



**BILL RICHARDSON**  
GOVERNOR

HAFB 05  
*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**

*Hazardous Waste Bureau*  
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**RON CURRY**  
SECRETARY

**DERRITH WATCHMAN-MOORE**  
DEPUTY SECRETARY

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

September 30, 2005

Ms. Debbie Hartell  
Chief  
Environmental Flight  
49 CES/CEV  
550 Tabosa Avenue  
Holloman AFB, NM 88330-8458

**RE: INTENT TO APPROVE: PETITIONS FOR NO FURTHER ACTION FOR  
SEVEN (7) SOLID WASTE MANAGEMENT UNITS/AREAS OF CONCERN  
HOLLOMAN AIR FORCE BASE  
JANUARY 2005  
HOLLOMAN AIR FORCE BASE NM65721224422  
HWB-HAFB-04-021**

Dear Ms. Hartell:

The New Mexico Environment Department (NMED) is issuing a Public Notice with intent to approve the Class 3 permit modification requested by the United States Air Force/Holloman Air Force Base (HAFB or the Permittee) on **September 30, 2005**. This modification consists of a request to approve No Further Action (NFA) status for seven (7) solid waste management units (SWMUs)/areas of concern (AOCs) and the transfer of these SWMUs/AOCs from Table A to Table B of Part 4 of the Resource Conservation and Recovery Act (RCRA) permit issued to HAFB. The 7 sites proposed for NFA approval are identified in the enclosed Attachment.

NMED will begin a 60-day public comment period on **September 30, 2005**. The Public Notice for this comment period will indicate that a draft Permit modification consisting of Tables A and B, and the Fact Sheet/Statement of Basis have been prepared for review and comment, including the procedures to request a Public Hearing. The Permittees will be notified by certified mail if a Public Hearing is scheduled. The Permittee may submit

Ms. Hartell  
September 30, 2005  
Page 2 of 2

comments on the draft Permit to NMED no later than **5:00 p.m., November 15, 2005**, the close of the comment period.

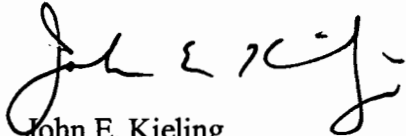
NMED will give due consideration and the weight it deems appropriate to all comments received during the public comment period. When ruling on permit issuance, NMED may make reasonable modifications to the permit to meet the requirements of the Hazardous Waste Management Regulations (20.4.1 NMAC) and the HAFB RCRA Permit. At the time that a final permit decision is made, NMED will issue a response to all comments submitted during the public comment period.

The final permit decision shall become effective thirty (30) calendar days after notice of the decision has been served on the Permittee. The approved permit modification revised Tables A and B, will be transmitted to the Permittee by certified mail.

Enclosed for your review are copies of the draft Permit modifications that consist of the proposed Tables A and B in highlight/strikeout. Also enclosed are copies of the Public Notice and the Fact Sheet/Statement of Basis. These documents will also be available for public review at the NMED Hazardous Waste Bureau office in Santa Fe and at the Environment Department District 1 Office in Albuquerque as well as on the NMED website. Procedures for submitting official comments are contained in the Public Notice and Fact Sheet/Statement of Basis.

Please contact Cornelius Amindyas of my staff; at (505) 222-9543 should you have any questions.

Sincerely,



John E. Kieling  
Manager  
Permits Management Program

JEK: ca

Enclosures

cc: J. Bearzi, NMED HWB  
W. Moats, NMED HWB  
C. Padilla, NMED WWMD  
L. King, EPA, 6PD-N  
File: HAFB 05, and Reading File

**ATTACHMENT**

Solid Waste Management Units Proposed for No Further Action (Corrective Action Complete)  
Class 3 RCRA Permit Modification Request of **June 20, 2005**

	<b>SWMU/AOC ID Number</b>	<b>SWMU/AOC Name</b>
1	<b>139</b>	Lake Holloman
2	<b>140</b>	Lake Stinky
3	<b>166</b>	MOBSS Drainage Lagoon
4	<b>FST-837</b>	German Air Force Buildings 837 & 839 Septic Tank
5	<b>106</b>	Main Base Landfill
6	<b>DP-62</b>	Rita's Draw Debris Disposal Site
7	<b>136</b>	Building 1119 Wash Rack Drainage Pit

**APPENDIX 4-A: TABLE A**  
**SUMMARY OF SOLID WASTE MANAGEMENT UNITS**  
September 30, 2005

The following list contains the proposed sites that NMED determined to be appropriate for no further action (NFA). The subject sites are struck out since they have been moved to Table B.

SERIAL NO.	SWMU	ERP SITE ID	UNIT NAME
1	4	SD-08	Building 131 Oil/Water Separator
2	8	N/A	Building 231 Oil/Water Separator
3	19	N/A	Building 638 Oil/Water Separator
4	20	N/A	Building 639 Oil/Water Separator
5	39	N/A	Building 1092 Oil/Water Separator
6	82	SD-08	Building 131 Washrack
7	101	LF-10	Building 121 Landfill
8	104	LF-29	Former Army Landfill
9	105	LF-19	Golf Course Landfill
10	106	LF-01	Main Base Landfill
11	108	LF-23	MOBSS Landfill Disposal Trench
12	109	LF-10	Old Main Base Landfill
13	111	RW-42	Radioactive Waste Disposal Area
14	113A	OT-20	Sludge Disposal Trenches near Lagoons
15	113B	DP-30/SD-33	Sludge Disposal Trenches Fire Train Area
16	114	OT-03	TEL Disposal Site
17	115	LF-22	Waste Area Landfill #1 PCB Disposal Area
18	116	LF-21	West Area Landfill #2
19	118	OT-16	Building 21 Pesticides Holding Tank
20	122	N/A	Building 702 Waste Oil Tank
21	123	N/A	Building 704 Waste Oil Tank
22	127	FT-31	Building 1092 Waste Oil Tank
23	130	SS-46	Taxiway 4 Tank 28 JP-4 Underground Waste Tank
24	132	OT-16	Building 21 Entomology Leachfield
25	135	FT-31	Building 1092 Oil/Water Sep Drainage Pit
26	136	N/A	Building 1119 Washrack Drainage Area
27	137	SS-38	Building 1166 Test Track Drain Field
28	139	N/A	Lake Holloman
29	140	N/A	Lake Spaley
30	141	SD-27	Pad 9 Drainage Pit
31	165	SS-39	Building 1176 Pond
32	166	SD-25	MOBSS Drainage Lagoons
33	170	FT-31	Fire Department Training Area 1
34	177	SS-39	Building 1176 Sumps
35	179	SS-39	Discharge Box
36	181	SS-39	Building 1176 Drainage Trough
37	183	N/A	Air Base Sewer System
38	197	OT-14	Former Entomology Shop

SERIAL NO.	SWMU/AOC	ERP SITE ID	UNIT NAME
39	229	SS-59	T-38 Test Cell Fuel Spill Site
40	AOC-1	DP-64	Chemical Agent Site
41	AOC-2	N/A	Sewage Drainage Pit NE of Building 864
42	AOC-3	DP-63	Ammunition Yard Disposal Pit
43	AOC-4	N/A	West POL Fuel Spill Site
44	AOC-1001	SS-61	Building 1001 Fuel Spill Site
45	<del>AOC-FST837</del>	<del>N/A</del>	<del>Building 837 Fuel Septic Tank</del>
46	AOC-A	OT-16	Building 21 Pesticide Rinsewater Spill Area
47	AOC-B	N/A	Building 807 Test Cell Surface Spill Area
48	AOC-C	N/A	Building 835 Spills
49	AOC-E	N/A	Buildings 903-909 Sand Plast Residues
50	AOC-F	N/A	Asphalt Tank Spill Area
51	AOC-H	SS-18	Chromic Acid Spill Area
52	AOC-I	OT-37	Fighter Wing Flight Line Spill
53	AOC-J	SS-13	Herbicide Sodium Arsenite Spill Area
54	AOC-K	SS-12	Northeast Fuel Line Spill Site # 1
55	AOC-L	N/A	Early Missile Test Site
56	AOC-M	N/A	Building 18
57	AOC-N	SS-48	Building 137 Military Gas Tank Leak
58	AOC-O	OT-45	Building 296 Old AGE Refueling Station
59	AOC-P	OT-44	Building 301 Fuel Tank Leak
60	AOC-Q	SS-17	BX Gas Station Fuel Line Leaks
61	AOC-R	SS-06	JP-4 Fuel Line Spill Site
62	<del>AOC-RD</del>	<del>DP-62</del>	<del>Rain Drain Disposal Pit</del>
63	AOC-S	N/A	Leaking Underground Storage Tank
64	AOC-T	SS-05	POL Storage Tank Spill Sites 1 & 2
65	AOC-U	N/A	Lost River Basin
66	AOC-V	SS-57	Officer's Club
67	PRI-2	OT-35	PRI Bldg 1264 Solvent Burn Area
68	PRI-5	OT-35	PRI Bldg 1264 Solvent Burn Area
69	PRI-A	OT-32	Primate Research Lab Sewer Line

TOTAL OF CORRECTIVE ACTION SITES IN TABLE A = 69 [i.e., 39 SWMUs + 30 AOCs].

Note: Following Public comments period, the subject sites will be moved to Table B, leaving 62 sites.

**APPENDIX IV-A: TABLE B  
SUMMARY OF SOLID WASTE MANAGEMENT UNITS**

The following is a list of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Not Currently Requiring Corrective Action.

SWMU/AOC	DESCRIPTION	COMMENT
1	Building 55 Oil/Water Separator	Site NFAd in February 2001
2	Building 121 Oil/Water Separator	Site NFAd in February 2001
3	Building 130 Oil/Water Separator	Site NFAd in February 2001
5	Building 137 Oil/Water Separator	Site NFAd in February 2001
6	Building 193 Oil/Water Separator	Site NFAd in February 2001
7	Building 198 Oil/Water Separator	Site NFAd in February 2001
9	Building 282 Oil/Water Separator	Site NFAd in February 2001
10	Building 283 Oil/Water Separator	Site NFAd in February 2001
11	Building 300 Oil/Water Separator	Site NFAd in February 2001
12	Building 304 Oil/Water Separator	Site NFAd in February 2001
13	Building 304A Oil/Water Separator	Site NFAd in February 2001
14	Building 306 Oil/Water Separator	Site NFAd in February 2001
15	Building 309 Oil/Water Separator	Site NFAd in February 2001
16	Building 315 Oil/Water Separator	Site NFAd in February 2001
17	Building 316 Oil/Water Separator	Site NFAd in February 2001
18	Building 500 Oil/Water Separator	Site NFAd in February 2001
21	Building 702 Oil/Water Separator	Site NFAd in February 2001
22	Building 704 Oil/Water Separator	Site NFAd in February 2001
23	Building 800 Oil/Water Separator	Site NFAd in February 2001
24	Building 801 Oil/Water Separator	Site NFAd in February 2001
25	Building 805 Oil/Water Separator	Site NFAd in February 2001
26	Building 809 Oil/Water Separator	Site NFAd in February 2001
27	Building 810 Oil/Water Separator	Site NFAd in February 2001
28	Building 822 Oil/Water Separator	Site NFAd in February 2001
29	Building 827 Oil/Water Separator	Site NFAd in February 2001
30	Building 830 Oil/Water Separator	Site NFAd in February 2001
31	Building 855 Oil/Water Separator	Site NFAd in February 2001
32	Building 868 Oil/Water Separator	Site NFAd in February 2001
33	Building 869 Oil/Water Separator	Site NFAd in February 2001
34	Building 902 Oil/Water Separator	Site NFAd in February 2001
35	Building 903 Oil/Water Separator	Site NFAd in February 2001
36	Building 1000 Oil/Water Separator	Site NFAd in February 2001
37	Building 1080 Oil/Water Separator	Site NFAd in February 2001
38	Building 1080A Oil/Water Separator	Site NFAd in February 2001
40	Building 1166 Oil/Water Separator	Site NFAd in February 2001
41	Building 1266 Oil/Water Separator	Site NFAd in February 2001
42	Building 1 Waste Accumulation Area	Site NFAd in February 2001
43	Building 55 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU, but no corrective

		action was not required.
44	Building 121 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU, but no corrective action was not required.
45	Building 195 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
46	Building 198 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
47	Building 280 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
48	Building 282 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
49	Building 300 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
50	Building 301 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
51	Building 308 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
52	Building 500 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
53	Building 638 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
54	Building 702 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
55	Building 702A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
56	Building 807 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
57	Building 809 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
58	Building 822 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
59	Building 837 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
60	Building 844 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
61	Building 851 Waste Accumulation Area	EPA listed the site in 1988 as

		a SWMU with no further corrective action required.
62	Building 855 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
63	Building 867 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
64	Building 869 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
65	Building 901 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
66	Building 901 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
67	Building 909 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
68	Building 910 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
69	Building 807 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
70	Building 1119 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
71	Building 1778A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
72	Building 1178A Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
73	Building 1266 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
74	Building 7005 Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
76	DRMO Non-Hazardous Waste Drain	EPA listed the site in 1988 as a SWMU with no further corrective action required.
77	RATSCAT Waste Accumulation Area	EPA listed the site in 1988 as a SWMU with no further corrective action required.
78	Trim Pad 3 WAA	EPA listed the site in 1988 as a SWMU with no further corrective action required.
79	Building 21 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.



