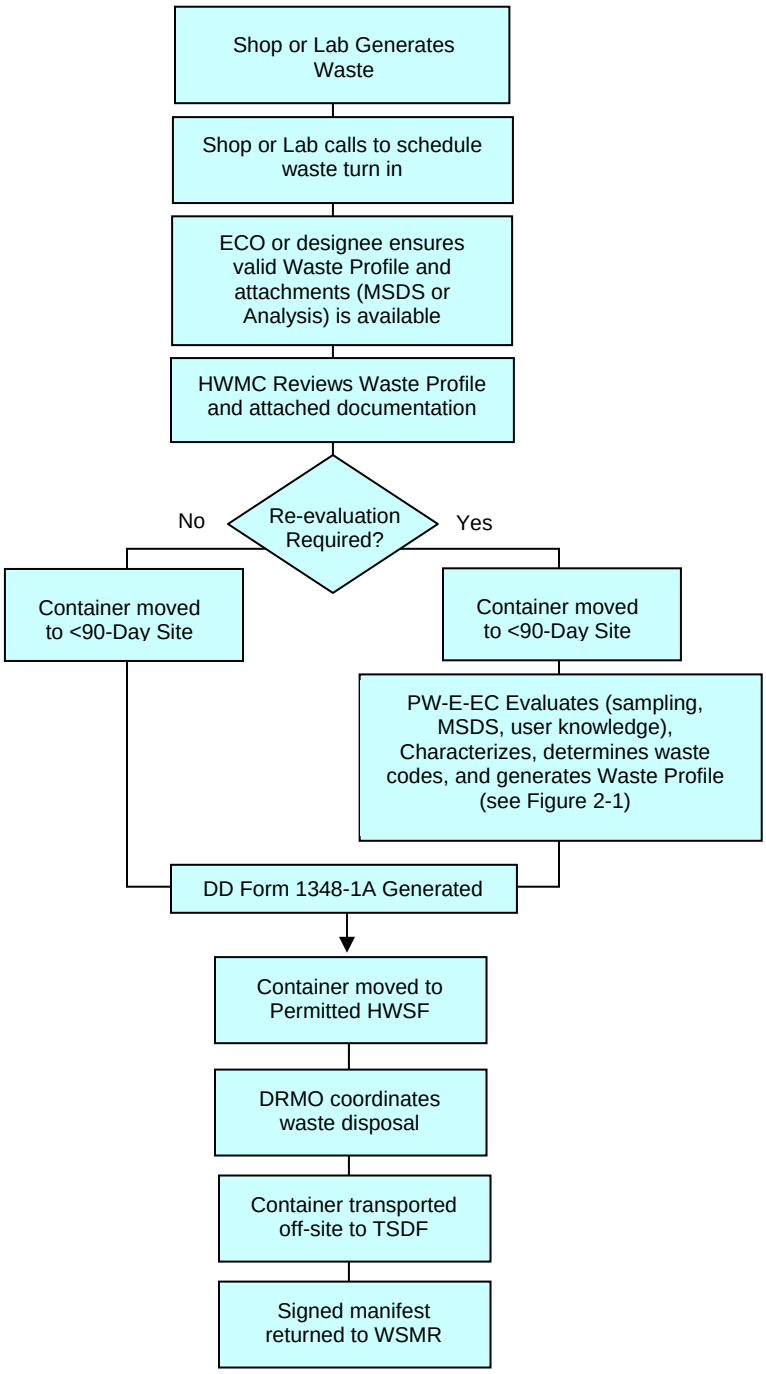

Figure 2-2. Flow diagram for Waste Turn-in.

The facility maintains a Hazardous Waste Profile for each waste stream generated. These forms provide a record of the acceptable knowledge and a description of the activities that produce the waste[s1]. Waste Profile Forms are reviewed and approved by personnel knowledgeable of the waste generating process at the SAP, and are further reviewed and approved at the <90-Day and the HWSF. Along with the results of laboratory analysis (if required) this paperwork provides the documentation to support a hazardous waste determination.

When new or changed waste streams are identified, a Waste Profile Form and supporting documents are prepared and submitted to the HWMC. If the waste stream will be recurring, a SAP may be set up and managed in accordance with the container storage regulations found at 40 CFR 265 Subpart I.

Documentation related to waste characterization is extensively checked at each movement of waste. The documentation is reviewed for completeness to ensure that all forms are present and signed as necessary. This documentation can include the Waste Profile, Waste Profile Form, MSDS, chain-of-custody forms for samples, and the associated chemical analysis from a laboratory, if analysis is required. In addition, the waste container is inspected to ensure that such parameters as physical state, physical description, weight and volume match the description provided for the waste stream. Significant discrepancies in quantity are: any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest. Bulk wastes are not accepted at the HWSF; only containerized waste is accepted. Upon discovering a significant discrepancy, the HWSF manager will reconcile the discrepancy with the <90-Day facility manager or transporter to ensure that the generator's manifest is accurate when waste is shipped to an off-site TSDF. Any significant discrepancies will be noted in the Operating Record.

2.3 Selecting Waste Analysis Parameters

When acceptable (process) knowledge or historical analytical data are not available, testing of waste streams is conducted to obtain a detailed chemical and physical analysis in accordance with 40 CFR §264.13. The objectives of sampling are to:

- Confirm characterizations of wastes for which prior analysis or acceptable (process) knowledge is not available;
- Determine compliance with applicable regulatory requirements, including Land Disposal Restrictions;
- Provide information to aid in the safe management of wastes, such as using biodegradable sorbents, if appropriate;
- Provide relevant data for use in making disposal decisions and,
- Resolve differences associated with inspections and generator descriptions.

The following subsections outline the procedures that will be followed to ensure that the objectives are met and that WSMR complies with all regulatory requirements for waste analysis.

2.3.1 Criteria and Rationale for Parameter Selection

Characteristics of wastes are identified in several different ways. Visual inspections are conducted for all waste streams. This consists of characterizing the physical form, phase, and appearance (color, odor, etc.) for each container prior to movement. Chemical analysis is conducted to identify specific waste characteristics if a complete waste characterization has not already been performed based on acceptable (process) knowledge or previous analysis.
The chemical analyses conducted for a waste stream vary, based on the knowledge of the processes generating the waste and the parameters of concern as identified in Table 2-1.
Waste analysis parameters are selected to fulfill three criteria: waste identification, identification of incompatible/inappropriate wastes, and process and design considerations for container compatibility. The subsections below, in conjunction with Table 2-1, outline the parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters in accordance with 40 CFR 264.13(b)(1). Table 2-2 summarizes the analytical methods used for waste characterization.

Table 2-2. Analytical Methods.

Waste or Characteristic	Method (SW-846; unless indicated differently)
Ignitability (D001)	1010
Corrosivity (D002)	9040A/9041A/9045A; 1110
Reactivity (D003)	SW-846, Section 7.3.3.2 or Section 7.3.4.2
Toxic Characteristic Leaching Procedure	1311
Volatile Organic Compounds	8260B
Semi-Volatile Organic Compounds	8270C
Metals	6010B, 7470A

2.3.1.1 Paint-related materials group

In general, uncharacterized waste associated with painting activities is analyzed to determine the presence of metals above toxicity characteristic levels. Metals such as cadmium and chromium are found in some types of paints used in specific shops. Paint-related waste is also tested for ignitability. Waste associated with the chemical stripping of paint and the use of paint thinners is also tested for the presence of solvents or other semivolatile or volatile organic compounds **(SVOC or VOC)**. Paint thinners, strippers, and rinse water associated with stripping could require testing for corrosivity, based on knowledge of the materials used in the process.

2.3.1.2 Vehicle and equipment maintenance waste

Vehicle and equipment maintenance activities generate a variety of waste streams with different characteristics. However, similar constituents are found in these waste streams. Because some waste or used fuels contain lead, cadmium, or other metals, a metals analysis is conducted for all uncharacterized waste streams involving vehicle or equipment maintenance. VOCs and SVOCs are also typical components of fuels and lubricants and should be tested for in uncharacterized waste streams associated with fuel or lubricant use. Wastes associated with

parts cleaning and/or may have come into contact with solvents should also be tested for VOCs and SVOCs, as halogenated and nonhalogenated solvents can be identified by these analyses. Finally, because many of these waste streams are associated with fuels or ignitable substances, ignitability is a standard analysis for wastes from vehicle and equipment maintenance.

2.3.1.3 Shop Floor Sweeping Compound Waste

Shop floors, for some activities, are sprinkled with sweeping compound. This material helps to pick up dust and dirt from the floors. In soldering, welding and cutting processes, particulates can be generated and swept up with the sweeping compound. This waste group is tested for RCRA metals, which could be present at levels that make the waste characteristic for toxicity.

2.3.1.4 Installation Remediation Activities

Wastes generated from Installation Remediation activities include soil cuttings, groundwater, personal protective equipment (PPE), and debris. These wastes can vary widely, and are addressed on a case-by-case basis. Work Plans are prepared for each investigation or remediation project, and are submitted to NMED ahead of initiation of the work. Management of any wastes expected to be generated is discussed in the Work Plan.

2.3.1.5 Photographic Operations

Metals are the primary concern in wastes from photographic operations. Mercury is found in photo imaging paper and should be tested for in uncharacterized waste streams associated with this paper. Other metals such as cadmium, selenium, and silver are found in wastes such as photo-fixing solution and silver recovery cartridges. These metals are often present at levels that make these wastes characteristically toxic. In addition, the corrosivity of uncharacterized waste streams is also tested.