80	Building 55 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
81	Building 121 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
83	Building 134 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required.
84	Building 137 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
85	Building 283 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
86	Building 304A Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
87	Building 306 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
88	Building 309 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
89	Building 703 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
90	Building 801 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
91	Building 816 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
92	Building 822 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
93	Building 827 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
94	Building 830 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
95	Building 902 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
96	Building 1080 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
97	Building 1119 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
98	Building 1166 Wash rack	EPA listed the site in 1988 as a SWMU with no further

		corrective action required
99	Building 1266 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
100	Pad 9 Wash rack	EPA listed the site in 1988 as a SWMU with no further corrective action required
102	Acid Trailer Burial Site	EPA listed the site in 1988 as a SWMU with no further corrective action required
103	Causeway Rubble Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required
106	LF-01	Main Base Landfill
107	Main Base Substation PCB Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required
110	POL Rubble Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required
112	RATSCAT Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required
117	Wire Spool Disposal Area	EPA listed the site in 1988 as a SWMU with no further corrective action required
119	Building 121 Waste Oil Tank	NFAd in February 2001
120	Building 309 Waste Oil Tank	NFAd in February 2001
121	Building 316 Waste Oil Tank	NFAd in February 2001
124	Building 752 Waste Oil Tank	NFAd in February 2001
125	Building 868 Fire Water Tank	NFAd in February 2001
126	Building 1000 Waste Oil Tank	NFAd in February 2001
128	Building 1166 Waste Oil Tank	NFAd in February 2001
129	Buildings 1191 and 1192 Spill Tanks	NFAd in February 2001
131	Waste Oil Bowsers	NFAd in February 2001
133	Building 703 Wash rack Discharge Pit	NFAd in February 2001
134	Buildings 902-924 Drainage Ditch	NFAd in February 2001
136	Building 1119 Washrack Drainage Area	Proposed 2005
138	Building 1166 Oil/Water Sep Drainage Pit	NFAd in February 2001
139	N/A	Lake Holloman
140	N/A	Lake Stinky
142	Wastewater Influent Chamber	NFAd in February 2001
143	Bar Screen	NFAd in February 2001
144	Comminutor	NFAd in February 2001
145	Grit Chamber	NFAd in February 2001
146	Parshall Flume and Wet Well	NFAd in February 2001
147	Splitter Box	NFAd in February 2001
148	Sewage Lagoon A	Closed June 30, 2000

149	Sewage Lagoon B	Closed June 30, 2000
150	Sewage Lagoon C	Closed June 30, 2000
151	Sewage Lagoon D	Closed June 30, 2000
152	Sewage Lagoon E	Closed June 30, 2000
153	Sewage Lagoon F	Closed June 30, 2000
154	Sewage Lagoon G	Closed June 30, 2000
155	Sludge Drying Beds	NFAd in February 2001
156	Imhoff Tanks (5)	NFAd in February 2001
157	ABLE 51 PCB Storage Area	NFAd in February 2001
158	PCB Storage Bunker	NFAd in February 2001
159	Building 500 Pb Storage Shelves	NFAd in February 2001
160	Building 500 NiCd Battery Storage Area	NFAd in February 2001
161	Building 844 Battery Storage Area	NFAd in February 2001
162	DRMO Scrap Metal Storage Area	EPA called this site a SWMU in 1988, but did not require correctiveaction <sup>1</sup> .
163	DRMO Wood Pile	EPA called this site a SWMU in 1988, but did not require correctiveaction <sup>1</sup> .
164	Building 1080 Pond	NFAd in February 2001.
165	Building 1176 Pond	NFAd in February 2001.
166	SD-25	MOBSS Drainage Lagoon
167	Test Shed Launch Area Collection Basin	EPA identified it in 1988 as a SWMU without requiring further corrective action
169	Burn Kettle	EPA identified it in 1988 as a SWMU without requiring further corrective action
171	Fire Department Training Area 2	NFAd in February 2001
173	Building 198 Sand Trap	EPA listed this as a SWMU in the 1988 RFA Report
174	Building 231 Hobby Shop Silver Recovery Unit	EPA listed this as a SWMU in the 1988 RFA Report
176	Building 844 Sand Trap	EPA listed this as a SWMU in the 1988 RFA Report
178	Building 1191 Fuel Runoff Pits	NFAd in February 2001
180	Building 301 Outdoor Drainage Flume	NFAd in February 2001
182	Building Floor Drains	NFAd in February 2001
184	Wastewater Re-circulation Line	NFAd in February 2001
185	Building 332 Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
186	Hospital Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
187	West Area Silver Recovery Unit	EPA identified this site as a SWMU in 1988.
188	Building 161 Acid Neutralization Unit	EPA identified this site as a

		SWMU in 1988.
189	Building 282 Recycling Area	EPA identified this site as a SWMU in 1988.
190	Building 500 Battery Neutralization Unit	EPA identified this site as a SWMU in 1988.
191	Building 855 Concrete Pad	EPA identified this site as a SWMU in 1988.
192	Coco Block House Disposal Well	EPA identified this site as a SWMU in 1988.
193	Trash Dumpster	EPA identified this site as a SWMU in 1988.
194-228	SWMUs which no longer exist or could not be located	EPA identified this site as a SWMU in 1988.
212	Former north Area Wash Rack	NFAD in February 2001
230	Building 828 Fuel Spill Site	NFAD in February 2001
231	Incinerator/Landfill	NFAD in February 2001
194-228	SWMUs which no longer exist or could not be located	EPA identified the site in the 1988, but did not require corrective action <sup>1</sup> .
PRI-1	Primate Research Institute (PRI) Building 1264: Waste accumulation Area	EPA identified the site in the 1988
PRI-3	PRI Building 1264: Biological Incinerator	EPA identified the site in the 1988
PRI-4	PRI Building 1264: Quarantine Area Incinerator	EPA identified the site in the 1988
AOC-BBMS	Bare Base Mobility Squadron Spill Area	EPA identified the site in the 1988
AOC-D	SD-26 Building 882 Spills	EPA identified the site in the 1988
<del>AOC-FST837</del>	<del>Building 837 Fuel Septic Tank</del>	<del>Proposed for NEA in 2005</del>
AOC-G	Atlas Substation PCB Spill	EPA identified the site in the 1988
AOC-PRI-A	Sewer Line from Primate Research Laboratory	EPA identified the site in the 1988
<del>AOC-RD</del>	<del>DP-62</del>	<del>Rita &amp; Draw Disposal Pit</del>
PRI-S	Primate Research Lab Borehole Disposal Site.	EPA identified the site in the 1988
AOC-RR	Buried RR Cars.	EPA identified the site in the 1988

### HOLLOMAN AIR FORCE BASE OPERATING AND CLOSED UNITS

OPERATING/CLOSED UNIT	DESCRIPTION	COMMENT
<b>20,000-Pound Open Detonation (OD) Treatment Unit/SWMU # 168.</b>	The OD Unit was permitted in 1997.	Permitted in 1997 and is operating.
<b>Container Storage Unit/SWMU # 75</b>	Permit Expired July 4, 2001	Undergoing Renewal. <sup>2</sup>
<b>300-Pound Open Burn (OB) Unit. This site was listed in the 1988 RFA Report as SWMU 172.</b>	The OB Unit was under Interim from 1965 to 1979 status HAFB conducted risk-based closure as per approved Work Plan of 1997.	NMED approved Closure of this site on February 3, 1997.

1. Unit underwent Corrective Action, was approved for NFA, and is limited by Institutional Controls
2. Unit is a Hazardous Waste Management Unit.



**BILL RICHARDSON**  
GOVERNOR

*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**

*Hazardous Waste Bureau*  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Telephone (505) 428-2500  
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[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



**RON CURRY**  
SECRETARY

**DERRITH WATCHMAN-MOORE**  
DEPUTY SECRETARY

**PUBLIC NOTICE NUMBER 05-05**

**NEW MEXICO ENVIRONMENT DEPARTMENT  
HAZARDOUS WASTE BUREAU  
Santa Fe, New Mexico  
September 30, 2005**

**NOTICE OF PUBLIC COMMENT PERIOD AND INTENT TO APPROVE A PERMIT  
MODIFICATION TO THE UNITED STATES DEPARTMENT OF THE AIR FORCE  
HOLLOMAN AIR FORCE BASE'S RCRA PERMIT**

Under authority of the New Mexico Hazardous Waste Act (Section 74-4-1 *et seq.*, NMSA 1978, as amended, 1992) and the New Mexico Hazardous Waste Management Regulations (20.4.1 NMAC), the New Mexico Environment Department (NMED) can approve or deny hazardous waste permits, closure plans, permit modifications, and amendments. Under this authority, NMED intends to approve, pending public input into this decision, a modification to the RCRA permit issued to the United States Air Force/Holloman Air Force Base (the Permittee), New Mexico, EPA ID# NM6572124422.

Holloman Air Force Base (the Base) is located on approximately 59,827 acres of land about seven miles west of the City of Alamogordo in Otero County, south central New Mexico. The Base lands are situated in the northern Chihuahuan Desert in the region known as Tularosa Basin, which is bound on the east and west by the Sacramento and San Andres Mountains, respectively. The Base is located adjacent to White Sands Missile Range and White Sands National Monument, both located west of the Base. Regional water supplies are derived from Bonito Lake, located approximately 60 miles north of the Base and the Boles, Douglas, and San Andres Well Fields, which are located 14 miles to the southeast.

Currently, Holloman AFB hosts the Air Combat Command 49<sup>th</sup> Fighter Wing, which includes pilot training, mobility support, and combat support operation. The primary Air Force Material Command component located at Holloman AFB is the 46<sup>th</sup> Test Group, which is responsible for evaluation of propulsion and navigational systems for aircraft, space vehicles and missiles. A variety of tenant organizations are assigned to Holloman AFB such as the German Air Force Tornado Squadron, the 4<sup>th</sup> Space Surveillance Squadron, and Detachment 4 of the 55<sup>th</sup> Weather Squadron.

The Permittee is located at the following address: Holloman Air Force Base, New Mexico. The Permittee's primary contact for the action is: Ms. Debbie Hartell, Chief, Environmental Flight, 550 Tabosa Avenue, Holloman AFB, NM 88330-8458.

If approved, the proposed modification would grant No-Further-Action (NFA) status for six (6) SWMUs and one (1) AOC. Appendix 4-A, Table A in Part 4 of HAFB's RCRA Permit, lists SWMUs at the HAFB facility where corrective action may be necessary to characterize and/or remediate past releases of hazardous wastes or hazardous waste constituents. If this modification were approved by NMED, the 7

SWMUs/AOCs would be transferred from Table A to Table B of the same Appendix, as SWMUs/AOCs that have been approved for NFA.

Five of the SWMUs and one AOC are proposed for NFA by the Permittee on the basis that they were characterized and/or remediated in accordance with current applicable State or Federal Regulations. One of the SWMUs (106) is proposed for NFA on the basis that it was remediated under another agency (the Solid Waste Bureau) of the same Department.

The following SWMUs/AOC are the subject regarding this action: 1) SWMU 139, Lake Holloman; 2) SWMU 140, Lake Stinky; 3) SWMU 166, MOBSS Drainage Lagoon; 4) FST-837, German Air Force Buildings 837 & 839 Septic Tank; 5) SWMU 106, Main Base Landfill; 6) SWMU DP-62, Rita's Draw Debris Disposal Site; and 7) SMWU 136, Building 1119 Wash Rack Drainage Pit.

#### **PUBLIC REVIEW OF THE ADMINISTRATIVE RECORD**

The Administrative Record for this proposed action consists of the HAFB Permit Modification Request letter, Fact Sheet/Statement of Basis, this Public Notice, the draft Permit modification that consists of the proposed changes in Tables A and B, and the referenced supporting documentation. The Administrative Record may be reviewed at the following location during the public comment period:

NMED – Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
(505) 428-2500  
*Monday - Friday from 8:00 a.m. to 5:00 p.m.*

The HAFB Permit Modification Request, the Fact Sheet / Statement of Basis, the Public Notice, and the draft Permit modification may be reviewed at the following locations during the public comment period:

*NMED-District 1 Albuquerque Office  
5500 San Antonio Avenue NE  
Albuquerque, New Mexico 87109  
(505) 222-9500  
Monday - Friday from 8:00 a.m. to 5:00 p.m.*

*Alamogordo Public Library  
920 Oregon Street  
Alamogordo, NM 88330  
(505) 439-4140  
Monday – Thursday 10:00 a.m to 8:00 p.m.  
Saturday from 11:00 a.m. to 5:00 p.m.  
Sunday from 1:00 p.m. to 5:00 p.m.*

A copy of the Fact Sheet / Statement of Basis, the Public Notice, and the draft Permit that consists of the proposed Tables A and B are also available on the NMED website at [www.nmenv.state.nm.us/HWB/hafbperm.html](http://www.nmenv.state.nm.us/HWB/hafbperm.html) under No Further Actions. To obtain a copy of the Administrative Record or a portion thereof, in addition to further information please contact Ms. Pam Allen at (505) 428-2531, or at the address given above. NMED will provide copies, or portions thereof, of the administrative record at a cost to the requestor.

NMED issued this public notice on **September 30, 2005** to announce the beginning of a 45-day comment period that will end at **5:00 p.m., November 15, 2005**. Any person who wishes to comment on this action or request a public hearing should submit written or electronic mail (e-mail) comment(s) with the commenter's name and address to the respective address below. Only comments and/or requests received on or before **5:00 p.m., November 15, 2005** will be considered.

John E. Kieling, Program Manager  
Hazardous Waste Bureau - New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

Or via e-mail: john.kieling@state.nm.us  
Ref: Holloman AFB – 7 No Further Actions

Written comments must be based on the administrative record. Documents in the administrative record need not be re-submitted if expressly referenced by the commenter. Requests for a public hearing shall provide: (1) a clear and concise factual statement of the nature and scope of the interest of the person requesting the hearing; (2) the name and address of all persons whom the requestor represents; (3) a statement of any objections to the proposed action, including specific references; and (4) a statement of the issues which such persons proposes to raise for consideration at the hearing. Written comment and requests for Public Hearing must be filed with Mr. John Kieling on or before **5:00 p.m., November 15, 2005**. The NMED will provide a thirty (30) day notice of a public hearing, if scheduled.

The NMED must ensure that the approved final Permit is consistent with the New Mexico Hazardous Waste Management Regulations. All written comments submitted on the draft Permit will become part of the administrative record, will be considered in formulating a final decision, and may cause the draft Permit to be modified. NMED will respond in writing to all significant public comment. The response will specify which provisions, if any, of the draft Permit have been changed in the final Permit decision, and the reasons for the change. This response will also be posted on the NMED website in addition to NMED notifying all persons providing written comments.