2.3.1.6 Recovered Liquids from Recycling of Aerosol Cans

RCRA-empty aerosol cans are collected for scrap metal recycling. These empty cans are brought to the HWMC. They are then punctured at the SAP by a device commonly called a “can popper.” Any residual liquid contents in the aerosol cans are captured by draining into a drum. The collection drum is always closed, except when actively puncturing cans. The recovered liquids are accumulated until the drum is near full. Analysis is performed for VOCs, SVOCs, ignitability and RCRA metals, based on knowledge of the various products contained in aerosol cans around WSMR activities and RCRA characteristics, as applicable.

2.3.1.7 Miscellaneous

Spill cleanups and lab packs are other waste streams that can occur. These wastes are not generated on a regular basis, and the waste characteristics change depending on the material spilled. These wastes will be addressed on a case-by-case basis, and knowledge of the material spilled could form the basis for selecting analyses to run. Labs packs result from the decision to discard expired shelf-life products and materials that can no longer be used. MSDS sheets can provide the basis for performing a hazardous waste determination or for determining the analyses required.

2.3.1.8 Other Analyses - to support treatment alternatives

In addition to the specific analyses identified in Table 2-1, other analyses such as thermal content (BTUs) may be conducted to provide information regarding treatment alternatives. Current analytical methods are provided, but these are suggested methods and are not meant to be restrictive of the analyses that can be performed. In many cases, for example, SW6010 is the recommended analysis for metals, but additional analytical methods for constituents such as mercury or lead may be appropriate. The methods are intended to serve as a guide and could be substituted for other, more relevant or more current methods as they are developed. The analytical laboratory will be consulted prior to sampling events to ensure that the most up-to-date methods are used for analysis.

2.3.2 Special Parameter Selection and Procedural Requirements

Additional waste analysis and procedural requirements for wastes may be necessary in special cases; specifically for ignitable, reactive, and incompatible wastes, and to comply with Land Disposal Restrictions requirements.

2.3.2.1 Ignitable, Reactive and Incompatible Wastes

Parameters are chosen to ensure the proper storage and disposal of these wastes in accordance with 40 CFR 264.17(b), by preventing reactions which:

- Generate extreme heat or pressure, fire or explosions, or violent reactions;
- Produce uncontrolled toxic or flammable fumes or gases;
- Damage the structural integrity of the containers or the HWSF; and
- Threaten human health or the environment.

Incompatible wastes will not be stored in close proximity to one another. No blending of wastes is being performed at the HWSF. Containers are separated and stored so that waste from a leaking container cannot come into contact with other containers. During storage, containers remain closed unless it is necessary to transfer the waste due to container leakage, or for a contractor who is taking the waste to an off-site treatment, storage and disposal facility to open the container to confirm the contents by a visual inspection.

The following information is provided so that incompatible wastes are separated during storage and emergency response is performed in such a way as to prevent accidental contact.

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects harmful to human health and the environment, such as: (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases. Table 2-3 provides examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences that may result from mixing materials in one group with materials in another group. The table is not exhaustive, but is intended to provide guidance to personnel at the HWSF and emergency responders when managing these potentially incompatible wastes.

Acceptable knowledge (information about the process that produced the waste), as well as the results of any analytical test will be used to determine appropriate compatibility groups.

Material Safety Data Sheets provide this information for waste streams that consist of a single component. For waste streams that include multiple components or those that involve reactions, personnel trained to assign wastes to compatibility groups will make the assignments. Table 2-3 or an alternate, equivalent source, will be consulted to ensure that incompatible waste groups are not stored in proximity. Copies of NMAC 20.4.1.500, incorporating 40 CFR 264 Appendix V and 49 CFR 177.848 are also available to assist in the determination of incompatible wastes.

2.3.2.2 Land Disposal Restrictions

The hazardous wastes stored at the HWSF are prohibited from land disposal if contaminant concentrations exceed levels listed in 40 CFR 268, Subpart D. Containers of such wastes are stored solely for the purpose of accumulation of quantities necessary to facilitate proper recovery. In accordance with NMAC 20.4.1.800, incorporating 40 CFR 268.50, these wastes will be stored for less than one year. All provisions of 40 CFR 262.34, 264, and 265 are met. Each container is clearly marked to identify its contents, quantity, and the accumulation start date. When generated waste is determined restricted from land disposal, all supporting data used to make the determination are kept on file per 40 CFR 268.7(a)(6).

Before shipping hazardous wastes off site, a determination will be made as to whether the waste needs treatment before it can be land disposed. In accordance with the LDR regulations outlined in 40 CFR §268.7, hazardous wastes must meet the applicable LDR treatment standards contained in 40 CFR Part 268, Subpart D. This determination will be made by either acceptable (process) knowledge or testing. If it is known that the wastes do not meet applicable LDR treatment standards based on acceptable (process) knowledge or historical analytical results, no testing is necessary. Additional testing, if necessary, will be conducted only to certify that the waste meets LDR treatment standards. Each waste for which a treatment standard has been set will be evaluated for the applicable parameters in 40 CFR Part 268, Subpart D. In addition, for any wastes that exhibit the hazardous characteristics of ignitability, corrosivity, reactivity, or toxicity, the underlying hazardous constituents will be determined in accordance with 40 CFR §268.9. All analytical results completed in support of LDR requirements will be retained within the required Operating Record.

Wastes resulting from WSMR operations that exceed the applicable LDR treatment standards will be sent off site to a permitted treatment facility. LDR notifications, and any additional data as required by 40 CFR §268.7(a)(2), will be supplied with the shipment of each waste.

Wastes that are determined through analysis to meet treatment standards as specified in 40 CFR Part 268, Subpart D, can be land-disposed in a permitted facility without further treatment. An LDR certification, including data to support the certification as required by 40 CFR §268.7(a)(3), will be prepared and accompany the shipment of waste to the receiving facility.

2.3.2.3 Air Emission Requirements

For wastes subject to Subpart CC, NMAC 20.4.1.500, incorporating 40 CFR 264.1082, the waste profiles must be reviewed and updated annually. The largest containers used for storage at the HWSF are 55-gallon containers, or 85-gallon salvage drums. Thus, per 40 CFR 264.1086 (b) (1) (i), Container Level 1 standards apply. The Container Level 1 standards specify the use of containers meeting the Department of Transportation (DOT) regulations for packaging of hazardous materials for transportation.

2.4 Sampling and Analysis Plan

This section presents the Sampling and Analysis Plan (Plan) for wastes managed at the HWSF.

2.4.1 Objectives

The Plan provides procedures for testing the waste streams requiring analytical characterization that are stored in the HWSF. It explains how samples will be collected and the analyses that will be performed. The plan's design is based on knowledge of the materials used at WSMR and knowledge of the characteristics of categories of waste. Specific topics covered in this plan include:

- Sampling procedures and methodology;
- Health and safety procedures;
- Sampling QA/QC Procedures;
- Sample Container Preservation Requirements; and
- Laboratory procedures.

Samples collected are prepared according to the most current appropriate EPA sample protocol. If EPA methods are not available, ASTM methods are used.

Proper waste identification will be ensured by the following measures:

- A Waste Profile Form will be prepared for each new waste stream to identify the process and characterize the waste;
- An annual review of waste stream will be conducted to determine waste inconsistency with the waste profile and whether additional sampling is warranted;
- SAP managers and/or ECOs inform the HWMC if new material is introduced into process for determination of the need for re-evaluation of the waste stream.
- Waste is identified and tracked according to procedures detailed in Figures 2-1 and 2-2.

WSMR personnel are continually working to reduce the volume of hazardous waste generated by base operations through pollution prevention initiatives.

TABLE 2-3. INCOMPATIBLE WASTE

GROUP	WASTE	Acetic acid and other organic acids	Acetylene sludge	Acid and water	Acid sludge	Alcohols	Aldehydes	Alkaline caustic liquids	Alkaline cleaner	Alkaline corrosive battery fluid	Alkaline corrosive liquids	Aluminum	Battery acid	Beryllium	Calcium	Caustic wastewater	CH_3 $SiCl_3$	Chemical cleaners	Concentrated mineral acids	Electrolyte, acid	Etching acid liquid or solvent	Halogenated hydrocarbons	Lime and water	Lime sludge and other corrosive alkalies	Lime wastewater	Lithium	Magnesium	Metal hydrides	Nitrated hydrocarbons	Other flammable and combustible	Other reactive metals and metal hydrides	Reactive organic compounds and	Other water-reactive waste	PCl_3	Pickling liquor and other corrosive acids	Potassium	SO_2 Cl_2	$SOCl_2$	Sodium	Spent acid	Spent mixed acid	Spent sulfuric acid	Spent Caustic	Unsaturated hydrocarbons	Zinc powder
	GROUP B WASTE	6	2,3,4	1,2,3,4,5	1,2,3,4,5	6	6	2,3,4	2,3,4	2,3,4	2,3,4	4,6	1,2,3,4,5	4,6	3,4,6	2,3,4	3	1,2,3,4,5	6	1,2,3,4,5	1,2,3,4,5	6	2,3,4	2,3,4	2,3,4	3,4,6	4,6	3	6	6	4,6	6	3	3	1,2,3,4,5	3,4,6	3	3	4,6	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5	2,3,4	6	4,6
1A	Acetylene sludge																																												
3A	Alcohol																																												
4A	Alcohols																																												
4A	Aldehydes																																												
1A	Alkaline caustic liquids																																												
1A	Alkaline cleaner																																												
1A	Alkaline corrosive battery fluid																																												
1A	Alkaline corrosive liquids																																												
2A	Aluminum																																												
2A	Beryllium																																												
2A	Calcium																																												
1A	Caustic wastewater																																												
6A	Chlorates																																												
6A	Chlorine																																												
6A	Chlorites																																												
6A	Chromic acid																																												
4A	Halogenated hydrocarbons																																												
6A	Hypochlorites																																												
1A	Lime and water																																												
1A	Lime sludge and other corrosive alkalies																																												
1A	Lime wastewater																																												
2A	Lithium																																												
2A	Magnesium																																												
4A	Nitrated hydrocarbons																																												
6A	Nitrates																																												
6A	Nitric acid, fuming																																												
2A	Other reactive metals and metal hydrides																																												
4A	Other reactive organic compounds and solvents																																												
6A	Other strong oxidizers																																												
6A	Perchlorates																																												
6A	Permanganates																																												
6A	Peroxides																																												
2A	Potassium																																												
2A	Sodium																																												
1A	Spent caustic																																												
5A	Spent cyanide and sulfide solutions																																												
4A	Unsaturated hydrocarbons																																												
3A	Water																																												
2A	Zinc powder																																												

EXPLANATION

Red block indicates incompatible wastes. Mixing of these wastes will result in a hazardous reaction listed below.