After consideration of all written public comments received, NMED will issue, or modify and issue, the Permit. If NMED modifies and issues the Permit, the Permittee shall be provided by mail a copy of the modified Permit and a detailed written statement of reasons for the modifications. The NMED Secretary will make the final Permit decision publicly available and shall notify the Permittee by certified mail. The Secretary's decision shall constitute a final agency decision and may be appealed as provided by the Hazardous Waste Act. All persons on the mailing list, or that provided written comments, or who requested notification in writing, will be notified of the final decision by mail.

The final decision will become effective thirty days after service of the decision, unless a later date is specified or review is requested under the New Mexico Hazardous Waste Management Regulations, 20.4.1 NMAC, Section 901.E., *Hearings*.

#### **ARRANGEMENTS FOR PERSONS WITH DISABILITIES**

Persons having a disability and requiring assistance or auxiliary aid to participate in this process should contact Judy Bentley at the New Mexico Environment Department, Personnel Services Bureau, P.O. Box 26110, 1190 St. Francis Drive, Santa Fe, New Mexico, 87502, telephone 505-827-9872. TDY users please access her number via the New Mexico Relay Network at 1-800-659-8331.



**STATEMENT OF BASIS FOR APPROVAL  
OF  
NO FURTHER ACTION FOR SEVEN SOLID WASTE  
MANAGEMENT UNITS**

**RCRA Corrective Action Program**

**HOLLOMAN AFB**

**NEW MEXICO**



**ENVIRONMENTAL FLIGHT  
ENVIRONMENTAL RESTORATION PROGRAM  
49 CES/CEV  
550 TABOSA AVENUE  
HOLLOMAN AFB, NEW MEXICO**

**JUNE 2005**

**STATEMENT OF BASIS FOR APPROVAL  
OF  
NO FURTHER ACTION FOR 7 SOLID WASTE  
MANAGEMENT UNITS**

**RCRA Corrective Action Program  
HOLLOMAN AFB, NEW MEXICO**

Prepared By:

**49 CES/CEV  
Environmental Flight  
550 Tabosa Avenue  
Holloman Air Force Base  
New Mexico**

**June 2005**

**STATEMENT OF BASIS FOR APPROVAL OF NO  
FURTHER ACTION FOR 7 SOLID WASTE MANAGEMENT  
UNITS**

**RCRA Corrective Action Program  
HOLLOMAN AFB, NEW MEXICO**

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## ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
AFB	Air Force Base
BBMS	Bare Base Mobility Squadron
bgs	Below Ground Surface
BTEX	Benzene, toluene, ethyl benzene, xylenes
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CES/CEV	Civil Engineering Squadron/Combat Engineer Vehicle
cm	Centimeter
cm/sec	Centimeters per Second
DPT	Direct Push Technology
DRO	Diesel-Range Organics
EPA	Environmental Protection Agency
ERP	Environmental Restoration Program
FID	Flame Ionization Detector
FST	Field Service Tank
FWENC	Foster-Wheeler Environmental Corporation
GRO	Gasoline-Range Organics
HAFB	Holloman Air Force Base
HSWA	Hazardous and Solid Waste Amendments
IRA	Interim Remedial Action
IRP	Installation Restoration Program
kg	Kilogram
L	Liter
lbs	Pounds
LNAPL	Light Non-aqueous Phase Liquid
LTM	Long Term Monitoring
mg	Milligram
µg	Microgram
mL	Milliliter
ML	Silty sand
MOBBS	Mobile Bare Base Squadron
NFA	No Further Action
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Commission
ORO	Oil-Range Organics
OVS	Oil/water Separator
OVA	Organic Vapor Analyzer
PA/SI	Preliminary Assessment/Site Investigation

PCB	Polychlorinated Byphenol
PCS	Petroleum-Contaminated Soils
PID	Photo Ionization Detector
PMEL	Petroleum Materials Evaluation Laboratory
POL	Petroleum, Oil and Lubricants
PPM	Parts Per Million
PSH	Phase Separate Hydrocarbons
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SM	Sandy-silt
SSL	Soil Screening Level
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TCE	Trichloroethene
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Petroleum Hydrocarbons
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VCA	Voluntary Corrective Action
VCM	Voluntary Corrective Measures
WWTP	Wastewater Treatment Plant

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## **A. INTRODUCTION**

The New Mexico Environment Department (NMED) has made a final determination to approve the Holloman Air Force Base (AFB) request to remove 7 Solid Waste Management Units (SWMUs) from the Hazardous and Solid Waste Amendments (HSWA) Corrective Action module Resource Conservation and Recovery Act (RCRA) permit No. NM 657214422-1

## **B. FACILITY DESCRIPTION**

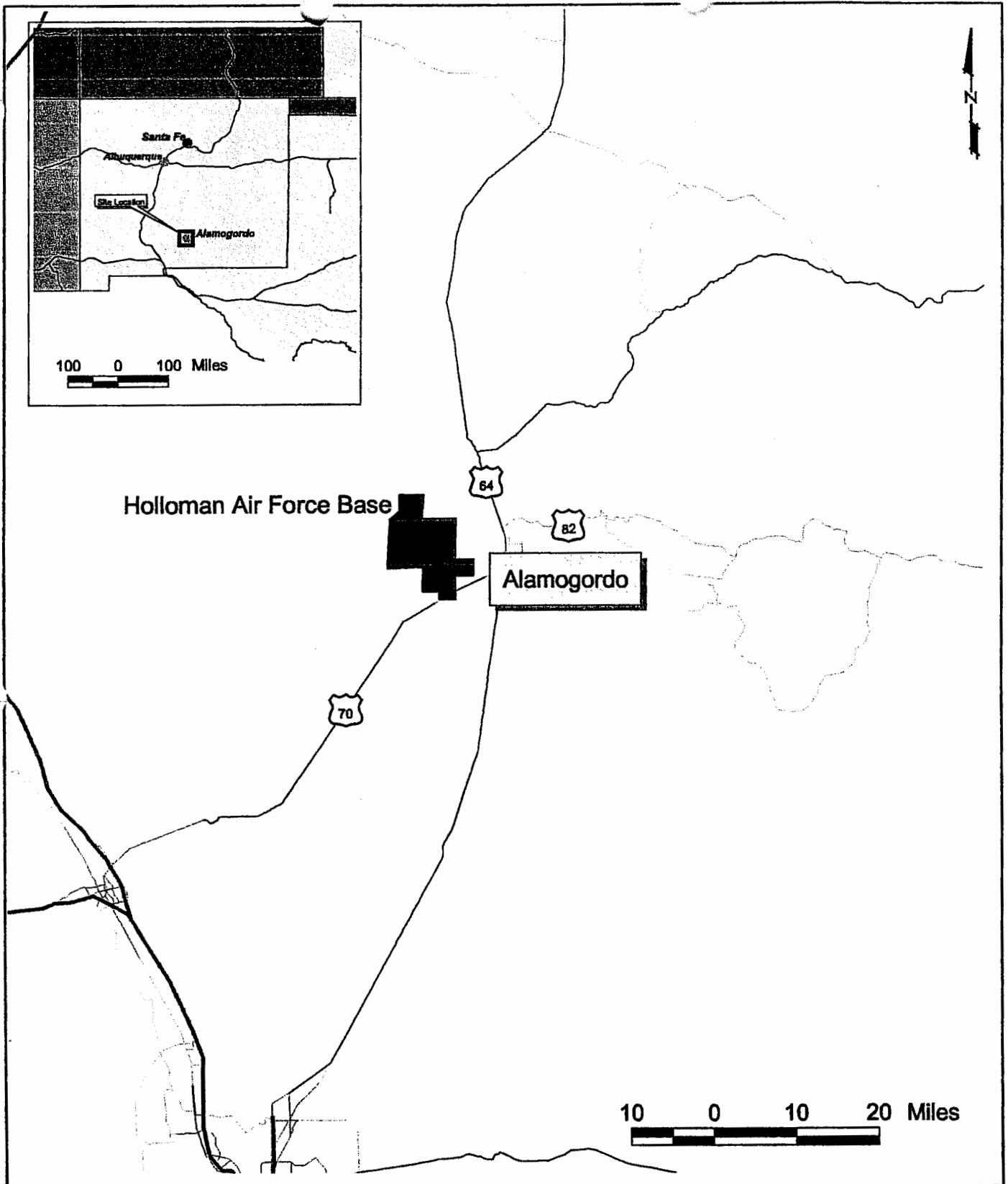
Holloman AFB is located on approximately 59,827 acres of land in Otero County in south central New Mexico (Figure 1). The Base lands are situated in the northern Chihuahuan Desert in the region known as the Tularosa Basin. The basin is bound to the east and west by the Sacramento and San Andreas Mountains, respectively. The Base is located adjacent to White Sands Missile Range, and White Sands National Monument is located west of the Base.

The nearest population center is the city of Alamogordo, located approximately seven miles to the east. Regional metropolitan centers include El Paso, Texas located 90 miles south-southwest and Las Cruces, located 70 miles southwest of the facility. The primary transportation route for the facility is Highway 70 that transverses the southern boundary of the Base.

Currently, Holloman AFB hosts the Air Combat Command 49<sup>th</sup> Fighter Wing, which includes pilot training, mobility support, and combat support operation. The primary Air Force Materiel Command component located at Holloman AFB is the 46<sup>th</sup> Test Group, which is responsible for evaluation of propulsion and navigational systems for aircraft, space vehicles and missiles. A variety of tenant organizations are assigned to Holloman AFB such as the German Air Force Tornado Squadron, the 4<sup>th</sup> Space Surveillance Squadron, and Detachment 4 of the 55<sup>th</sup> Weather Squadron. Figure 1, is a general map of the Base. Locations of SWMUs are identified on Figure 2.

## **C. HISTORY OF INVESTIGATION**

At Holloman AFB, investigation and remediation of SWMUs is conducted under both the Air Force's Environmental Restoration Program (ERP) and the RCRA Corrective Action Program. The ERP program [formerly the Installation Restoration Program (IRP)] was initiated in 1983 and the RCRA Facility Assessment (RFA) was conducted in 1987. A HSWA permit was issued to Holloman AFB in 1991 and became effective on September 25, 1991.



**BHATE**  
*Environmental Engineers and Scientists*

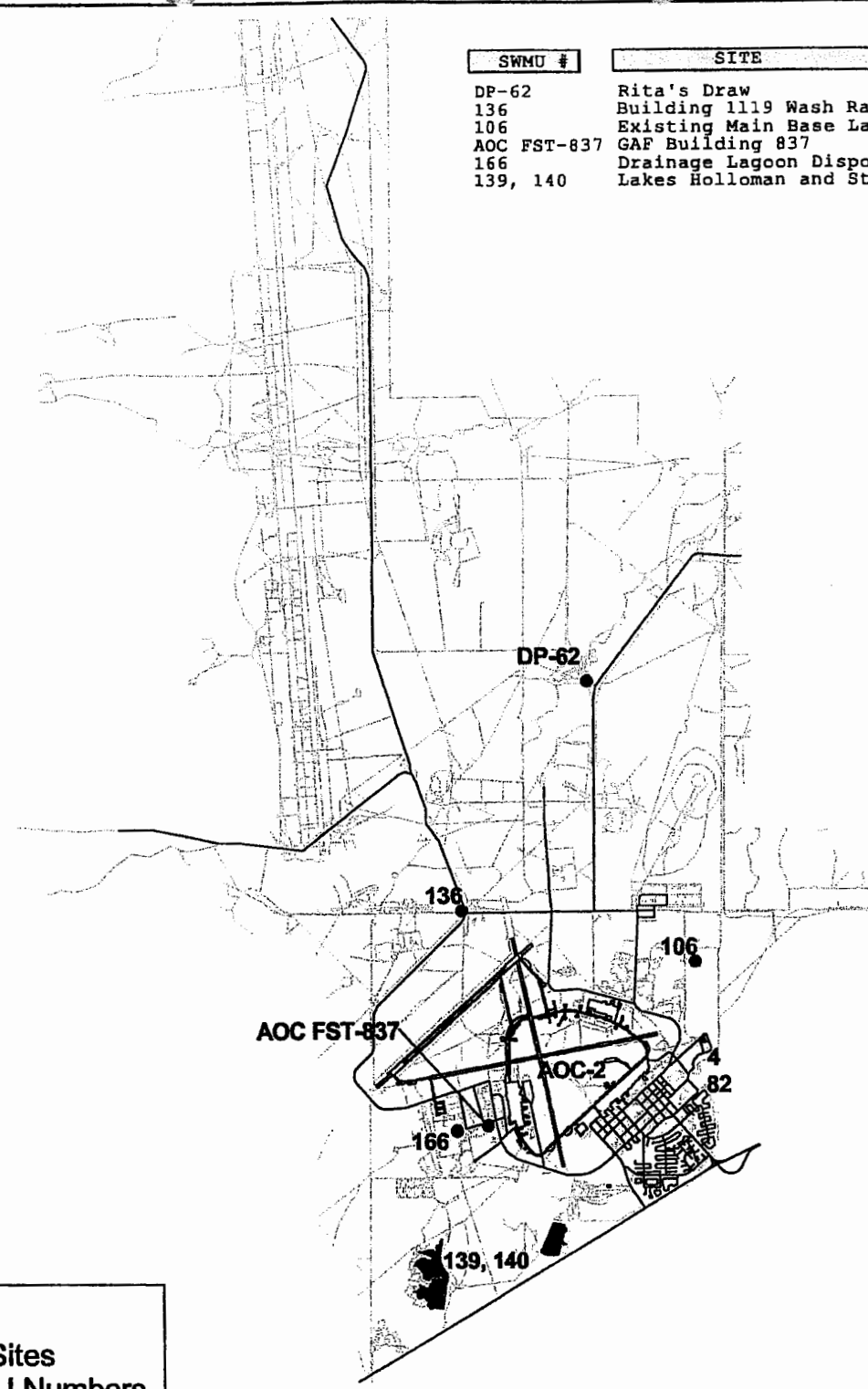
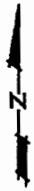
**SITE LOCATION MAP**

**FIGURE 1**

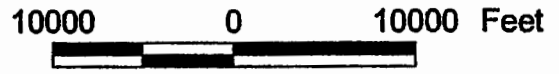
**HOLLOMAN AFB  
 NEW MEXICO**

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	SHOWN	10/26/04	CM
			DRAWING NO:
			GIS_FIG1

SWMU #	SITE
DP-62	Rita's Draw
136	Building 1119 Wash Rack
106	Existing Main Base Landfill
AOC FST-837	GAF Building 837
166	Drainage Lagoon Disposal Site
139, 140	Lakes Holloman and Stinky



Legend	
•	ERP Sites
166	SWMU Numbers
■	Water Bodies



### SWMUs FOR NFA

Holloman AFB, New Mexico

Figure 2

PROJECT NO.	SCALE	DATE	DRAWN BY:
	1"=10,000'	4/14/05	cm
			DRAWING NO:
			GIS 2

The HSWA portion of the RCRA permit identified sites at the Base requiring a RCRA Facility Investigation (RFI). RFI activities were conducted in two phases. The Phase I RFI was conducted between 1987 and 1992. Phase II of the RFI was conducted between 1992 and 1995. A total of 236 potential SWMUs and 29 Areas of Concern (AOC) were investigated. Additionally, five remote sites such as radar sites, well fields and reservoirs were investigated under the RFI. A total of 265 sites were identified and investigated during this process. At the completion of the RFI and RFA processes and through the use of decision documents, only 119 SWMUs and AOCs remained on the RCRA permit.

In 1999, Holloman AFB submitted a request to remove 104 SWMUs and AOCs sites from the RCRA permit. In February 2000, NMED determined that 69 of the 104 SWMUs and AOCs would be considered appropriate for removal. A detailed document describing conditions at these sites and basis for removal was submitted to NMED in October 2000. In February 2001, NMED granted a Class III Permit Modification to remove 69 sites from the Base RCRA Permit.

Currently, a total of 64 SWMUs and AOCs remain of the Base RCRA permit. This document has been prepared to provide NMED with the basis for removing an additional 10 SWMUs and AOCs from the Base permit (Figure 2).

#### **D. INVESTIGATION RESULTS**

Since the removal of 69 sites in February 2001, additional sites have undergone remediation or corrective action as directed by NMED. At present, 10 sites have been identified for no further action (NFA). Section I of this document contains a brief description of each of each site, the actions performed, the basis for removal from the permit, and references concerning the site.

#### **E. PERMIT MODIFICATION**

The administrative record for this proposed action consists of a legal notice, fact sheet, the NMED statement of basis for removal, the request for Permit Modification, related correspondence, documents and the modified permit. The administrative record may be reviewed during normal business hours at:

Mr. John Kieling  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

(505) 428-2500

The legal notice, fact sheet, the NMED Statement of Basis, and modified permit may also be reviewed at:

Public Library of Alamogordo  
2400 Scenic Drive  
Alamogordo, New Mexico 883310

#### **F. SELECTED REMEDY**

The NMED determination that NFA is required at these SWMUs is based on sampling and analytical data, field surveys, documentation of remediation, historical records, aerial photographs, and employee interviews regarding operations at these sites. The determination for permit removal is based one or more of the following criteria:

- NFA Criterion 1: The SWMU/AOC cannot be located, does not exist or is a duplicate SWMU/AOC.
- NFA Criterion 2: The SWMU/AOC has never been used for the management (i.e. generation, treatment, storage and/or disposal) of RCRA solid waste or hazardous waste and/or constituents, or other Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances.
- NFA Criterion 3: No release to the environment has occurred or is likely to occur in the future from the SWMU/AOC
- NFA Criterion 4: A release from the SWMU/AOC to the environment has occurred, but the SWMU/AOC was characterized and/or remediated under another authority (such as the NMED Petroleum Storage Tank, Solid Waste, or Groundwater Quality Bureaus).
- NFA Criterion 5: The SWMU/AOC has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

Each site approved by NMED for NFA is summarized in Table 1.

**TABLE 1.**  
**LIST OF SOILID WASTE MANAGEMENT UNITS (SWMUs)**  
**Proposed No Further Action (NFA)**  
**By Criteria**  
**Holloman AFB, New Mexico**

<b>SWMU No.</b>	<b>SWMU TITLE</b>	<b>ERP SITE No.</b>	<b>NFA CRITERIA No.</b>
136	Building 1119 Washrack Drainage Pit	None	5
139 & 140	Lake Holloman and Lake Stinky	WP-49	5
166	MOBSS Drainage Lagoon	SD-25	5
AOC FST-837	German Air Force Building 837 & 839 Field Septic Tank	None	4
106	Main Base Landfill	LF-01	4
DP-62	Ritas Draw Debris Disposal Site	DP-62, AOC-Ritas Draw	5

## **G. PUBLIC PARTICIPATION**

Requirements for public notification by the New Mexico Hazardous Waste Regulations include public notice in a local newspaper and sending notices to all persons on the facility mailing list maintained by the NMED. The notice announces the 60-day comment period for the request for permit modification. The notice indicates the date, time and place for a public meeting. Also, the notice will provide a contact person and address for submitting written comments on the permit modification. Upon review of the request for permit modification, a list of SWMUs that NMED deems appropriate for NFA must be published in a local newspaper and public notices must be sent to all persons on the facility mailing list. As part of this process, the public may make comments to and/or request additional information from NMED.

## **H. FURTHER STEPS**

The public meeting will be scheduled and notices will be posted/published as indicated in section F. The NMED will notify all persons on the mailing list concerning the location, time and date of the public meeting and the contact person for public written comment. When the comment period has passed and the public meeting has been conducted, the NMED will notify Holloman AFB and each person on the public comment mailing list of the final decision. The final decision will become effective thirty (30) days after service of the decision, unless a later date is specified or review is requested in accordance with New Mexico Hazardous Waste Management Regulations, 20 NMAC 4.1, Section 901. E. *Hearings*.

## **I. CONTACT PERSON FOR ADDITIONAL INFORMATION**

Ms. Pam Allen  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

(505) 428-2500

## **J. DESCRIPTIONS OF SWMUs PROPOSED FOR NO FURTHER ACTION**

### **1.1 SWMU 136 Building 1119 Washrack Drainage Area**

#### **Location**

SWMU 136 is a washrack drainage area located immediately south of Building 1119 (Figure 3).

#### **History**

Soil analyses performed at SWMU 136 during the Table 2 RFI identified two of six soil samples with TRPH greater than 1000 mg/Kg. VOCs, SVOCs and metals were detected but at levels below the SSLs

A bioventing remediation system was installed in the pit and operated from 1997 to mid 1999. The bioventing system removed all but the most recalcitrant hydrocarbons to below the remediation action level. In December 1999, the drainage pit was excavated to remove any remaining PCS from the pit area. A closure report summarizing these results was prepared and submitted in September 2000.

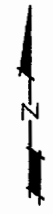
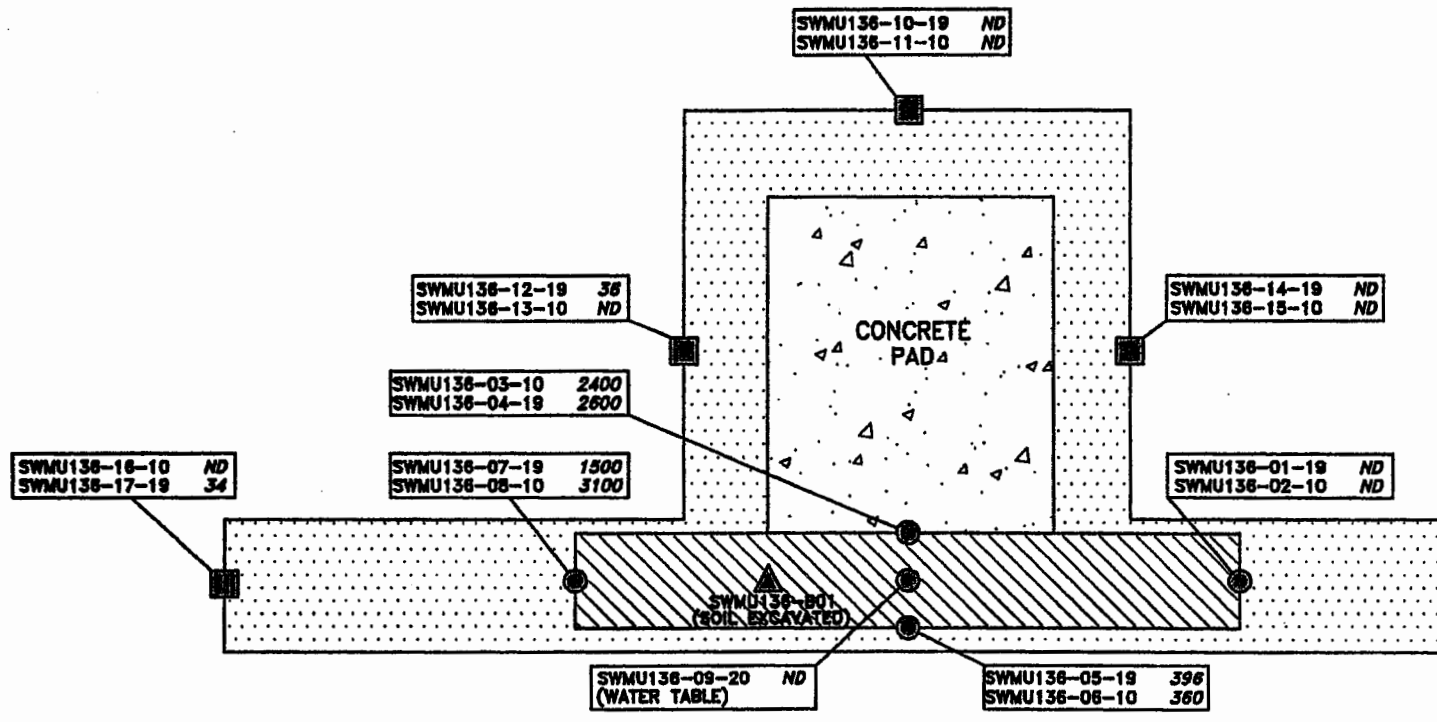
In January 2003, NMED requested that additional soil samples be collected from the southern wall of the drainage pit excavation and analyzed for petroleum hydrocarbons. The request was made to determine if any PCS remained in excess of NMED SSLs for Residential soil (TPH @ 940 mg/Kg). Analytical results from these soil samples did not exceed action levels. On September 22, 2003 NMED directed Holloman AFB to move the SWMU to Table A.2 of the Base RCRA permit (SWMUs requiring no further action). Figure 4 is a copy of this letter from NMED.


#### **Evaluation of Relevant Information**

A low flow air injection bioventing remediation system was installed in the pit and operated from 1997 to mid 1999. Despite, the operation of the bioventing system, some areas still contained TRPH above the action level.

In December 1999, the drainage pit was excavated to remove TRPH contaminated soil from the pit area. The completed excavation was approximately 12 feet wide, 30 feet long and approximately 20 feet deep. The excavated soil was field screened and segregated to minimize the volume for offsite disposal. The pit was excavated





 INITIAL EXCAVATION AND CORRESPONDING SAMPLES WITH TRPH RESULTS (SEPTEMBER 8, 1999)


 OVER-EXCAVATION AND CORRESPONDING SAMPLES WITH TRPH RESULTS (SEPTEMBER 10, 1999)

 TABLE 2 RFI RESULTS (SEPTEMBER 1997)

NOTE: TRPH CONCENTRATIONS ARE SHOWN IN ITALICS.  
CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)



SITE MAP OF SWMU 136 BUILDING 1119  
WASHRACK DRAINAGE PIT

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	1"=8'	10/26/04	MRM
			DRAWING NO:
			9030167-03

Figure 3  
HOLLOMAN AIR FORCE BASE  
NEW MEXICO

to groundwater which was encountered at approximately 20 feet below the ground surface (bgs).

Table 2 summarizes the analytical results from soil samples collected from the sidewalls of the drainage pit excavation. A closure soil sample was collected from the mid-point of each sidewall of the excavation. The closure samples were analyzed for TRPH, benzene, toluene, ethylbenzene and xylenes (BTEX). The highest TRPH concentration was identified in soil sample SWMU 136-12-19 at 36 mg/Kg. BTEX constituents were either not detected or quantified below the remediation action levels. A closure report summarizing these results was prepared and submitted in September 2000.

In January 2003, NMED requested that additional soil samples be collected from the southern wall of the drainage pit excavation. On March 19, 2003, a test pit was dug and three soil samples were collected and analyzed from the midpoint of the southern wall. The samples were selected from the most visibly stained and/or odor emitting intervals. These soil samples were analyzed for VOCs, SVOCs and TPH. TPH as gasoline, diesel fuel and motor oil were identified in the three samples ranging from 3.9 mg/Kg to 398 mg/Kg. Naphthalene at 10 µg/Kg was reported in one sample (SWMU 136-05-19). No other VOCs or SVOCs were detected in this sample or other samples. These analytical results were submitted to NMED on August 13, 2003. On September 22, 2003, NMED directed Holloman AFB to move the SWMU to Table A.2 of the Base RCRA permit (SWMUs requiring no further action).

#### **Basis for Determination.**

SWMU 136 has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

All contaminated soil at the site has been excavated and transported to a TSD facility. Analytical results from soil samples collected from the side walls of the excavation document the appropriate removal of PCS.

#### **References**

- October 1994- Radian Corporation Draft Final Table 2 RCRA Facility Investigation Report.