- Group 1-A + 1-B = heat generation, violent reaction
- Group 2-A + 2-B = fire or explosion or generation of flammable hydrogen gas
- Group 3-A + 3-B = fire, explosion, heat generation or generation of flammable or toxic gases
- Group 4-A + 4-B = fire, explosion, violent reaction
- Group 5-A + 5-B = toxic hydrogen cyanide or hydrogen sulfide gas
- Group 6-A + 6-B = fire, explosion, violent reaction

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2.4.2 Sampling Procedures and Methodology

In many cases, samples from containers containing waste will be collected for characterization. This section outlines the procedures and methods to be followed for sampling containers containing liquid and non-liquid organic and inorganic wastes. Sample handling, sample documentation, and sampling quality assurance and quality control are outlined in Section 2.4.4. WSMR personnel or a designated contractor will conduct the sampling. Only qualified persons, who have been approved to perform the sampling, by demonstration of knowledge of proper sample collection techniques, will collect samples used for hazardous waste characterization. The physical, chemical, and waste-specific parameters of each waste are considered to determine the most appropriate type of sampling equipment and sampling strategy. Sampling personnel will be knowledgeable of, and have experience with, the sampling techniques outlined on following page.

As part of the inventory, a visual inspection of the container and its contents is conducted. Once a visual inspection and inventory has been completed, the container to be sampled is opened. Only sampling equipment constructed of materials that are compatible with wastes and not susceptible to reactions that might alter or bias the physical or chemical characteristics of organic and inorganic wastes is used.

To ensure proper characterization of the waste in situations where acceptable knowledge is not sufficient to make a complete hazardous waste determination, a representative sample is collected. Because the physical state of the hazardous waste stored at the HWSF may vary from free liquid to solids, the representative sample must be tailored to these physical states. Generic sampling procedures are described below.

For liquid wastes, the representative sample is a grab sample per container taken by an appropriate sampling device such as a Coliwasa sampler, per the most recent EPA *Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods*. The sampling device and decontaminated sample containers are made of glass or fluorinated ethylene propylene (FEP) plastic to guard against loss or cross contamination of volatile organics. If a container has only one bung opening, the sample is taken from that opening such that the entire depth of the container is sampled and then analyzed. If the container potentially demonstrates liquid stratification or sediment settling, sampling methods detailed in ASTM procedures will be used. These include Method D5743-97 (Standard Practice for Sampling Single or Multilayered Liquids, With or Without Solids, in Drums or Similar Containers) or Method D5956-96 (Standard Guide for Sampling Strategies for Heterogeneous Wastes.

For containers containing sludges or solid wastes, a representative sample is taken using the appropriate sampling protocol as listed in 40 CFR 261, Appendix I. This includes: 1) ASTM Method D140-70 for extremely viscous liquid; 2) ASTM D346-75 for crushed or powdered material; 3) ASTM D420-69 for soil or rock-like material; 4) ASTM 1452-65 for soil-like material; 5) and ASTM D2234-76 for fly ash-like material. These methods specify the sampling device and appropriate procedure for collecting the sample.

For sludges and other wet materials, it is necessary to identify whether the waste will or could generate free liquids, as defined at 40 CFR 260. The presence of free liquids can be identified by visual inspection of the container or by conducting the paint filter test (EPA Method 9095).

These tests will be conducted to determine whether the waste contains or could generate free liquids.

If a waste stream is expected to be fairly homogeneous, representative samples will be collected at random from within the waste to be sampled. A stratified random sampling approach will be used if the waste stream is expected to be, or is found to be, heterogeneous, and will include all phases. Samples of the waste will be collected as either composite or grab samples. Composite samples will be used for cases where the waste is heterogeneous. Grab samples will be collected for homogeneous waste streams. Composite samples, due to the extra handling involved in the preparation of the sample have the potential for under-reporting the concentration of volatile organic compounds (VOCs). For many waste streams, in particular the paint and paint-related waste category and contaminated rags, this is not a serious concern as the acceptable knowledge, particularly the MSDS, provide sufficient information to assign the appropriate waste codes and determine the LDR status for the individual VOCs, as they will be above the treatment standards. Sample containers for collection of samples and the appropriate preservation methods will be directed by the analytical laboratory, and will be appropriate to the EPA analytical method intended for the sampled waste material.

Solid wastes that are stored vary from gloves and rags to contaminated soil and batteries. The lithium batteries, which are reactive wastes, will not be sampled because knowledge of process is sufficient for characterization. Miscellaneous solid hazardous waste such as gloves, rags, etc., which are contaminated with any of the solvent wastes or mercury, will be treated similarly (i.e., knowledge of process is sufficient to characterize these wastes.) Consequently, they will not be sampled, but precautions will be taken to prevent solvent-contaminated wastes from being stored with the metal-contaminated wastes. In the event of a release/spill to the ground, contaminated soil will be sampled laterally and vertically until the full extent of the contamination is determined.

Contamination control procedures outlined in Section 2.4.4.2 will be followed during sample collection. Proper decontamination of sampling equipment will be performed if disposable equipment is not used.

2.4.3 Health and Safety Procedures

If deemed necessary, personnel performing sampling activities will use personal protective equipment such as rubber gloves, boots, aprons, Tyvek coveralls, and eye protection. Sampling for hazardous waste determinations will be performed only by persons trained in hazardous waste sampling. These personnel will also have 24-hour Occupational Safety and Health Administration training as specified in 29 CFR § 1910.120. Appropriate medical monitoring and certification will also be conducted.

2.4.4 Sampling QA/QC Procedures

The quality assurance (QA) process ensures that all decisions made about waste characterization and the data used are technically based, and that proper documentation is maintained. Quality control (QC) tools are used to measure whether the QA objectives are met.

Sampling for waste characterization will be conducted in accordance with the guidance provided in the EPA document SW-846 and EPA's waste analysis plan guidance manual

(*Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste).* Quality assurance for sampling will apply to all samples for waste characterization. The QA program for sampling includes requirements for the following:

- training requirements for sampling personnel, including QA/QC procedures and proper sampling techniques
- chain-of-custody protocols for tracking samples
- review of procedures by sampling personnel to ensure proper use of equipment
- procedures for equipment maintenance
- procedures for field sampling QC
- documentation of sampling locations

All sampling conducted for the purpose of characterizing wastes will use appropriate quality assurance/quality control (QA/QC) procedures. Additionally, WSMR will ensure that waste characterization information is accurate by making the following determinations:

- Whether the waste was characterized at the point of generation, in compliance with 40 CFR §§ 268.7(a)(3) and 268.9(c);
- Whether routinely generated wastes are re-evaluated (or re-profiled), at least annually, to ensure the waste's characterization is accurate and up to date, in compliance with 40 CFR § 264.13(a)(3);
- Whether SAP operators have appropriately identified when the process or operation generating routinely generated wastes has changed, in compliance with 40 CFR § 264.1 3(a)(3)(i); and
- Whether persons preparing hazardous waste determinations are trained in the applicable waste characterization requirements as required by 40 CFR § 264.16.

Procedures for sample documentation, equipment, handling and custody are discussed below.

2.4.4.1 Documentation of Activities

Sample containers will be uniquely identified to indicate the generating shop or facility and the date and activities will be documented according to most recent appropriate EPA methods. An adhesive label will be affixed to the sample container containing the following information:

- Collector's initials;
- Sample identification;
- Analytical methods requested;
- Generating facility;
- Sample date; and
- Sample time.

Any other distinguishing characteristics or information required by the laboratory or project personnel will be added to the label.

2.4.4.2 Contamination Control Procedures

Only compatible sampling tools and containers will be used for sample collection and storage. Sampling tools and equipment will be protected from contamination sources prior to sampling and will be decontaminated before and between samples, if reused. Sample containers will also be protected from contamination sources. Sampling personnel will wear clean chemical-resistant gloves when handling sampling equipment and samples. Gloves will be decontaminated or disposed of between samples.

2.4.4.3 Sample Handling and Chain of Custody

Chain-of-custody (COC) forms will be used and procedures will be followed to track possession of the samples from the time they are collected until the analytical data from the samples are received and recorded. For all samples, procedures will begin once sampling is complete. The following information will be recorded when samples of waste are collected:

- The type of waste collected, and a brief description;
- The names and signatures of the samplers;
- The sample number and the date and time of sample collection;
- The names of any persons involved in transferring samples; and
- The shipping number (e.g., airbill number) for samples shipped to off-site laboratories.

A sample will be considered under custody if it is:

- In the possession of the sampling team;
- In view of the sampling team; or
- Transferred to a secure area.

An area is considered secure only when it is locked and access is controlled. The sampling team leader is responsible for custody of the samples until they have been properly packaged, documented, and released to a courier or directly to the analytical laboratory.

2.4.5 Sample Container and Preservation Requirements

Samples will be collected in new, pre-cleaned sampling containers and will be kept cold during storage, transportation, and shipping, as necessary. Containers, preservatives, and holding time requirements for sample types that will be collected vary widely and will be coordinated with the analytical laboratory prior to sample collection. In addition, current analytical methods will be verified with the laboratory prior to sample collection.

At the end of each sampling event, samples will be carefully packaged so that they will not be damaged or break during transport or shipping. Each shipping container will be shipped to an analytical laboratory by an overnight delivery service, transported directly by a contracted laboratory, or transported directly to the on-site laboratory.

WSMR will evaluate laboratory analysis by addressing the precision, accuracy, completeness, comparability, and representativeness of the data used to support waste characterizations.

2.4.6 Laboratory Analysis

Each laboratory used to conduct analyses will maintain an internal quality assurance program, as documented in its laboratory quality assurance manual. The laboratories will use a combination of blanks, surrogates, duplicates, MS/MSD (matrix spike, matrix spike duplicate) and laboratory control samples to demonstrate analytical Quality Assurance/Quality Control (QA/QC). Control limits will be established for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The specific procedures to be completed and the laboratory control limits will be included in the QA manual for each laboratory used. QA/QC procedures will follow those in the most recent appropriate EPA methods. The following is a summary of the laboratory specifications.
Typically, the laboratory report will contain the following:

- Unique laboratory identification;
- Sample identification;
- Sampling date;
- Preparation date;
- Analysis date;
- Preparation batch;
- Preparation method;
- Analysis batch;
- Analysis method;
- Analyte;
- Results;
- Footnotes/data qualifiers;
- Units;
- Sample matrix;
- Sample-specific detection limit;
- Dilution factor;
- Case narrative (if necessary); and
- Laboratory control sample results.

Appropriate EPA methods address most of the procedures proposed in this Plan. The laboratory will be required to achieve the required or estimated detection limits specified in the appropriate EPA methods. If equivalent methods are used, these will be justified and approved in advance. Approval for any equivalent methods employed by the laboratory will be at the discretion of WSMR and the New Mexico Environment Department (NMED). All laboratories performing analyses for waste characterization will be informed of the applicable permit requirements. These include the requirement that the analytical method detection limits are not higher than the LDR treatment standards, as specified at NMAC 20.4.1.800, incorporating 40 CFR 268.40, and the requirement for a laboratory QA/QC program.

2.5 Recordkeeping

The HWSF and/or the HWMC maintains an Operating Record in accordance with 40 CFR

264.73. Records specific to the analysis of waste to be stored at the HWSF include all records and results of waste analyses and waste determinations performed as specified in 40 CFR 264.13, 264.17, 264.314, 264, and 268.4(a). Specifically, these records will include:

- A current copy of the waste profile form for all containers collected from each SAP
- All analytical results
- All chain-of-custody forms for waste samples
- All other information, such as waste analysis reports, notifications and/or certifications submitted by activities producing waste.

ATTACHMENT 3
CONTINGENCY PLAN

(PERMIT APPLICATION SECTION 5)

3.0 CONTINGENCY PLAN

White Sands Missile Range (WSMR) prepared this RCRA Contingency Plan for the HWSF in compliance with New Mexico Hazardous Waste Management Regulations (HWMR) 20 New Mexico Administrative Code (NMAC) 4.1, 40 CFR §270.14(b)(7) and 40 CFR Parts 264, Subpart D, as applicable. This plan consists of descriptions and emergency procedures specific to the HWSF and is consistent with the *WSMR Hazardous Materials (HAZMAT) Incident Plan, Annex C to WSMR All Hazards Response Plan*. This additional plan was developed to ensure that WSMR organizations are able to respond safely and effectively to oil and/or hazardous substance spills. The requirement originates in the *National Oil and Hazardous Substance Pollution Contingency Plan (NCP)* which was established under the Clean Water Act (CWA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

3.1 Purpose

This Contingency Plan defines responsibilities, provides guidance for coordination of activities, and minimizes hazards to human health or the environment from fires, explosions, or any sudden or non-sudden release of hazardous waste to the air, soil, or surface water. The provisions of this plan will be carried out immediately if there is a fire, explosion, spill, or release of hazardous waste constituents that could threaten human health or the environment.

This plan identifies policies, responsibilities, procedures, and resources for response to actual and potential spills at the HWSF. This plan has been reviewed by, and agreed upon by the WSMR Fire Department, Security Office, Medical Clinic, and White Sands Missile Range Safety Division.

3.2 Distribution

Copies of this RCRA Contingency Plan will be on file at the following locations in compliance with 40 CFR § 264.53.

- WSMR Control Center;
- McAffee Clinic;
- Fire and Emergency Services Division;
- Administrative offices of the HWSF;

3.3 Types of Waste

Wastes covered under this Permit include corrosive, reactive, flammable, and toxic materials. Refer to Attachment 1 of this Permit for detailed listings.

3.4 HWSF Schedule, Emergency Response Procedures, and Notification

The following information is supplied in accordance with 40 CFR § 264.52 (d) and § 264.55. Emergency response procedures for the HWSF are written in accordance with the *WSMR All Hazards Response Plan*, under which WSMR will operate in the event of a hazardous material incident or oil spill. It defines the roles, responsibilities, and organizational relationships of

WSMR Directorates, tenant and other organizations in responding to, and recovering from, an oil spill or incident involving the transport, use, storage, or processing of hazardous waste.

At any time any person becomes aware of[s1] a fire, spill, potential release, or any other emergency, a call must immediately be placed to the WSMR Control Center (911). This organization will notify the appropriate organizations for response to the situation (medical, security, fire, etc). The Installation on Scene Commander (IOSC) is the senior Fire Department person on site until relieved by a higher authority such as the WSMR Fire Chief. At the time of the emergency, the WSMR Garrison Commander (GC) is notified and provided with all information regarding the emergency. The IOSC will evaluate the emergency and determine the on site actions.

The management of emergencies may change depending on time of day, availability of personnel etc. All emergencies on WSMR are handled through the WSMR Control Center (911). This agency has the resources to respond effectively and to activate currently trained and knowledgeable personnel. Specific personnel from the HWSF will be contacted in the event of an emergency. Ultimate responsibility for emergency response rests with the GC who has designated the Fire Chief as the IOSC. Notification to individuals with specific expertise and the WSMR Fire and Emergency Services Division is managed from the centrally located WSMR Control Center, which is staffed on a 24-hour basis. The WSMR Control Center maintains an updated roster of specialty personnel required for an emergency response.

As stated in the Annex G to the WSMR All Hazards Response Plan, the primary and alternate emergency coordinators for all Post operations are:

- Primary ECs: Director of Plans, Training, Mobilization, and Safety (DTMS)
  Mr. Seth Mills, DPTMS, or current person in position

- 1st Alternate EC: Fire Chief
  Mr. Robert Valles, DESF, or current person in position

- 2nd Alternate EC: Senior Fire Officer
  Mr. Francisco Vega, DESF, or current person in position

  Telephone Number: 575-678-1234

3.5 Installation Response

Upon notification of an emergency incident, the WSMR Control Center will record all pertinent information from the first responder and first response emergency organizations. The IOSC, as described above, will form a team using personnel from all WSMR activities to form an IRT. This person will notify the WSMR Control Center to ensure appropriate people and organizations are activated for emergency response.

If an incident can be easily managed by on-hand equipment, supplies, and labor, it is considered a minor incident. A minor incident is defined as an incident where no possible hazards exist to

human health or the environment.

The IOSC will define the nature of the assistance requested, will make a determination whether the incident is minor and provide instruction to those organizations requested.

NOTE: IN NO INSTANCE WILL A FIRE BE CONSIDERED A MINOR INCIDENT.

3.5.1 Installation Response Team (IRT)

If the IOSC determines that the members of the IRT must be activated, the organizations listed below will be called. Representatives from each organization will respond. The IRT telephone roster is provided in Table 3-1. The top three organizations will be activated by dialing 911. At this time, the WSMR Control Center will activate all emergency services organizations.

Table 3-1. Installation Response Team (IRT) Roster

Organization	Daytime Telephone
Fire and Emergency Services Division	678-4187 or 911
McAffee Health Clinic	678-2882 or 911
Law Enforcement and Security	678-1234 or 911
Public Affairs	678-1134
Environmental Compliance	678-1007
Public Works Directorate	678-4941/1405
Safety Division	678-1211
Chemistry Laboratory	678-2992
Explosive Ordnance Disposal	678-2035
Weather Station	679-9118
Visual Services	678-2868
WSMR helicopter support	679-1315

3.6 HAZMAT Incident Site Operations and Field Teams

The following information is provided in accordance with (40 CFR § 264.56).

During normal working hours at the HWSF, the first person to become aware of an incident shall contact the WSMR Control Center (911). He/she will provide, if possible, the following information: substance involved, nature of the incident, quantity, location, and/or injuries involved. All personnel will immediately leave the vicinity of the HWSF. If the IOSC determines that a HAZMAT incident/emergency situation exists (e.g., large spill, fire, or explosion), or that human health or the environment is threatened, he will immediately activate the Contingency Plan.