**TABLE 2**  
**SUMMARY OF SOIL ANALYTICAL RESULTS**  
*(Soil Remaining After Excavation)*  
**SWMU-136 BUILDING 1119**  
**BUILDING 1119**  
**HOLLOMAN AFB, NEW MEXICO**

Sample No. SWMU-136	Final POL Remediation Sampling Results															NMED SSLs Residential  mg/Kg
	136 -01-19  19 Ft	136 -02-10  10 Ft	136 -12-19  19 Ft	136 -13-10  10 Ft	136 -10-19  19 Ft	136 -11-10  19 Ft	136- 16-10  10 Ft	136- 17-19  19 Ft	136 05-19  17 Ft	136 08-10  20 Ft	136 03-16  20.25 FT	136-B02 -01-01  0-2 Ft	136-B02 -02-01  14-16 Ft	136-B02 -03-01  22-24 Ft		
<b>PETROLEUM HYDROCARBONS Modified Method 8015 (µg/Kg)</b>																
C6 to C10 (gasoline range)	-	-	-	-	-	-	-	-	<900	<900	<900	NA	NA	NA	940	
C10 to C22 (diesel range)	-	-	-	-	-	-	-	-	396,000	4,000	3,900	NA	NA	NA	940	
C22-C32 (motor oil range)	-	-	-	-	-	-	-	-	<3,600	6,600	5,300	NA	NA	NA	940	
<b>TOTAL RECOVERABLE PETROLEUM HYDROCARBONS Method 413.1 (mg/Kg)</b>																
	<10	<10	36	<10	<10	<10	<10	34	-	-	-	329	<34	<32	940	
<b>VOCs by Method 8240 µg/Kg</b>																
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<0.39	<0.39	<0.39	<1.91	<2.07	<1.95	27	
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<0.42	<0.42	<0.42	<1.89	<2.04	<1.92	248	
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<0.41	<0.41	<0.41	<2.02	<2.18	<2.05	1,060	
Xylenes	<15	<15	<15	<15	<15	<15	<15	<15	<0.8	<0.8	<0.8	<4.09	<4.43	<4.16	132	
<b>SVOCs by Method 8270 µg/Kg</b>																
Naphthalene	-	-	-	-	-	-	-	-	10	<5	<5	NA	NA	NA	71.9	

Note: All metals analysis performed on samples 135-B02-01-01, 135-B02-02-01 and 135-B02-03-01 were significantly less than the NMED SSLs (Residential)



BILL RICHARDSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Telephone (505) 428-2500  
Fax (505) 428-2567  
www.nmenvy.state.nm.us



RON CURRY  
SECRETARY  
DEBORAH WATCHEMAN-MOORE  
DEPUTY SECRETARY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

September 22, 2003

Mr. Howard Moffitt  
Deputy Base Civil Engineer  
49 CES/CTV  
550 Tabosa Avenue  
Holloman Air Force Base, NM 88330-8458

RE: REVIEW OF THE FINAL CLOSURE REPORT FOR SWMU 136 - BUILDING  
1119 WASHRACK DRAINAGE PIT, OCTOBER 2001.  
HOLLOMAN AIR FORCE BASE, EPA ID # NM657212422-2  
HWB-HAFB 02-005

Dear Mr. Moffitt:

The Permits Management Program of the New Mexico Environment Department's Hazardous Waste Bureau has reviewed the Final Closure Report for SWMU 136 - Building 1119 Washrack Drainage Pit that Holloman Air Force Base (HAFB) submitted. Following review of the above document, and supporting documentation provided in the Hazardous and Solid Waste Amendment quarterly activity report submitted in June 2003, NMED has determined that SWMU 136 is appropriate for NFA.

Holloman Air Force Base is hereby advised to apply for a Class 3 Permit modification to remove SWMU 136 from the operating Permit thus moving it from Table A.1 (SWMUs that require further investigation) of the Annual Unit Audit to Table A.2 (SWMUs that require no further action).

Mr. Howard Moffitt  
September 22, 2003  
Page 2

If you have any questions or need any further information please contact me at 505-841-9488, or Robert Warder at the address above or by phone at 505-841-9040.

Sincerely,

Cornelius Amladyas  
Project Leader  
Holloman Air Force Base  
CAA/rw

cc: John Kleing, NMED HWB  
Will Mosts, NMED HWB  
Robert Warder, P.E., NMED HWB  
Steve Jetter, NMED HWB  
James Harris, EPA Region 6 (SPD-N)  
Debbie Harrell, HAFB  
Dan Holmquist, HAFB

File: Red HAFB 03, Reading File

**BEHATE**  
Environmental Engineers and Scientists

NFA LETTER FOR SWMU 136

Figure 4

HOLLOMAN AIR FORCE BASE  
NEW MEXICO

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	NTS	10/28/04	CM
			DRAWING NO.:
			9030167-04

- September 2000 Foster-Wheeler Environmental Corporation Draft Final Closure Report for SWMU 136- Building 119 Washrack Drainage Pit SWMUs 39, 127, 139 at IRP Site FT-31 Holloman AFB, NM
- October 2001 Final Amended Closure Report SWMU 136- Building 119 Washrack Drainage Pit Holloman AFB, NM
- August 13, 2003 Correspondence. From 49 CES/CEV Holloman AFB, NM to Mr. Cornelius Amindyas NMED. Transmittal of additional soil sampling results and comment response.
- September 22, 2003 Correspondence. From Mr. Cornelius Amindyas NMED to 49 CES/CEV Holloman AFB. Review of the Final Closure Report for SWMU 136- Building 119 Washrack Drainage Pit, October 2001 Holloman AFB, NM

## **1.2 SWMUs 139 & 140 Lake Stinky and Lake Holloman**

### **Location**

SWMU 139 Lake Stinky and SWMU 140 Lake Holloman and the ditch from sewage lagoon G are located southwest of the Base sewage lagoons (Figure 5).

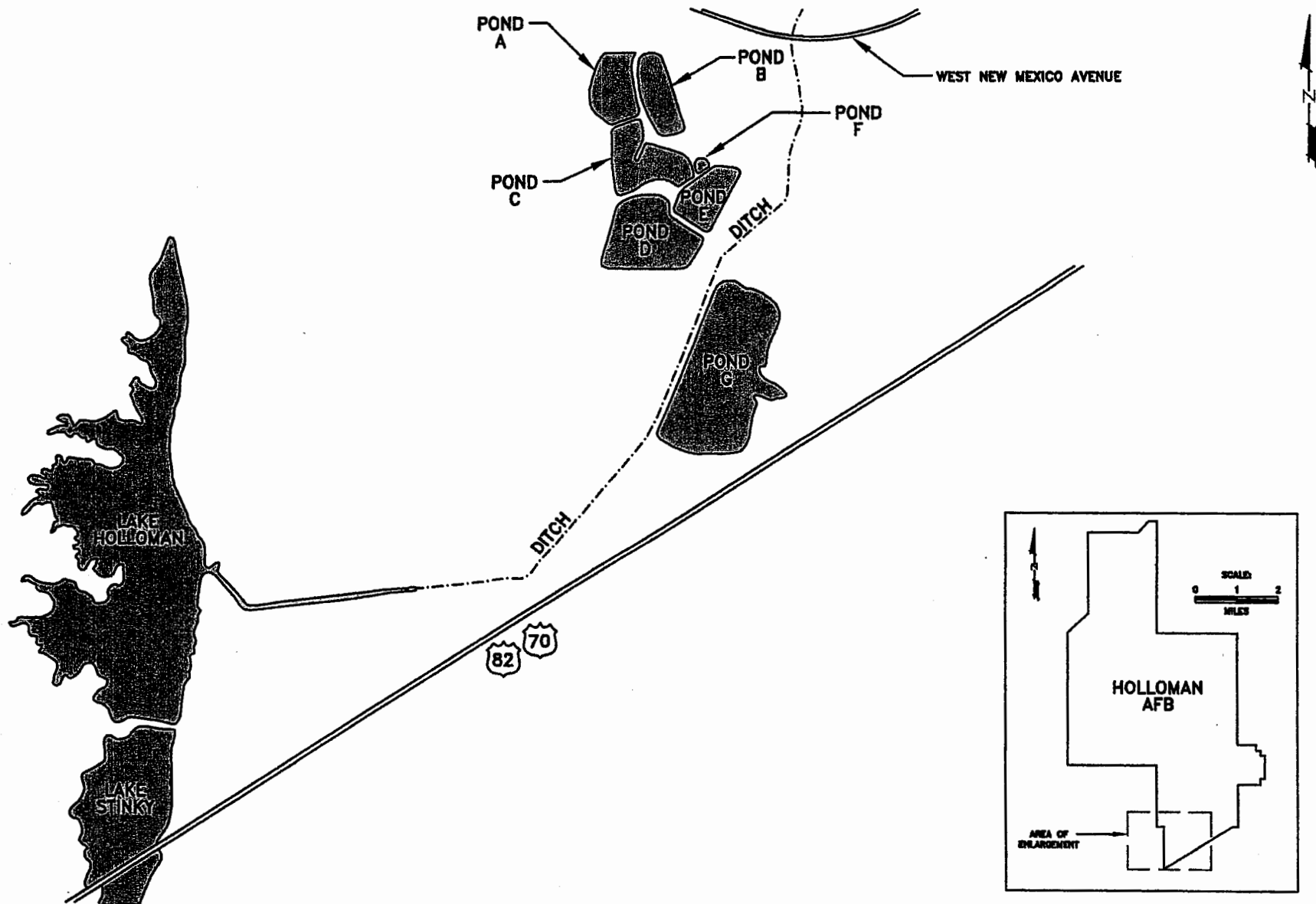
### **History**

Lake Holloman (SWMU 140) was connected to seven aeration/evaporation lagoons (identified as lagoons A through G) which received approximately 1.3 million gallons of wastewater per day. Water that did not evaporate from the seven lagoons flowed from the lagoon G to Lake Holloman via an unlined ditch. In addition, Lake Holloman received runoff water from landscape irrigation, the golf course, and the runway approach area. During high water conditions, water from Lake Holloman discharges into Lake Stinky (SWUM 139). Both Lakes are unlined and water may either infiltrate to groundwater or evaporate depending upon seasonal conditions.

Several investigations were conducted between 1988 and 1995 to characterize soil, sludge and groundwater conditions within and immediately adjacent to the sewage lagoons (SWMUs 155, 156 & 184) including conditions at Lake Holloman and Lake Stinky. These investigations, the corrective measures study and risk assessments were used to develop a closure strategy for the lagoons along with Lakes Stinky and Holloman. These efforts concluded that while some pesticides and heavy metals were identified in sediments from some of the sewage lagoons, their concentrations did not pose a threat to human health and the environment. However, PCBs were detected in sludge from lagoons A and B. In 1992, an interim corrective action (IRA) was conducted to remove the PCB contaminated sludge from these lagoons.

In 1996 and 1997, the sewage lagoons were closed. The liquid was aerated and evaporated. The remaining sediment/sludge was capped and the area secured. A deed restriction has been placed on the site of the lagoons to limit future use. The biological risk assessment indicated that Lake Holloman, Lake Stinky and the ditch connecting them to the sewage lagoons did not require evacuation and capping. Further, the lakes could remain as wet areas for wildlife. Currently, the lakes have been designated as wildlife areas by the Base.

The NMED issued a NFA for the site on August 30, 2000. Figure 6 is a copy of the NFA letter from Mr. Cornelius Amindyas (NMED) to HAFB regarding the NFA status of the site.



**BHATE**  
 Environmental Engineers and Scientists

**SWMUs 139 & 140 LAKES  
 HOLLOMAN AND STINKY**

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	1"=2,000'	10/26/04	MRM
			DRAWING NO. 9030167-05

**Figure 5**  
**HOLLOMAN AIR FORCE BASE**  
**NEW MEXICO**



GARY E. JOHNSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**  
Hazardous Waste Bureau  
2044 A Gallistoo, P.O. Box 26110  
Santa Fe, New Mexico 87502-6110  
Telephone (505) 827-1557  
Fax (505) 827-1544



PETER MAGGIORE  
SECRETARY

PAUL R. RITZMA  
DEPUTY SECRETARY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

August 30, 2000

Howard E. Moffitt  
Deputy Base Civil Engineer  
49 CES/CEV, 550 Tabosa Avenue  
Holloman Air Force Base, NM 88330-8458

**SUBJECT: APPROVAL OF NO FURTHER ACTION AT SWMUs 139 and 140**  
EPA ID No. NM6572124422  
TASK NUMBER: HWB-HAFB-99-001

Dear Mr. Moffitt:

The Hazardous Waste Bureau (HWB) of the New Mexico Environment Department (NMED) has reviewed Holloman Air Force Base's (HAFB) 1997 document titled "Characterization Summary and No Further Action (NFA) Documentation for Solid Waste Management Units (SWMUs) 139 (Lake Holloman and the Ditch) and 140 (Lake Stinky), and the 1996 "Draft Final Risk Assessment Addendum for the Sewage Lagoons Closure Project".

Following review of the above documents, HWB has determined that both SWMUs 139 and 140 are appropriate for NFA. Based upon HWB's review of the ecological risk assessment, SWMUs 139 and 140 are eligible for NFA because of the following reasons:

- Ecological quotients modeled for the receptors and the lakes and ditch were less than one (<1.0) indicating low potential for ecological risk.

Mr. Howard Moffitt  
August 30, 2000  
Page 2 of 2

- The hotspot of DDT and its derivatives has been isolated from the lakes/wetlands system, which should lead to decreasing levels of these contaminants in the wildlife in the future (which would correspond to lower body burdens in receptors).
- There is potential for the remaining DDT to break down to less toxic constituents in a reasonable time frame at this site (the half life of DDT may be as short as 2 years in anoxic conditions, such as those at the bottom of the lakes).

Holloman Air Force Base is hereby advised to apply for a Class 3 Permit modification to remove SWMUs 139 and 140 from the operating Permit (thus moving them from Table A.1 (SWMUs that require further investigation) of the Annual Unit Audit to Table A.2 (SWMUs that require no further action)).

If you have any questions please contact Dr. Kirby Olson or me by telephone at (505) 827-1561 ext. 1034, and (505) 827-1561 ext. 1030, respectively, or at the above address.