There are many steps required in the handling of a HAZMAT Incident. After a HAZMAT incident is reported, the response is initiated and operations started. Each operation is addressed step by step in priority:

- Assess the Situation. Assessment will be made by observing the scene, interviewing personnel, and/or reviewing records; then identifying the potential hazard and the parameters that determine the degree of the hazard. The IOSC will 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.

- Protect Personnel. The IOSC will take all reasonable measures to ensure the safety of personnel, such as activating the fire alarm, accounting for HWSF personnel, attending to injuries, or coordinating the evacuation of HWSF personnel, if necessary. If evacuation is indicated for other personnel, the IOSC must be informed.

- Contain or Mitigate the Hazards. The IOSC will take reasonable measures to ensure that fires, explosions, or releases do not occur, recur, or spread. The IOSC will apply methods to reduce or control the risk associated with the hazardous waste/material, such as effective engineering to reduce or eliminate the exposure time, use minimum personnel limiting the amount of time personnel spend in the hazard area, and selection of personnel protective clothing and equipment.

3.6.1 Field Teams and Operational Levels

The field team size is determined by the size of the incident and the operational level for the risk posed by the hazardous waste/material. The "buddy system" will be used at all times when working in hazardous areas. There are four operational levels, as defined by 40 CFR § 1910.120.

- Level A is the maximum protection required. It includes a pressure-demand, full face-piece respirator Self Contained Breathing Apparatus (SCBA) and totally encapsulating chemical protective suits, which may require pressurization, dependent on the hazard.

- Level B requires a pressure-demand, full face-piece respirator and encapsulating or hooded one or two-piece chemical splash suit (may be disposable), dependent on the hazard.

- Level C requires half or a full face-piece air purifying respirator and hooded chemical resistant clothing (may be disposable).

- Level D requires no respiratory protection, but usually requires a work uniform including steel-toed boots, hard hat, eye protection and gloves.

Level A is the minimal level of protection for the first person entering a hazardous area of unknown chemical release. A limited number of personnel will respond.

In incidents where level D is required, the Hazardous Material (HAZMAT) Response Unit will be dispatched with the following crew: on-scene commander, driver, 2 rescue men, and 2 firefighters as a work party. Other supporting agencies will be notified as required. In addition to the 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course, the incident commander, where feasible, will have received the 8-Hour supervisory training in same. It is

specifically acknowledged that firefighters receive training as specified by NFPA 472 and 473, which is equivalent to 29CFR1910.120.

In incidents where level A-C is required, the HAZMAT Unit will be dispatched with the following crew: on-scene commander, driver, 2 rescuemen, and 2 firefighters as a work party. One fire company with at least a 3-man crew will be dispatched to be used as needed. Security, safety, and medical support will be called to the scene. All other on duty fire department personnel will be on alert status for dispatch.

A field investigation will be initiated to determine the potential hazard and appropriate response. The investigation is intended to rapidly identify the hazardous waste by review of MSDS, turn-in documents, and manifests; interview of personnel involved or witness to the incident; observing containers for markings; using testing equipment; taking samples for lab identification if required. An evaluation will be made to the need for evacuation of personnel at risk, to include down wind, as required.

3.6.2 Control of Incident Scene

Control of the incident scene will be established by using marking tape or other barriers to exclude unnecessary personnel from the area. Work zones will be established within the site using the 3-Zone method.

- Zone 1 - Exclusion Zone. The exclusion zone is the innermost of the three zones where the hazardous waste is located. Personnel entering this zone must wear the prescribed level of protective gear and be visually monitored by the site safety and decontamination officers. The boundary of Zone 1 is the hot line, and once determined, will be physically marked and secured. Factors such as fire or explosion, blown contaminants, etc. must be considered when establishing the limits of the exclusion zone and its dimensions may change as work proceeds.

- Zone 2 - Contamination Reduction Zone. This zone is used for decontamination of personnel, equipment, and waste containers leaving the exclusion zone. Entry points to the outer boundary of Zone 2 will be determined and will be the only access used. Exit points from Zone 1 will be determined and pass through decontamination stations will be set up in Zone 2. Access (entry and exit) control points will be visually monitored by the site safety and decontamination officers. Personal protective equipment is typically required in Zone 2, but at a lesser level than that required in Zone 1.

- Zone 3 - Support Zone. The support zone is considered to be a clean area. Support equipment, command post, etc. are located in this zone. Traffic is restricted to authorized personnel only. Level D protection is typically required in Zone 3.

The following criteria should be considered in establishing work zone dimensions and boundary distance:

- physical and topographical features at the HWSF;
- weather conditions;
- field/laboratory measurements of air contaminants and environmental samples;

- air dispersion calculations;
- potential for explosion and flying debris;
- physical, chemical, toxicological & other characteristics of the RCRA waste present;
- cleanup activities required;
- potential for fire;
- area needed to conduct operations;
- decontamination procedures;
- dimensions of contaminated area;
- potential for exposure to contaminant;

Handling, decontamination, and disposal of hazardous wastes will be in accordance with Federal/State laws and regulations, 40 CFR § 264.56(g).

3.7 Emergency Response Implementation of the Contingency Plan

3.7.1 Fire

Any fire in the vicinity of the HWSF is to be considered an emergency. This includes any fire involving hazardous waste or hazardous material, or any buildings, vegetation, or non-hazardous waste fire that threatens to ignite hazardous waste. Prior to any fire fighting, the following criteria will be implemented.

- WSMR Fire Department will be notified.
- HWSF personnel shall evacuate to an upwind location at least 100 yards (90 m) from the fire.
- The IOSC will be notified immediately by the WSMR Control Center;. IOSC will determine the appropriate response.
- Fire-fighting personnel must wear appropriate personal protective equipment.
- Immediately transport any injured personnel to the medical facility.
- The IOSC will remain near the site, but at a safe distance, so he can advise the personnel responding to the fire of the known hazards involved.
- In the event of an explosion/fire, the IOSC retains responsibility to select the fire-fighting methods and tactics;. IOSC determines when the emergency action was been completed.
- The IOSC will be in overall control of WSMR-HWSF emergency response efforts.

Wastes/Materials involved in a fire can be identified in the following ways:

- The location of the drum may indicate the contents of the drum (e.g., drums in the flammable storage building contain flammables).
- If the location of the drum does not indicate its contents, the label number can be used to identify the material. Records of the contents of each drum are kept in the HWMC. The emergency response is listed in this Attachment (3) in Section 3.4.
- If the label has been burned, the number painted on the drum can be used to identify the material.
- If the label and number are destroyed by fire, the the inventory in the HWMC office, should be used to identify drum contents. Unknown chemicals will be sampled and analyzed

according to methods in WSMR Waste Analysis Plan and U.S. EPA "Test Methods for Evaluating Solid Waste Physical Chemical Methods," SW-846, (most recent edition).

An appropriate spill absorbent will be poured over all chemical residues resulting from a hazardous waste fire. Once the liquid is absorbed, the waste will be swept or shoveled back in the appropriate containers using spark-less tools, and the surface will be cleaned using cleaners appropriate to the chemicals and in compliance with environmental requirements.

3.7.2 Explosion

The following procedures will be implemented in the event of a hazardous waste explosion or when a danger exists for a probable explosion.

- Immediately evacuate the area.
- The first responder will contact the WSMR Control Center. The IOSC will be notified immediately by the WSMR Control Center. IOSC will determine the appropriate response.
- Immediately transport any injured personnel to medical facility.
- The IOSC will remain near the site, but at a safe distance, so he can advise personnel responding to the explosion of the known hazards involved and the degree and location of the explosion.
- In the event of an explosion, the IOSC retains responsibility to select the fire-fighting methods and tactics. IOSC determines when the emergency action has been completed.
- The IOSC will be in overall control of WSMR-HWSF emergency response efforts.
- An appropriate spill absorbent will be poured over all chemical residues resulting from a hazardous waste release. Once the liquid is absorbed, the waste will be swept or shoveled back in appropriate containers using spark-less tools, and the surface will be cleaned using cleaners appropriate to the chemicals and in compliance with environmental requirements..

3.7.3 Spill or Material Release

WSMR will implement the following procedures in the event a hazardous waste or hazardous material spill where the spill causes an immediate health hazard, the spill cannot be contained with secondary containment or application of absorbents, or a threat exists for spilled material to move out of HWSF boundaries.

- First response is to protect human health and safety; the second response is to protect the environment.
- Evacuate the immediate area.
- Determine the identity and chemical nature of released material.
- Don appropriate personal protective equipment for exposure to the material.
- If possible, secure the source of the release.
- Build a dike to contain runoff, if appropriate.
- Contain the waste utilizing absorbent materials, if appropriate.
- If material/waste has contaminated the soil, the visibly contaminated soil will be drummed

and treated as hazardous waste; the remaining soils are to be sampled in accordance with SW-846 and analyzed for the contaminates listed in Table 2-2 in Permit Attachment 2.

- Waste is to be transferred to a salvage drum using spark-less tools and marked as hazardous waste. The waste is then transferred to appropriate conforming storage.
- During regular working hours, WSMR will immediately notify the NMED Hazardous Waste Bureau if human health or the environment is threatened; or after hours will contact NMED Spill Response. WSMR will notify the National Response Center (1-800-424-8802) if human health or the environment outside WSMR are threatened, or if the quantity of hazardous waste spilled is greater than the reportable quantity (RQ) specified in 40 CFR 302.
- Incompatible waste shall be managed in accordance with Permit Section II.J.

3.7.4 Prevention of Recurrence or Spread of Fires, Explosions, or Releases

The following information is provided in accordance with 40 CFR § 264.56 (e).

Actions to prevent the recurrence or spread of fires, explosions, or releases include stopping operations, collecting and containing released waste, and recovering or isolating containers. During an emergency, the IOSC will monitor other equipment not directly involved in the emergency for leaks, pressure build up, gas generation or ruptures that could encourage the spread of fire and/or explosions. An incident review will be conducted to identify root causes and any corrective measures identified will be implemented.

3.7.5 Storage and Treatment of Released Material

The following information is provided in accordance with 40 CFR § 264.56 (f) (g).

If the HWSF, or a portion of the facility, stops operations in response to either a minor or emergency event, IOSC will monitor, inspect and make a safety determination before operations commence again. Hazardous waste containers and equipment will be inspected for leaks, breaks, rupture, corrosion, bulges or dents. Such containers will be placed in overpack drums or the contents will be transferred to new containers, as conditions dictate.

Immediately after an emergency, WSMR will make arrangements for the proper handling and treatment of all recovered waste, contaminated soil, or other contaminated materials. Liquids that have accumulated in the containment system will be pumped into containers and stored in the container storage area. All other liquids and contaminated materials not within the containment system will also be collected in containers and stored in the container storage area. These items will be analyzed to determine proper disposition.

3.7.6 Incompatible Waste

Every effort is made to prevent the commingling of incompatible waste at the HWSF. No blending of waste is performed or planned. Preventive measures shall be conducted in accordance with Permit Section II.J

3.7.7 Post Emergency Equipment Maintenance

The following information is provided in accordance with 40 CFR § 264.56 (h) (2) (i).

Following an emergency, all equipment will be inspected to determine if it is clean, uncontaminated, and in working order. Those items not fit for use will be cleaned or replaced. All rinsate retrieved from cleaning of equipment after an emergency event will be collected in an area provided with a containment system. The residue will be adsorbed or collected and containerized, then stored as a hazardous waste in the proper area. When the inspection shows that adequate safety and emergency equipment are available, and before operations are resumed (40 CFR §265.56(j)), NMED will be notified that post-emergency equipment maintenance has been performed. Operations will then resume.

3.7.8 Container Spills and Leakage

Spills and leaks will be managed in accordance with 40 CFR § 264.56 (g) and 264.71.

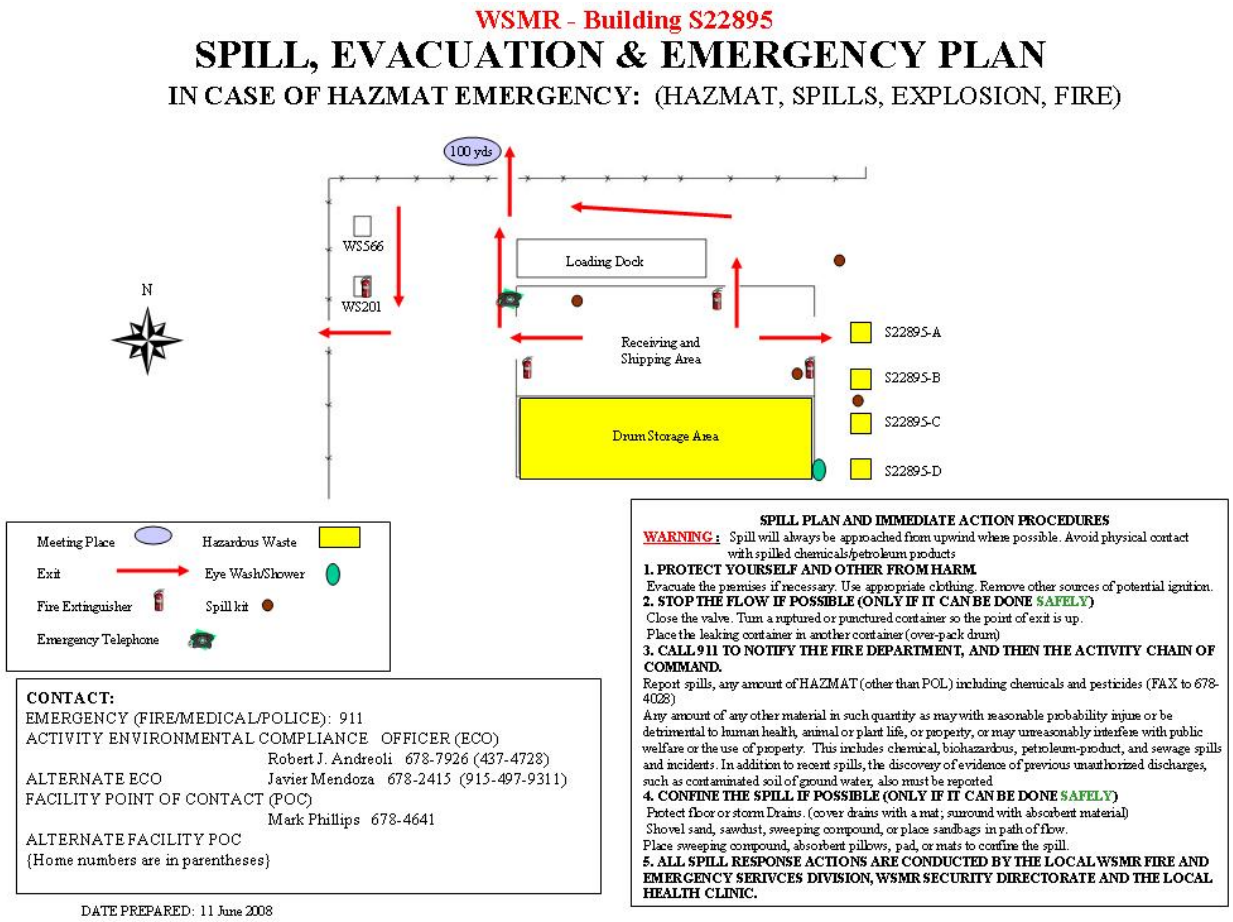
3.7.9 Evacuation Plan

This information is provided in accordance with 40 CFR 264.52 (f).

In the event of any major emergency, it will be necessary to follow an established set of procedures. Evacuation from the HWSF may be accomplished by means of exits in the building and the fenced compound. A person in an emergency would exit out the closest door and meet at the designated area, at least 100 yards (90 m) upwind, outside the facility boundary. The HWSF fire alarm and hand/voice signals will be used to initiate evacuation. An evacuation plan (Figure 3-1) for this facility is maintained and posted in Building S22895.

Figure 3-1. HWSF Evacuation Plan

A schematic of the Spill, Evacuation & Emergency Plan is shown below.



3.7.10 Required Reports

The following information is provided in accordance with 40 CFR § 264.56 (j).

Any emergency event that requires implementation of the Contingency Plan will be reported in writing within 15 days to NMED. The information to be included in this report includes:

- name, address, and telephone number of the owner or operator;
- name, address, and telephone number of the facility;
- date, time, and type of incident;
- name and quantity of materials involved;
- the extent of injuries, if any;
- an assessment of actual or potential hazards to human health or the environment, where applicable;
- estimated quantity and disposition of recovered material that resulted from the accident; and

- other information specifically requested by NMED, which is necessary and relevant to the purpose of an operating record.

As required by 40 CFR § 270.30 (k) (6), WSMR will report any noncompliance that may endanger health or the environment orally within 24 hours from the time WSMR becomes aware of the circumstances, including:

- information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
- information concerning a release or discharge of hazardous waste or of a fire or explosion from the HWSF which could threaten the environment or human health outside the facility.

The description of the occurrence and its cause will include:

- name, address, and telephone number of the HWSF at WSMR;
- date, time, and type of incident;
- name and quantity of materials involved;
- the extent of injuries, if any;
- an assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;
- estimated quantity and disposition of recovered material that resulted from the incident;

In addition to these reporting requirements for state authorities, WSMR has internal reporting requirements. WSMR will perform required reporting within 24 hours as deemed necessary by quantity and area of influence to:

- Office of The GC Command Group;
- National Response Center;
- NMED;
- Region VI EPA, Dallas.

A written submission will be provided within 5 days of the time WSMR becomes aware of the circumstances. The written submission will contain:

- description of noncompliance and its cause;
- period of non-compliance including exact dates and times;
- if not corrected, anticipated time of incident correction; and
- steps taken or planned to be taken to reduce, eliminate and prevent recurrences.

3.7.11 Amendments of the Contingency Plan

The following information is provided in accordance with 40 CFR § 264.54.

The Contingency Plan will be reviewed and amended, as necessary, whenever:

- the facility permit is revised;
- the plan fails in an emergency;
- the facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes in the response necessary in any emergency;
- the list of emergency equipment changes;
- a training exercise identifies a deficiency in the plan, or
- when there is a change in emergency contact personnel.

A copy of the Contingency Plan is maintained at the facility.

3.7.12 Emergency Equipment

The following list of dedicated emergency equipment located at the HWSF is provided in accordance with 40 CFR § 264.52 (e):

- four, 95-gal (0.361 cu m), emergency spill response kits containing sock absorbents, pads, and pulp located on the pad;
- one spill kit for aggressive spills containing sock absorbents, pads, and pulp located at Building S22895;
- twelve sacks of absorbent;
- six recovery/overpack drums; and
- non-sparking shovels, picks, etc.

All of this equipment is stored in, or immediately outside Building S22895.

3.8 Arrangements with Local Authorities

20.4.1.500 NMAC, incorporating 40 CFR 264.37 (Arrangements with Local Authorities), specifies that a hazardous waste storage facility will make arrangements to familiarize local authorities, such as police, fire departments and emergency response teams, with the facility and possible scenarios. WSMR is a self-contained military base; therefore arrangements with local authorities, such as hospitals, fire or police, are not included in this contingency plan. Should an emergency response action necessitate transportation of personnel for medical attention not available at the on-base clinic, transportation to and treatment at a near-by military or community trauma facility would be arranged. Details of the on-site organization of internal departments to respond to emergencies are provided in the preceding sections.