Sincerely,

Cornelius A. Amindyas  
Project Leader for Holloman Air Force Base  
Hazardous Waste Bureau

cc: James P. Bearzi, Chief, HWB  
Robert S. Dinwiddie, RCRA Adviser, HWB  
Kirby Olson, Environmental Specialist, HWB  
David Neleigh, Chief, EPA Region VI (6PD-N)  
Allen Chang, EPA Region VI (6PD-N)  
John Poland, Chief, Environmental Flight, HAFB  
Jose Gallegos, HAFB  
FILE: Red HAFB 00 and Reading

**BEHATE**  
Environmental Engineers and Scientists

NFA LETTER FROM NMED FOR SWMUs  
139 & 140

Figure 6

HOLLOMAN AIR FORCE BASE  
NEW MEXICO

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	NTS	10/26/04	CM
			DRAWING NO: 9030167-11



## **Evaluation of Relevant Information**

Investigations of Lake Holloman and Lake Stinky and the associated sewage lagoons began in 1987. Between 1987 and 1993, approximately 11 groundwater monitoring wells were installed and sampled in the immediate area of Lakes Holloman and Stinky to characterize subsurface geology, hydrogeology and groundwater quality. These wells and associated soil borings were installed as part of the Phase 1 and Phase 2 RFI at the sewage lagoons and lakes.

In August 1992, a site characterization report was issued for the lagoons and lakes. The report summarized investigation activities in which soil, sediment, and groundwater samples were collected from the lakes and ditch. Analyses of these samples identified the presence of organochlorine pesticides and metal constituents at low concentrations

A phase 2 RFI report for Lakes Holloman and Stinky was produced in 1993. This investigation focused on the potential for migration of pesticides and metals detected in sediment and soil to groundwater. The investigation concluded that organochlorine pesticides were present at very low levels (less than 0.02 µg/L) and that metal constituents had not impacted the groundwater.

In 1993, the Base issued a risk assessment for both the sewage lagoons and the lakes. Separate risk assessments were conducted at the lagoons and lakes and the results suggested several constituents that may pose a threat to human health and the environment. In 1994, however, a revised risk assessment determined that the hazardous constituents that were identified in the 1993 risk assessment were not present in the lakes. Further, the 1994 revision concluded that metal species of concern were present at concentrations below background levels.

A survey of biota, pore water and sediment at the lakes was conducted in 1994. The investigation included the analysis of tissues from biota. A draft report was issued that indicated low concentrations of pesticide constituents and metals were present in tissue and sediments. However, the investigation did not indicate that constituents present in sediments were available for uptake by biota. A final document was not produced.

A technical memorandum was issued in 1994 to summarize the status of investigations and present the results of the investigation and risk assessment in a concise manner. The report identified the decrease in organochlorine pesticides at several sampling stations between the 1992 and 1994 sampling events. The report concluded that neither pesticides nor metals exceeded reporting limits at Lakes Stinky or Holloman.

An addendum risk assessment was presented in 1996. The purpose of the assessment was to re-evaluate the data from the 1994 phase 2 RFI. The report concluded that no threat to human health and the environment exists from either Lake Stinky or Lake Holloman. The only potential pathway for DDD, DDE and DDT was identified in one biological sample (mosquito fish) from the ditch connecting lagoon G to Lake Holloman.

In 1996, a biological resource survey was conducted at the sewage lagoons and lakes. The report identified existing flora and fauna that both benefit from the lakes and might be harmed from any residual pesticides. The report concluded that draining and closing the lakes would cause much more harm to the wildlife than retaining them without further actions.

In 1997, a SWMU close-out report was issued for Lakes Holloman and Stinky. The report summarized all the previous investigations and actions performed for the lakes. The report recommended that no further action (NFA) be performed at these SWMUs. In August 2000, NMED issued an approval for NFA for SWMUs 139 and 140 to Holloman AFB (Figure 6). The NFA approval was based on:

1. Ecological quotients modeled were less than 1 indicating low potential ecological risk.
2. Sources of pesticides and metals had been isolated from the lakes by the closure of the sewage lagoons and that future wildlife will be exposed to less body burden.
3. Any remaining DDT will degrade in the environment in approximately 2 years.

### **Basis for Determination**

SWMUs 139 and 140 have been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

### **References**

- 1993 Risk Assessment for the Sewage Lagoon System, Radian Corporation.
- 1992 Site Characterization Report – Sewage Lagoon Investigation, Radian Corporation.
- 1993 Draft Final Phase 2 RFI for Lakes Holloman and Stinky, Radian Corporation
- 1993 Risk Assessment for the Sewage Lagoon System, Radian Corporation.
- 1994 Preliminary Survey of Contaminants Present in Biota, Pore-water and Sediments at HOLLOMAN AFB WWTF, Wildlife Service and US Fish.

- 1995 Technical Memorandum 1994 Site Investigation Lake Holloman, Lake Stinky and the Ditch, Ebasco Corporation and Radian Corporation.
- 1996 Biological Resources Report, Sewage Lagoons Closure Project, Holloman AFB, NM. Foster-Wheeler Environmental Corporation and Radian Corporation.
- 1996 Risk Assessment Addendum, Sewage Lagoons Closure Project, Holloman AFB, NM, Radian Corporation and Foster-Wheeler Environmental Corporation.
- 1997 Site Close-out Report SWMU 139 and 140 Holloman AFB, NM, Foster-Wheeler Environmental Corporation.
- August 30, 2000- Correspondence. From Mr. Cornelius Amindyas NMED to 49 CES/CEV Holloman AFB. Approval of No Further Action at SWMUs 139 and 140 Holloman AFB, NM

## **SWMU 166 MOBSS Drainage Lagoon (ERP Site SD-25)**

### **Location**

SWMU 166 (ERP Site SD-25) is a drainage lagoon located at the staging area of the Mobile Support Squadron (MOBSS) and is located in the extreme southwestern portion of the Base (Figure 7).

### **History**

SWMU 166 is a drainage lagoon located at the MOBSS facility [currently known as the Bare Base Mobility Squadron (BBMS)]. The lagoon is a converted stock pond, approximately 50 feet square and 5 feet deep. Dikes that extend up to 6 feet above the local grade achieve the depth. During heavy precipitation, the lagoon receives runoff from the staging area via two unlined drainage ditches. During times of drought, water in the lagoon is completely evaporated.

Initial restoration program record searches for the site concluded that the site posed minimal environmental harm because there was no evidence of contamination. However, the potential could exist for impact to the site by chemicals such as pesticides, disinfectants, and solvents from activities conducted in the BBMS staging area.

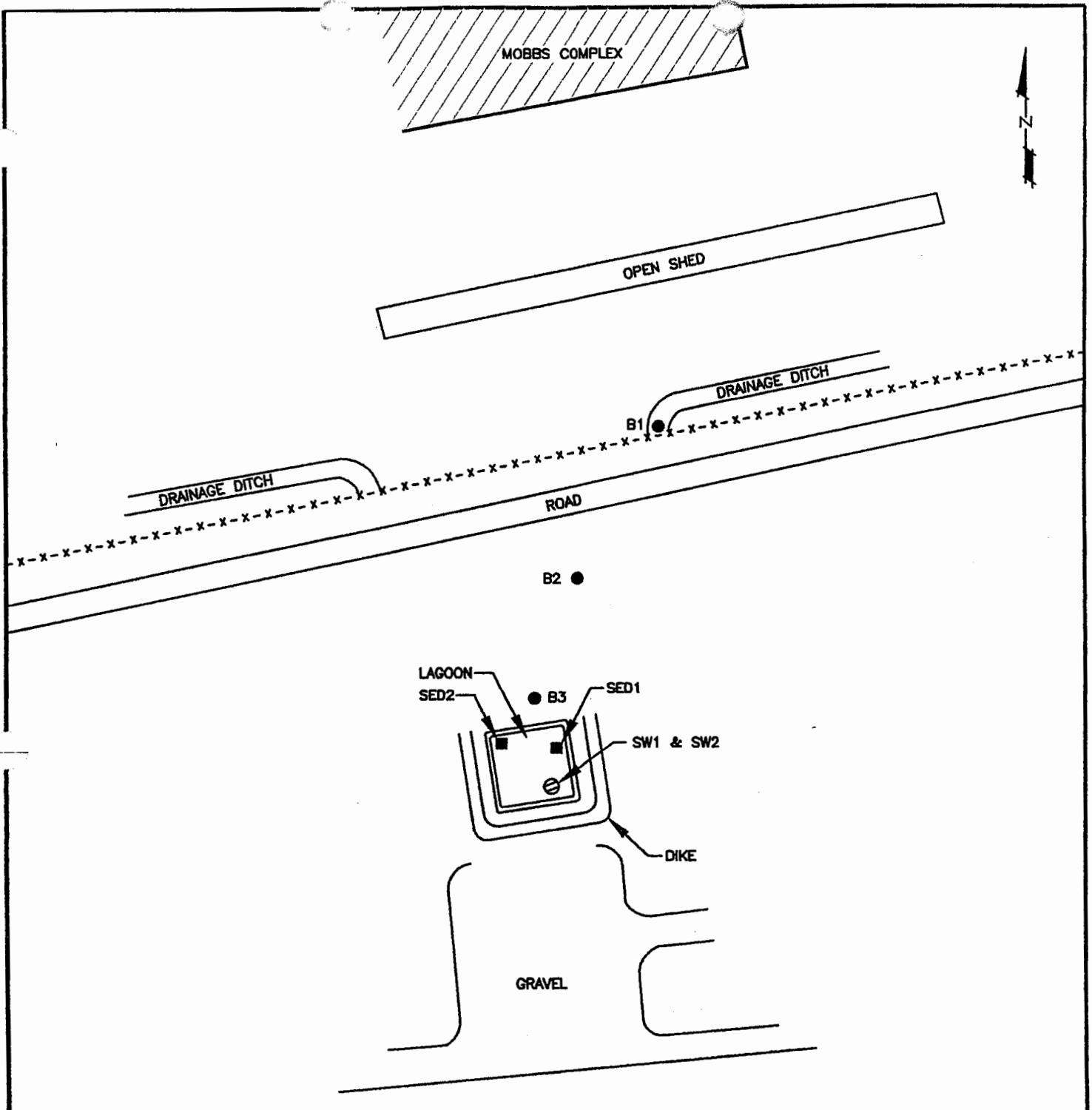
A site investigation was conducted in 1983. The inspection did not reveal any visual signs of contamination, however, three 55-gallon drums of unknown content were found next to the lagoon. Based upon the potential for contamination in runoff from the staging area, and the drums, a RI was conducted at SWMU 166.

The RI was conducted between January 1988 and June 1989. The RI investigation involved the collection and laboratory analysis of soil, sediment and surface water samples. Analytical results from soil, sediment and surface water did contain contaminants in excess of regulatory standards.

In 1990, a baseline risk assessment was conducted at the site. The risk assessment concluded the site posed no threat to public health or the environment.

### **Evaluation of Relevant Information**

Tables 3 and 4 summarize the soil, sediment and surface water sample analytical results from investigations conducted at this site. The RI conducted at the site included the collection, field screening and the selection of samples for laboratory analysis. Three soil samples were selected for analysis. Toluene, ethylbenzene



- LEGEND:**
- SOIL BORING
  - SEDIMENT LOCATION
  - ⊖ SURFACE WATER SAMPLE
  - == UNIMPROVED ROAD
  - x-x-x- FENCE



**SWMU 166 MOBBS  
DRAINAGE LAGOON**

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	1"=50'	5/31/05	MRM
			DRAWING NO:
			9030167-12

**Figure 7**  
**HOLLOMAN AIR FORCE BASE  
NEW MEXICO**

**TABLE 3**  
**SUMMARY OF SOIL AND SEDIMENT SAMPLE ANALYTICAL RESULTS**  
**SWMU-166**  
**(ERP Site SD-25)**  
**HOLLOMAN AFB, NEW MEXICO**

ANALYTICAL CONSTITUENTS	1989 RI REPORT SOIL & SEDIMENT SAMPLING RESULTS					NMED SSLs Residential (mg/Kg)
	Soil Samples			Sediment Samples		
	B1	B2	B3	SED 1	SED 2	
<b>TRPAs by Method 41811 µg/Kg</b>						
	52	35	21	31	48	940
<b>VOCs by Method 8240 µg/Kg</b>						
Toluene	7	ND	ND	ND	ND	248
Ethylbenzene	7	ND	ND	ND	ND	1,060
Xylenes	28	ND	ND	ND	ND	132
<b>SVOCs by Method 8270 µg/Kg</b>						
All SVOC Constituents	ND	ND	ND	ND	ND	0
<b>Trace Metals by Methods 6007/0005 mg/Kg</b>						
Arsenic	1.5	2.2	2	ND	2.3	3.9
Barium	58	109	121	92	101	5,450
Beryllium	1.8	1.8	1.7	1.7	1.9	156
Cadmium	ND	ND	1.3	7.6	ND	74
Chromium	8	19	21	14	18	10,000
Copper	33	31	36	36	44	3,130
Iron	<b>5,573</b>	<b>17,042</b>	<b>18,692</b>	<b>11,595</b>	<b>14,920</b>	2,350
Lead	3	6	70	4	5	400
Manganese	95	399	436	273	320	1,550
Nickel	12	20	24	14	14	1,560
Sodium	2,069	2,730	2,718	664	860	No Value
Zinc	22	60	68	42	53	2,350

NOTES: Bold values exceed NMED Residential SSLs.