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ATTACHMENT 4
TRAINING PROGRAM

(PERMIT APPLICATION SECTION 11)

4.0 PERSONNEL TRAINING PROGRAM

The following information is provided in accordance with 20.4.1.500 NMAC, incorporating 40 CFR §264.16 (a) (3) General Requirements.

White Sands Missile Range (WSMR) Regulation 200-1 addresses procedures for hazardous waste training of personnel. The purpose of the WSMR hazardous waste training program is to train the personnel who are responsible for conducting the hazardous waste management program in accordance with New Mexico Hazardous Waste Management Regulations. All personnel directly involved in the hazardous waste program at WSMR receive training. The level and extent of training is tailored to each individual's job duties and level of responsibility. Personnel receive both introductory and refresher training through classroom instruction and on-the-job training.

All personnel involved with hazardous waste management have job-specific training requirements. Numerous personnel support the accumulation of waste prior to storage of the waste at the HWSF. These personnel include the Satellite Accumulation Point (SAP) operators, SAP managers, personnel involved in moving waste to the Less-Than-90 Day (<90 Day) Hazardous Waste Accumulation Facility or to the HWSF, and the personnel operating the <90 Day. Individually, they may have responsibilities for accumulating, storing, sampling, characterizing, transportation of the waste, and maintaining the required paperwork. To ensure that these personnel perform their tasks properly, they are provided with appropriate and specialized training and will not work unaccompanied until the training is successfully completed. In addition, the logbook for each individual SAP and the <90 Day Accumulation Facility specify the personnel by name, with their job title and appropriate training requirements. Training requirements for personnel at the HWSF are discussed in the following paragraphs.

All personnel at the HWSF will complete introductory training within 6 months of their hazardous waste management assignment. Training will consist of-four hours of classroom instruction and certification of training in hazardous waste operations. The purpose of introductory training will be to present the goals and objectives of the WSMR hazardous waste management program, to familiarize personnel with the hazardous waste facilities and their operating procedures, and to outline emergency procedures and contingency plans. Section 4.3 of this Attachment outlines the introductory training program with specific topics to be addressed.

After introductory training has been completed, all personnel will participate in an annual review of the initial training. The annual review will consist of a review of the introductory training program, as outlined in Section 4.3 of this Attachment, followed by discussions and reviews on current hazardous wastes generated by WSMR, current treatment, storage, operating conditions, and procedures relating to these wastes, existing and potential problem areas in these operations, and potential emergency situations. All current hazardous wastes managed by the installation will be identified with respect to waste characteristics, volume, source, and location. Current or potential problems in treatment, storage, operating conditions, and handling procedures will be identified, with special emphasis placed on employee participation in identifying problem areas and seeking effective solutions. This training includes a review of emergencies that occurred and actions that were taken in the past year, together with identification of the incident and preventive measures to be taken to avoid recurrences.

Training records for each employee involved in handling hazardous waste include job title; job description; the type and amount of hazardous waste training the employee has received; and may contain a training plan which includes subject matter, instructor, and course date and hours. Introductory training and refresher training sessions are documented, as well as specialized courses received by key hazardous waste management personnel. Training records will be kept a minimum of 3 years, or until closure of the HWSF, whichever is the longer period of time.

An orientation will be provided to the Fire and Emergency Services Division. The orientation is designed to provide fire fighting personnel with vital information concerning storage operations, hazardous waste, and spill containment. The orientation will be conducted at least on an annual basis. A Fire and Emergency Services orientation will also occur whenever a modification to the permit occurs and/or an amendment to the Contingency Plan is implemented.

4.1 Job Titles and Duties

Job title and major duties for personnel directly involved with the handling of hazardous waste at WSMR are presented below with the training requirements.

4.1.1 HWSF/HWMC Staff

JOB TITLE: HWSF/HWMC MANAGER

MAJOR DUTIES: This person is responsible for oversight of the day-to-day operation of the facilities, tracking training requirements, and providing technical supervision. This person will be extensively trained in hazardous waste management procedures (RCRA), including Hazard Communication (HAZCOM), RCRA, the 40-hour HAZWOPER, 3 days of supervised field experience, the 8-hour HAZWOPER Supervisor's course, and the annual HAZWOPER refresher training**.**

JOB TITLE: HWSF/HWMC WORKER

MAJOR DUTIES: This person is responsible for the daily operation of the HWSF/HWMC. Training requirements for this position includes the HAZCOM, RCRA, the 40-hour HAZWOPER with 3 days of supervised field experience, and the annual HAZWOPER refresher. This person will assist the manager in the weekly inspections when the worker completes the weekly inspection training.

JOB TITLE: Less Than 90 Day Accumulation Facility Manager

MAJOR DUTIES: The <90 Day Accumulation Facility Manager is the person responsible for conducting the weekly inspections of the storage site and ensuring that the waste is transported to the HWSF in less than 90 days. Training that this person must complete includes the HAZCOM, RCRA training, the 40-hour HAZWOPER, the 8-hour supervisor's course in addition to 3 days of supervised field experience and the annual HAZWOPER refresher training. Additional position-specific training includes site inspections and HWSF waste turn-in procedures.

JOB TITLE: Less Than90 Day Accumulation Facility Operator

MAJOR DUTIES: The <90 Day Accumulation Facility Operator is the person responsible for transport of the waste containers at the storage site to the permitted HWSF. Training requirements include HAZCOM**,** RCRA and the annual HAZWOPER refresher. This person may also assist the Manager in the weekly inspections after completing the weekly inspection training and 8 hours of RCRA on the Job Training (OJT).

4.1.2 Other staff involved in waste management activities

JOB TITLE: SAP Manager

MAJOR DUTIES: The SAP Manager is the person fully responsible for managing the hazardous waste at the SAP for the shop, tenant, contractor, or activity generating hazardous waste at WSMR. These duties also include conducting the weekly inspections of the SAP and the SAP logbook. In addition to the HAZCOM and RCRA training, the SAP Manager will also have 8 hours of RCRA OJT.

JOB TITLE: SAP Operator

MAJOR DUTIES: The SAP Operator is the person who operates the process, generates the waste and places it in the container. This person may also assist the SAP Manager in the weekly inspections and is required to complete the HAZCOM and RCRA training.

JOB TITLE: Environmental Officer (EO)

MAJOR DUTIES: The EO -is responsible for the overall operation of their organization's or activity's hazardous waste management facilities. The EO will take four hours of classroom instruction and certification of training in hazardous waste operations.

4.2 Training for Emergency Response

Introductory emergency response training is provided by WSMR, and in-depth emergency response training is provided by each individual's immediate supervisor as outlined below.

4.3 Implementation of Training Program

The HWSF Manager is responsible for implementing the hazardous waste management training program for HWSF personnel. All current hazardous waste management personnel have completed introductory training as outlined below. No employee at the HWSF will work unsupervised before completing the introductory training. Refresher training will begin within 1-year of the first introductory training session. Training for HWSF personnel will continue to be offered as outlined below.

I. Introduction
   a. Environmental regulations and the purpose of a hazardous waste management program at WSMR
   b. Requirements of RCRA

II. Facility and Process Description

a. Waste identification and analysis
b. Routine operating procedures for handling, storing, and disposing of hazardous waste
c. Record keeping and reporting requirements
d. Security
e. Inspections
f. Hazardous waste operations at facility

III. Emergency Response Procedures and Contingency Planning
a. Identifying the spilled substance
b. Evaluating the hazards that may be encountered during the control, containment, and cleanup of the spill
c. Prevention of groundwater contamination by proper containment of spills
d. Establishing emergency communication with appropriate personnel
e. Location, use, maintenance, and inspection of emergency equipment and alarm system
f. Ensuring that people are protected through personal protective equipment or evacuation
g. Implementing the appropriate control procedures to stop the flow of the spill, including procedures for waste feed cutoff
h. Containing and cleaning up the spilled substance
i. Information required on spill incident reports
j. Power interruptions/failures and operations shutdowns
k. Operations during varying weather conditions such as heavy rain, light winds, etc
l. Procedures during fires and explosions
m. Shutdown of operations

IV. Hazard Communications
a. MSDSs
b. Posting
c. Manifesting
d. Communications or alarm systems

V. Use of Emergency and Monitoring Equipment

ATTACHMENT 5
INSPECTIONS

(PERMIT APPLICATION SECTION 4)

5.0 INSPECTIONS

Comprehensive inspections are conducted weekly at the HWSF. All inspections are made by the HWSF manager or his designated representative. The inspector will observe safety and security items and the condition of all facility buildings. During loading and unloading operations at the HWSF, personnel, upon entry, will observe site security, water supply, emergency communication equipment, worker emergency safety equipment, fire extinguishers and condition of hazardous waste containers. The results of each inspection are recorded on the current version of an inspection log sheet, such as the one shown on Table 5-1.

If an inspection reveals that non-emergency repair or maintenance is needed, the remedial action will be accomplished as soon as practicable to preclude further damage and to reduce the need for further repairs. If the deficiency constitutes an emergency involving hazard to human health or the environment, the remedial action will be initiated immediately. If an emergency condition exists (i.e., a spill or release of hazardous substance), the procedures contained in the Contingency Plan and/or Spill Contingency Plan will be initiated.