**TABLE 4**  
**SUMMARY OF SURFACE WATER ANALYTICAL RESULTS**  
**SWMU-166**  
 (ERP Site SD-25)  
 HOLLOMAN AFB, NEW MEXICO

ANALYTICAL CONSTITUENTS	Surface Water Sample		NMWQCC <sup>(1)</sup> or Federal Standards
	SW1	SW2 SW2	
<b>TRPH by Method 418.1 mg/L</b>			
	ND	ND	-
<b>VOCs by Method 8240 µg/L</b>			
All Constituents	ND	ND	-
<b>Pesticides &amp; PCBs Method 8080 µg/L</b>			
All Constituents	ND	ND	-
<b>Metals by Methods 600/7000s µg/L</b>			
Arsenic	ND	ND	15
Barium	50	46	2000
Cadmium	ND	ND	5
Chromium	ND	ND	100
Iron	100	170	1,000
Lead	ND	ND	15
Manganese	ND	ND	200
Selenium	ND	ND	50
Silver	ND	8	100

1. NMWQCC - New Mexico Water Quality Control Commission  
 Federal Standards - USEPA Drinking Water Standards

and xylene were detected in one soil sample with maximum concentrations of 7 µg/Kg, 7 µg/Kg and 28 µg/Kg respectively. No other VOCs, SVOCs, PCBs or pesticides were detected in the soil samples. TRPH was identified in all three samples at concentrations ranging between 21 mg/Kg and 52 mg/Kg. The maximum concentrations of RCRA metals included arsenic (2 mg/Kg), barium (121 mg/Kg), cadmium (1.3 mg/Kg), chromium (21 mg/Kg), mercury (ND), lead (70 mg/Kg), selenium (ND) and silver (ND).

Two sediment samples were collected from the bottom of the lagoon. Analytical results from these samples did not identify the presence of VOCs, SVOCs, pesticides or PCBs. TRPH was identified in concentrations ranging between 31 mg/Kg and 90 mg/Kg. The maximum concentrations of RCRA metals detected were arsenic (2.3 mg/Kg), barium (108 mg/Kg), cadmium (1.3 mg/Kg), chromium (18 mg/Kg), mercury (ND), lead (70 mg/Kg), selenium (ND) and silver (ND).

Two surface water samples were collected from the lagoon at different locations. Analytical results from these samples identified no VOCs, SVOCs, PCBs, pesticides, or TRPH. The maximum concentrations of RCRA metals included barium at 50 µg/L. No other metals were detected in the surface water samples.

The concentration of TRPH and petroleum related VOCs (ethylbenzene, toluene and xylenes) are at least two orders of magnitude lower than the NMED SSLs for residential soils. Water samples analyzed from this site only contained detectable concentrations of barium which were significantly less than the NMWQCC or federal standards. Only iron with concentrations ranging between 5,573 mg/Kg and 18,692 mg/Kg exceed the NMED Residential Soil SSL (2,300 mg/Kg).

### **Basis for Determination**

SWMU 166 has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

### **References**

- 1990 Remedial Investigation Report, Installation Restoration Program, Holloman AFB, NM Volume 1, Walk Haydel & Associates, Inc.
- 1989 Remedial Investigation Risk Assessment Report, Installation Restoration Program, Holloman AFB, NM, Walk Haydel & Associates, Inc.



### **1.3 AOC FST-837 German Air Force Building 837 OWS**

#### **Location**

AOC FST-837 is located between buildings 837 and 839 at the site of the Petroleum Materials Evaluation Laboratory (PMEL). Currently, these buildings are operated by the First German Air Force (Figure 8).

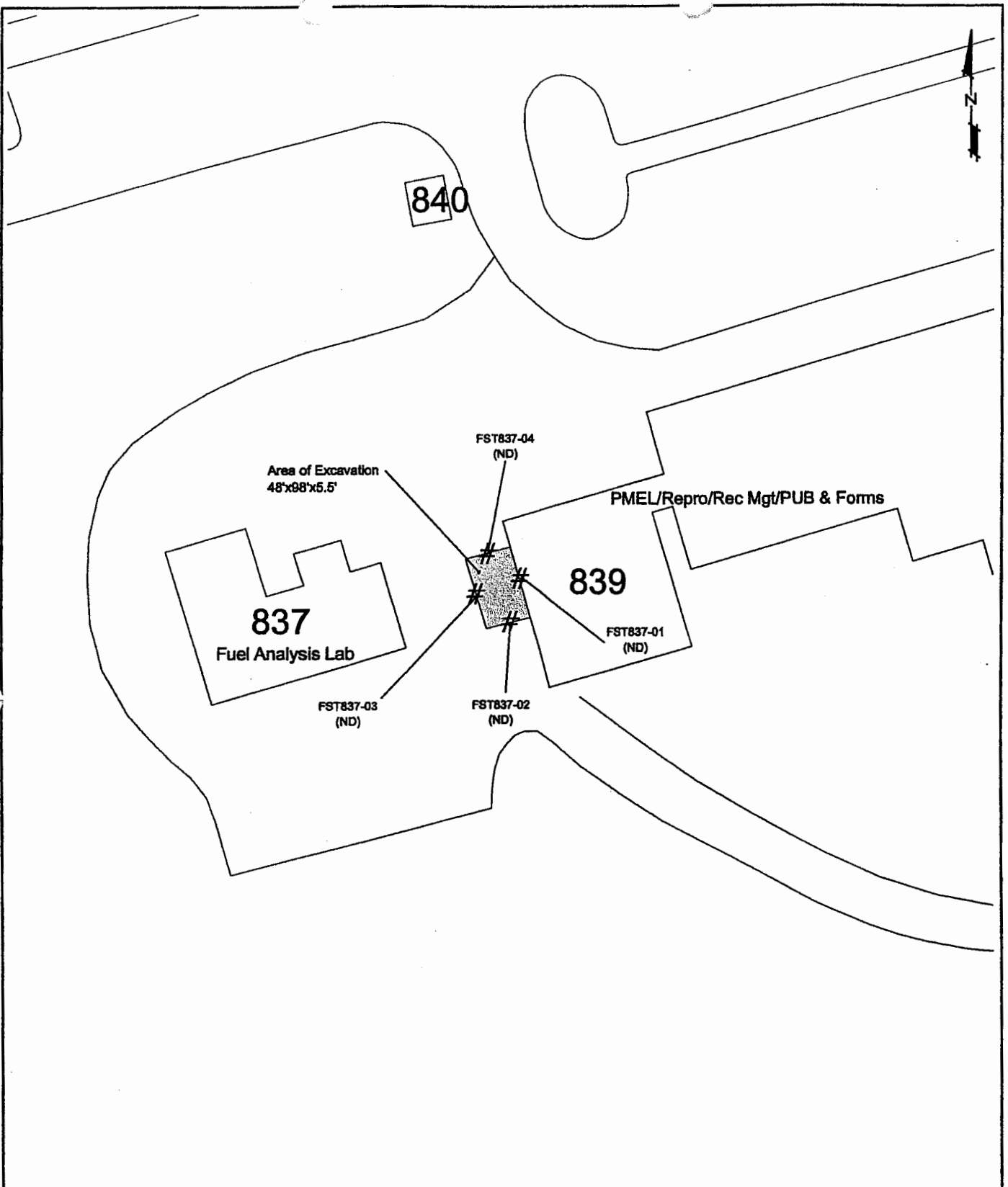
#### **History**

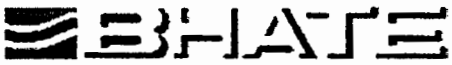
Site AOC FST-837 was a buried and unknown field septic tank (FST) that had not been included in the Base RCRA permit. The septic tank and leach field were discovered during excavation for the construction of Building 839. NMED was notified about the presence of the FST and it was added to the facilities SWMU list as site AOC FST-837. A portion of building 837 had operated as a fuel testing laboratory. Rinseate from fuel sample testing may have entered the drains connected to AOC FST-837.

AOC FST-837 was remediated under the NMED voluntary corrective action (VCA) program. The septic tank, surrounding soil and leach line were excavated and disposed offsite. Soil samples were collected from the completed excavation to document remediation to below the action level for the Base. The demolition, excavation, disposal and closure sampling activities were documented in a VCA completion report and submitted to NMED on June 9, 2000. On June 2, 2003 the base received an approval for the completed VCA of AOC FST-837. Figure 9 is a copy of the approval letter.

#### **Evaluation of Relevant Information**

Remediation activities for this site were conducted in accordance with NMED VCA guidelines and documented in the VCA completion report. The four (4) closure soil samples collected from the 48 feet wide by 98 feet long and 5-foot deep excavation indicated that no petroleum hydrocarbons or petroleum hydrocarbon constituents were present along the walls of the excavation above the NMED Residential SSLs. All samples report TPH GRO < 5 mg/Kg, TPH DRO < 10 mg/Kg and no detectable VOCs. Additionally, analysis of soil samples collected from the excavated and stockpiled soil did not identify any RCRA hazardous constituents. Further, no phase separated hydrocarbons were observed in groundwater at the bottom of the excavation.



 Environmental Engineers and Scientists	<b>SITE MAP OF AOC-FST-837          GERMAN AIR FORCE BUILDING 837</b>			<b>FIGURE 8          HOLLOMAN AFB          NEW MEXICO</b>
	PROJECT NO. 9030167	SCALE 1=40'	DATE 5/20/05	



BILL RICHARDSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau  
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www.nmenv.state.nm.us



RON CURRY  
SECRETARY  
DERRITH WATCHMAN-MOORE  
DEPUTY SECRETARY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

June 02, 2003

Mr. Howard Moffitt  
Deputy Base Civil Engineer  
49 CES/CTV  
550 Tabosa Avenue  
Holloman Air Force Base, NM 88330-8458

RE: VOLUNTARY CORRECTIVE ACTION COMPLETION REPORT FOR THE  
GERMAN AIR FORCE II PROJECT, JUNE 9, 2000.  
HOLLOMAN AIR FORCE BASE, EPA ID # NM6572124422  
HWB-HAFB 00-005

Dear Mr. Moffitt:

The Hazardous Waste Bureau (HWB) of the New Mexico Environment Department (NMED) has reviewed the above document regarding the Voluntary Corrective Action completion report for the German Air Force II construction project. On May 19, 2003, NMED received satisfactory responses to the Request for Supplementary Information (RSI) NMED submitted to Holloman Air Force Base on April 30, 2003. NMED hereby grants approval of the Voluntary Corrective Action.

If you have any questions or need any further information please contact me, or Robert Warder at the address above or by phone at 505-841-9040.

Mr. Howard Moffitt  
June 02, 2003  
Page 2

Sincerely,

Cornelius Amindyas  
Project Leader  
Holloman Air Force Base  
CA/rw

cc: John Kieling, NMED HWB  
Robert Warder, PE, NMED HWB  
Debbie Hartell, HAFB  
Dan Holmquist, HAFB

File: Red HAFB 03, Reading File

**BHATE**  
Environmental Engineers and Scientists

NFA LETTER FROM NMED FOR AOC-FST837

PROJECT NO.	SCALE	DATE	DRAWN BY:
8030167	NTS	10/26/04	CM
			DRAWING NO:
			8030167-07

Figure 9

HOLLOMAN AIR FORCE BASE  
NEW MEXICO

## **Basis for Determination**

AOC FST-837 has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

## **References**

- June 2000, Voluntary Corrective Action Completion Report for the German Air Force Base Project (AOC FST-837) Holloman AFB, Foster Wheeler Environmental Corporation
- April 30, 2003 Correspondence. From Mr. Cornelius Amindyas NMED to 49 CES/CEV Holloman AFB. Request for Supplemental Information Completion Report for the German Air Force II Project (AOC FST-837)
- June 2, 2003 Correspondence. From Mr. Cornelius Amindyas NMED to 49 CES/CEV Holloman AFB. Approval of VCA at AOC FST-837 Holloman AFB, NM

## **1.4 SWMU 106 Main Base Landfill (ERP Site LF-01)**

### **Location**

The Main Base Landfill (ERP Site LF-01) occupies approximately 210 acres and is located north of the main Base area along the north Base boundary (Figure 10).

### **History**

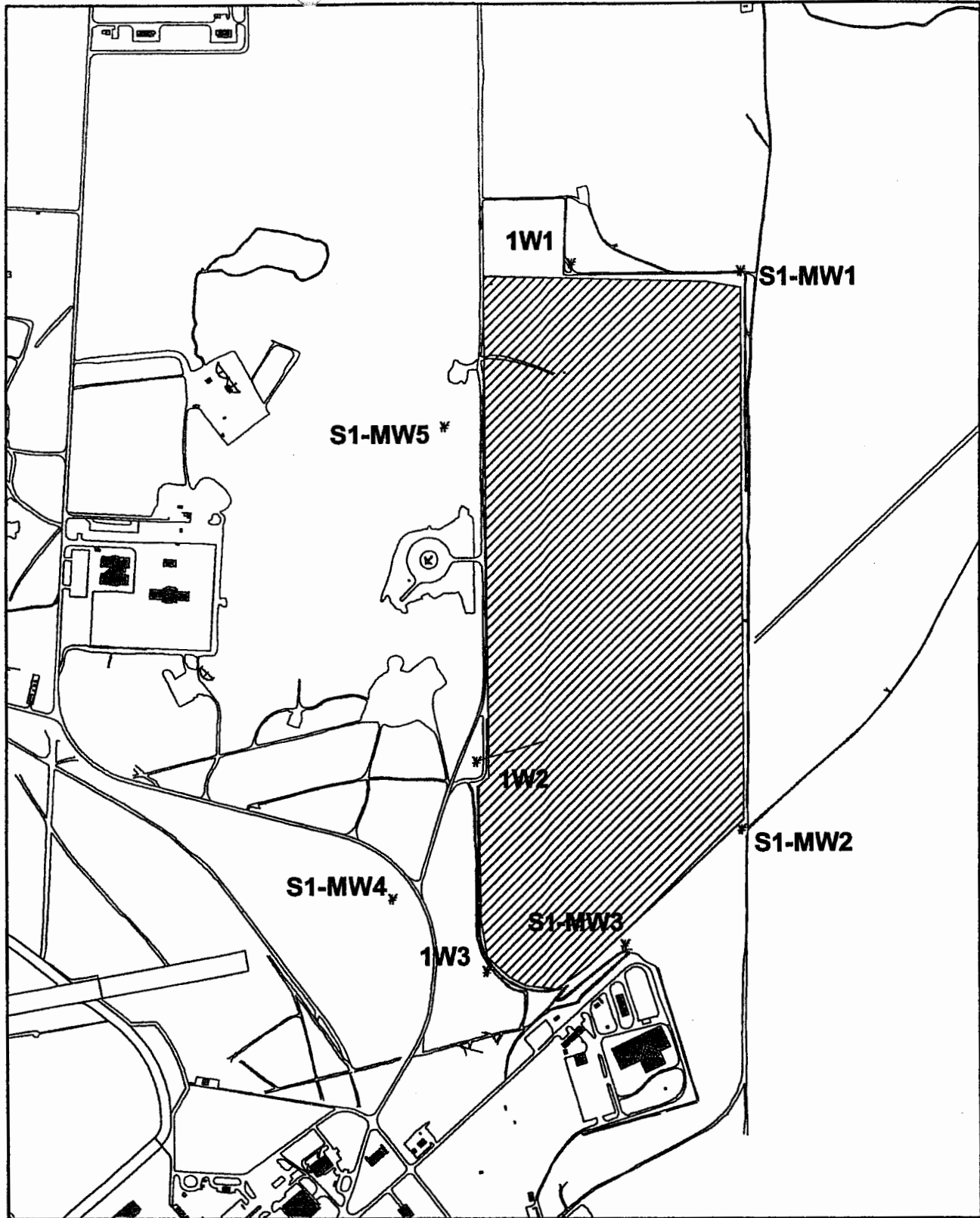
The Main Base Landfill accepted solid waste from the all facilities at the Base from 1958 to 1994. The landfill used the trench and fill method. When operating, the active areas were generally limited to a trench approximately 150 feet wide, 300 feet long and 30 feet deep.