Table 5-1. Inspection Criteria [replace]

White Sands Missile Range Inspection Sheet
<90 Day Storage Facility, HWSF

The following inspection checklist is to be completed on a weekly basis and retained onsite for all Sites.

HWSF: _____ Date._____ Inspector (print) _____.
90-Day Site: _____ Time:_____ Inspector (signature) _____.

No.	Item	Yes	No	Comments/Corrective Action
1.	Signs are posted for HW as required?			
2.	Is site security maintained properly (gates, doors, locks, etc…)?			
3.	Is a means of communications or alarm readily available and operational? (Emergency numbers posted).			
4.	Are containers marked properly (IAW WSMR Reg. 200-1)?			
5.	Are all containers in good condition? (Free of leaks, spills, and structural defects)			
6.	Are containers kept securely closed?			
7.	Is waste compatible with container it is in?			
8.	Is secondary containment present? (For liquids only)			
9.	Are there any signs of spills?			
10.	Is spill equipment available on site? (Over pack, absorbent, PPE).			
11.	Is a log book maintained for each container recording date, type of waste, total amount of waste in the container, and the person's signature?			
12.	Are all weekly inspection records available and up to date?			
13.	Is the fire extinguisher inspection conducted monthly?			
14	Are the ventilation systems on portable buildings operational? (Pertains to HWSF only)			
15	Is a water source and hose available? (Pertains to HWSF only)			
16	Is there an eyewash and emergency shower available on site and is it operational?			
17	Is the air conditioning system operating			
18	Were odor or fumes detected or observed prior to or upon entry?			
19	Is the wind sock operational? (Pertains to HWSF only)			
20	Are all containers properly located (aisle space, compatibility, grounding)?			
21	Is the containment area in good condition (deterioration of curbs, seals)?			
22	Is all material handling equipment operational (load test/inspection date current)?			
23	Is a current waste stream profile available?			

Comments:

Acknowledgement of Manager: _____ Date and Time: _____

ATTACHMENT 6
HAZARDOUS WASTE STORAGE FACILITY CLOSURE PLAN

(PERMIT APPLICATION SECTION 12)

6.0 CLOSURE PLAN

The Closure Plan for the HWSF is provided in accordance with §270.14 (b) (13) incorporating 264.112, and 264.178. The Closure Plan identifies the steps necessary to completely close the HWSF at the end of its intended operations. The Closure Plan will be amended whenever a change in operating plans or facility design occurs that may affect HWSF closure. Amendments to the Closure Plan may be made at any time during the active life of the facility. In addition, an amendment will be submitted no later than 60 days after an unexpected event has occurred affecting the Closure Plan or, if an unexpected event occurs during the final closure period, no later than 30 days after the unexpected event.

A copy of the Closure Plan, and its revisions, will be kept at WSMR until the closure of the facility is complete and certified. Certification that the facility was closed in accordance with the approved plan will be made by WSMR and an independent registered professional engineer before it is submitted to NMED.

6.1 Disposal of Containers and Decontamination of Equipment

At the time of closure, all containers of hazardous waste remaining in storage will be removed and transported off-site to a licensed disposal facility. The HWSF is used as a temporary storage site where waste is packaged, manifested, and prepared for shipment off the installation to various appropriate permitted disposal or treatment facilities. Once the wastes are prepared for shipment off the installation, WSMR then generally relies upon the Defense Reutilization and Marketing Office (DRMO) for procuring hazardous waste treatment and disposal services with permitted vendors. DRMO has a number of qualified hazardous waste facilities under contract at any given time, to ensure that necessary services are available. While WSMR can contract with permitted disposal and treatment contractors, it usually relies upon the qualified contractors which DRMO has chosen. The DRMO will continue to manage waste contracting for WSMR. In doing so, the HWSF will have disposal contractors available at the time of facility closure through this agency.

The maximum inventory of hazardous wastes ever on-site over the active life of the facility is estimated, as specified in 20.1.4.500 NMAC, incorporating 40 CFR 264.112(b)(3).
The maximum inventory is detailed in Permit Attachment 1.

After all containers are removed, the interior of the hazardous waste storage buildings, the containment area in Building S22895, the loading dock, and all operating equipment will be steam-cleaned. Any concrete stains that indicate the presence of surface contamination in the containment area in Building S22895 will be removed, using technology deemed appropriate at the time of closure. This could include scraping, chipping, washing and/or bioremediation. The selection of an appropriate technology will include a review of the facility operating records to identify the probable makeup of the contamination.

For determination of clean closure of the hazardous waste storage buildings, a final rinse will be performed in each building, using clean rags and potable water, and wiping all interior surfaces including the walls, ceiling, floor and floor grating. A discrete sample of the final rinse water for each individual building will be analyzed for total metals, volatiles, and semi-volatiles for the relevant 40 CFR 261 Appendix VIII constituents. If the analytical data for the final rinsate

reveals that the presence of contamination above that of the potable water, the steam-cleaning will be redone, and the sampling of the rinsate repeated until the final rinse water for the building does not indicate the presence of contamination. Analysis will be performed by a laboratory with an internal QA/QC program that meets the requirements of SW 846 or its equivalent and with developed procedures for each analytical method.

Alternatively, the portable storage buildings may be disposed off-site as hazardous waste.

The containment areas in Building S22895 will be inspected thoroughly, by visual observation, for the presence of any pitting or cracking in the containment area sealant. If any pitting and/or cracking are observed, the floor area will be divided into 100 equal-sized units and 15 percent of the units will be randomly sampled and analyzed by coring the upper three inches of the concrete and submitting a sample of the pulverized concrete from the core. The samples will be analyzed for the relevant 40 CFR 261 Appendix VIII constituents. If the top three inches indicates movement of hazardous waste components into the concrete, the lower portion of the concrete in the floor will also be analyzed. Should this portion also show transport of hazardous waste constituents into the subfloor, samples of the soil beneath the main building will be obtained by coring. The metal walls of the main building will be sampled by analyzing the final rinse water from the surfaces, as described above for the four metal storage buildings. The identification of contamination in the concrete subfloor of the containment area would require the removal and appropriate disposal of the contaminated concrete as hazardous waste.

In the event that contamination is identified in the soil beneath containment area of Building S22895 is confirmed by sampling, NMED will be notified. An investigation of the nature and extent of the contamination will be planned, and a Work Plan will be submitted to NMED for review and approval. The investigation Work Plan would specify the number and types of samples to be collected, the analyses to be performed and the locations planned. Following the investigation and the approval by NMED of the Investigation Report, an appropriate remedy to address the contamination would be evaluated and submitted to NMED for approval.

Sampling and testing of the soil around the loading dock at the HWSF will be accomplished. This sampling will consist of borings using a hollow stem auger at a distance of 3 and 7 ft (1 and 2 m) from the loading dock. Borings will be drilled every 5 ft (1.5 m) to a depth of 10 ft (3 m). Each boring will be sampled at surface level, 5 ft (1.5 m) and 10 ft (3 m) depths. Borings will also be drilled at any site that shows evidence of contamination. Ten percent of the samples will be randomly selected to test for all the 40 CFR 261 Appendix VIII constituents. Test procedures as outlined as appropriate for the interior of the buildings and the containment area in Building S22895 will be used. These test results will be reviewed by NMED, who will determine, in concert with WSMR, any necessary future action. Horizontal and vertical testing will be continued until any areas of contamination are defined and removed.

All miscellaneous equipment used in cleanup and decontamination of the storage facility (i.e., brushes, mops, buckets, protective clothing, pump hose etc.) will be treated as hazardous waste. If a spill occurs during cleanup and closure, the Contingency Plan will be implemented.

6.2 Closure Performance Standard

The Closure Plan will comply with the performance standards set forth in HWMR-6, Part V, 40 CFR Subpart G.

6.3 Schedule for Closure

Closure will be accomplished according to the specifications contained in 40 CFR § 264.112, 113. With an anticipated maximum life of 50 years the final closure schedule for the HWSF will include the following steps:

- Step 1. 1 July 2034 – Notify Director, NMED of intent to close facility.
- Step 2. 1 December 2034 – Receive last volume of waste for storage.
- Step 3. 1 January 2035 – Begin closure by removing all containers of hazardous waste from the storage facility.
- Step 4. 1 March 2035 – Removal of all hazardous waste from the facility complete.
- Step 5. 1 June 2035 – Closure activities complete and certification submitted to Director, NMED. Closure schedule guidelines for the HWSF are shown in days on Table 6-1.

Table 6-1. Closure Schedule Guidelines for HWSF

Activity	Days
1. Notify NMED of intent to close facility.	0
2. Receive final volume of hazardous waste from WSMR.	150
3. Begin closure by removing all hazardous waste from storage facility.	150 - 180
4. Removal of all hazardous waste from storage facility complete.	150 - 240
5. Closure activities complete and certification submitted to NMED.	150 - 330

If closure activities cannot be completed within the proposed timeframes, WSMR will request an extension in accordance with 20 NMAC**,** 40 CFR §264.113. WSMR is a Federal Government owned installation and is therefore exempt [§264.140(b) (4)(c)] from closure cost estimates, financial assurance under §270.14(b)(15) incorporating §264.142,and §264.143, and liability requirements under §270.14(b)(17) incorporating §264.147 of the Permit Application General Requirements. Additionally, WSMR does not use any State financial mechanisms to meet the requirements of §264.143, §263.145, and §264.147.

6.4 Post Closure

The HWSF is a hazardous waste storage facility only and does not conduct disposal activities. It is therefore exempt from post closure care cost estimates and post closure care financial assurance per §264.144 and §264.145 as required under §270.14 (b) (16) of the Part B General Requirements.

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