According to information from a records search and interviews conducted during the 1988 to 1990 Phase I IRP Investigation, the landfill may have accepted small quantities of hazardous wastes such as oils, solvents and pesticides.

Soil borings and groundwater monitoring wells (MW-1 through MW-5, IW-1, IW-2 and IW-3) were drilled and installed along the perimeter of the landfill during the Phase II IRP Investigation. Soil samples collected from the borings were used for stratigraphic characterization only. No laboratory analysis for hazardous constituents was performed. Six undisturbed soil samples of the landfill cap material were analyzed for permeability.

Groundwater samples collected from the monitoring wells were analyzed for metals, TRPH, VOCs, SVOCs, anions and TDS. A summary of the maximum concentrations of each detected analyte during the investigation phase and during 10 years of LTM are presented in Table 5. The groundwater analytical results identified VOCs benzene, toluene, xylenes, 1, 2-dichloroethane and SVOCs bis-2-ethylhexylphthalate and di-n-octylphthalate in at least one well. No TRPH, pesticides and PCBs were detected in samples from the eight monitoring wells. TDS in the samples from the eight monitoring wells ranged from 18,318 mg/L to 67,621 mg/L.

In 1995, the long-term groundwater monitoring (LTM) program (10 years) was initiated at SWMU 106. Five of the eight wells on site were sampled for RCRA metals, VOCs and organochlorine pesticides. In subsequent LTM events, constituents not identified in the previous two sampling rounds (such as organochlorine pesticides) were dropped from the analytical regiment. The LTM program at SWUM 106 was completed with the 2003 LTM sampling event.



**BHATE**  
*Environmental Engineers and Scientists*

**SITE MAP OF SWMU 106  
 MAIN BASE LANDFILL**

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	1"=100'	5/20/05	CM/IRM
			DRAWING NO: GIS_FIG10

**FIGURE 10  
 HOLLOMAN AFB  
 NEW MEXICO**

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**SWMU 106**  
**MAIN BASE LANDFILL LF-01**  
**HOLLOMAN AFB, NEW MEXICO**

ANALYTICAL CONSTITUENTS	RI Report (1989) Sample No. and Location	Maximum Reported Result	Long Term Monitoring Well No.	Maximum Reported Result During 10 years of Long Term Monitoring	NMWQCC or Federal Standards
<b>TDS by Method 1601 mg/L</b>					
TDS	MW-1	67,621	S1-MW2	44400 <sup>(1)</sup>	10,000
<b>VOCs by Methods 8240 and 8260 µg/L</b>					
Benzene	MW-3	82	All Wells	ND	5
1,2-Dichloroethane	MW-3	9	All Wells	ND	5
Ethylbenzene	All Wells	ND	All Wells	ND	700
Toluene	MW-1	49	All Wells	ND	1000
xylenes	MW-3	85	All Wells	ND	10,000
<b>SVOCs Method 8240 µg/L</b>					
Bis(2-ethylhexylphthalate)	IW-3	73	Not Sampled	NA	NA
Di-n-octylphthalate	IW-1	14	Not Sampled	NA	NA
<b>Organochlorine Pesticides Method 8080 &amp; 8081 µg/L</b>					
All Constituents	All Wells	ND	All Wells	ND	NA
<b>Metals by Methods 1601/7000 µg/L</b>					
Antimony	All Wells	43	All Wells	ND	6
Arsenic	IW-1	3.6	S1-MW2	27	15
Barium	MW-5	285	IW2	12	2000
Beryllium	MW-5	3	All Wells	ND	4
Cadmium	All Wells	<76.2	All Wells	ND	5
Chromium	MW-5	84	S1-MW5	3	100
Copper	MW-5	29	All Wells	ND	1,300
Iron	MW-5	38,345	All Wells	NA	1,000
Lead	All Wells	NA	S1-MW5	44	15
Manganese	MW-5	872	S1-MW1	115	200
Mercury	All Wells	<0.2	All Wells	ND	2
Selenium	MW-2	3.7	S1-MW5	27	50
Silver	MW-5	27	S1-MW1	1	100
Sodium	MW-3	39,625,700	All Wells	NA	None
Thallium	IW-1	5.8	All Wells	NA	None
Zinc	MW-5	166	All Wells	NA	10,000

NOTES:

Bold Values= Indicates that reported result exceeds NMWQCC or federal standards  
 ND= Not Detected  
 NA= Not Analyzed

<sup>1</sup> TDS Value from Quarter 4, 2002 LTM Groundwater Quality Evaluation, Holloman AFB, NM Tetrtech FW, January 2004

During the 10 years of LTM only two constituents, arsenic (maximum concentration of 27 µg/L) and Lead (maximum concentration of 44 µg/L) exceed state and federal standards. Further, the groundwater at this exceeds the NMWQQ for TDS with a maximum concentration of 44,400 mg/L observed at well S1-MW2.

An engineered cap was installed over SWMU 106 in 1998. The cap prevents the potential infiltration of moisture to the deposited waste. Routine maintenance of the cap and a methane monitoring program has been implemented under the direction of the NMED Solid Waste Bureau. The New Mexico Solid Waste Bureau issued closure certification for the landfill in December 1999.

### **Evaluation of Relevant Information**

Soil borings were installed during the monitoring well installation portion of the investigation at SWMU 106. In 1990, undisturbed soil samples were collected of the non-engineered soil cap. Soil analysis indicated that permeability of the cap material ranges from  $1 \times 10^{-3}$  cm/sec to  $1 \times 10^{-6}$  cm/sec which is an order of magnitude greater than typical cap material. Soil samples from the borings drilled for groundwater monitoring wells indicated that subsurface sediments surrounding the landfill are comprised of clayey silt (ML), clayey sand (SC), and silty sand (SM).

The initial groundwater analytical results (RI Report) identified the maximum concentrations of VOCs benzene (82 µg/L at MW-3), toluene (49 µg/L at MW-1), xylenes (85 µg/L at MW-3), 1,2-dichloroethane (9 µg/L at MW-3) and SVOCs bis-2-ethylhexylphthalate (73 µg/L at IW-3) and di-n-octylphthalate (27 µg/L at IW-1). The majority of these constituents were identified in one well, MW-3. No TRPH, pesticides and PCBs were detected in samples from the eight monitoring wells. TDS in the samples from the eight monitoring wells ranged from 18,318 mg/L (IW-1) to 67,621 mg/L (MW-1). The maximum concentrations of RCRA metals included arsenic (3.6 µg/L), barium (285 µg/L), cadmium (ND), chromium (84 µg/L), mercury (ND), selenium (3.7 µg/L) and silver (27 µg/L). The samples were not analyzed for lead.

Five rounds of LTM were conducted at the site from 1995 to 2003. During these sampling events conducted in 1995, 1997, 1999, 2001 and 2003, no VOCs or organochlorine pesticides were identified in groundwater. Only two metal species, arsenic and selenium have been detected in groundwater samples. No RCRA metals species exceed the New Mexico Water Quality Control Commission (NMWQCC) or federal standards. Further, TDS at the site exceeds 10,000 mg/L which defines regulated water under the NMWQCC regulations.



An engineered cap was installed over SWMU 106 in 1998. The cap prevents the potential infiltration of moisture to the deposited waste. Routine maintenance of the cap and a methane monitoring program has been implemented under the direction of the NMED Solid Waste Bureau. The NMED Solid Waste Bureau issued closure certification for the landfill in December 1999. Figure 11 is a copy of the approval letter for the closure design at LF01. Figure 12 is a copy of the letter from NMED determining that closure of the landfill was complete.

### **Basis for Determination**

A release from the SWMU 106 to the environment has occurred, but the SWMU/AOC was characterized and/or remediated under another authority (such as the NMED Petroleum Storage Tank, Solid Waste, or Groundwater Quality Bureaus).

### **References**

- 1990 Walk Haydel & Associates, Inc., Remedial Investigation Report, Installation Restoration Program, Holloman AFB, NM Volume 1
- 1989 Walk Haydel & Associates, Inc., Remedial Investigation Risk Assessment Report, Installation Restoration Program, Holloman AFB, NM
- 1995 Groundwater Technology Government Services, Inc. and Foster Wheeler Environmental Corporation, Long Term Groundwater Monitoring Program Volume I Field Sampling Program
- 1999 Foster Wheeler Environmental Corporation, Closure Report for Main Base Landfill Holloman AFB
- 2003 US Army Corps of Engineers, Omaha District, 2003 Long-Term Groundwater Monitoring Report Holloman Air Force Base, New Mexico
- Correspondence. From Mr. Butch Tongate NMED Solid Waste Bureau to 49 CES/CEV Holloman AFB, Approval of Landfill Capping and Closure.

HOLLOMAN AFB MAIN BASE LANDFILL  
CLOSURE AND POST-CLOSURE CARE PLAN

Owner: U.S. Air Force  
Operator: U.S. Air Force  
Facility: Municipal Landfill, 125 Acres  
Location: T17S, R8E, Sections 1 & 12

Pursuant to Section 501, and Section 502 of the New Mexico Solid Waste Management Regulations (20 NMAC 9.1), and after providing Public Notice in accordance with Section 501.G, the New Mexico Environment Department (NMED) hereby approves the Closure and Post-Closure Care Plan of the aforementioned facility, received June 1997, subject to the following conditions:

1. Within 30 days of approval, the U.S. Air Force shall submit to the NMED a revised closure schedule indicating when funding will be secured.
2. Within 30 days of closure, the U.S. Air Force shall record a notation on the deed to the landfill property, or some other instrument that is normally examined during title search that the land was used as a landfill and its use is restricted under the post-closure care requirements; place a copy in the operating record; and provide a copy to the NMED.

  
Mark Weidler  
Secretary

1/5/98  
Approval date



NMED LETTER APPROVING THE CAP  
AND POST CLOSURE CARE OF SWMU 106

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	NTS	10/28/04	CM
			DRAWING NO: 9030167-08

Figure 11  
HOLLOMAN AIR FORCE BASE  
NEW MEXICO



GARY F. JOHNSON  
Governor

State of New Mexico  
ENVIRONMENT DEPARTMENT  
Harold Runnels Building  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, New Mexico 87502-6110  
Telephone (505) 827-2855  
Fax: (505) 827-2916



PETER MALLINAR  
Secretary

December 2, 1999

Howard E. Moffitt  
Deputy Base Civil Engineer  
49 CES/CC  
550 Tabosa Avenue  
Holloman AFB, New Mexico 88330-8458

Dear Mr. Moffitt:

Representatives of the Department have recently (September 28, 1999) inspected the Main Base closed landfill for compliance with its Closure / Post-Closure Care Plan. The landfill appears to have been closed in accordance with the Plan. However, stormwater monitoring devices must be installed and monitored at the base of the downchutes.

In the view of the Department, closure of the Main Base Landfill is substantially complete. The Department hereby officially notifies Holloman Air Force Base that the 30-year Post-Closure Care Period commenced on September 28, 1999. This notification does not relieve the Base of any closure or post-closure requirements under the Regulations. If you have any further questions regarding this matter, please contact Edward Hansen of my staff at 827-2328.

Sincerely,

Butch Tongate  
Acting Chief, Solid Waste Bureau

BT:EJH:ejh

cc: Kenneth M. Smith, NMED District IV Manager, Las Cruces  
Gary McGinnis, NMED District IV, SWM, Las Cruces  
Chuck Hules, Manager, Compliance Monitoring and Enforcement Section, SWB, Santa Fe

**BEHATE**  
Environmental Engineers and Scientists

SOLID WASTE CLOSURE LETTER FOR NMED  
BUREAU FOR SWMU 106

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	NTS	10/26/04	CM
			DRAWING NO:
			9030167-09

Figure 12

HOLLOMAN AIR FORCE BASE  
NEW MEXICO

## 1.5 SWMU DP-62 Ritas Draw

### Location

DP-62 (formerly identified as Area of Concern (AOC) - Ritas Draw) is located in a remote portion of the North Base Area, approximately 300 feet northwest of ERP Site OT-04 (Acid Trailer Burial Site – Solid Waste Management Unit (SWMU) 102). DP-62 is one of many smaller arroyos that terminate into Ritas Draw (Figure 13).

### History

DP-62 is northward sloping with a terminus at Ritas Draw. A change in elevation of approximately 30 feet exists from south to north across DP-62. In 1998, during the initial field reconnaissance in the area of AOC-Ritas Draw, two partially buried drums were discovered. These drums were believed to be related to early missile testing that occurred on HAFB during the 1950s. The drums were empty, and the original contents of the drums are unknown.

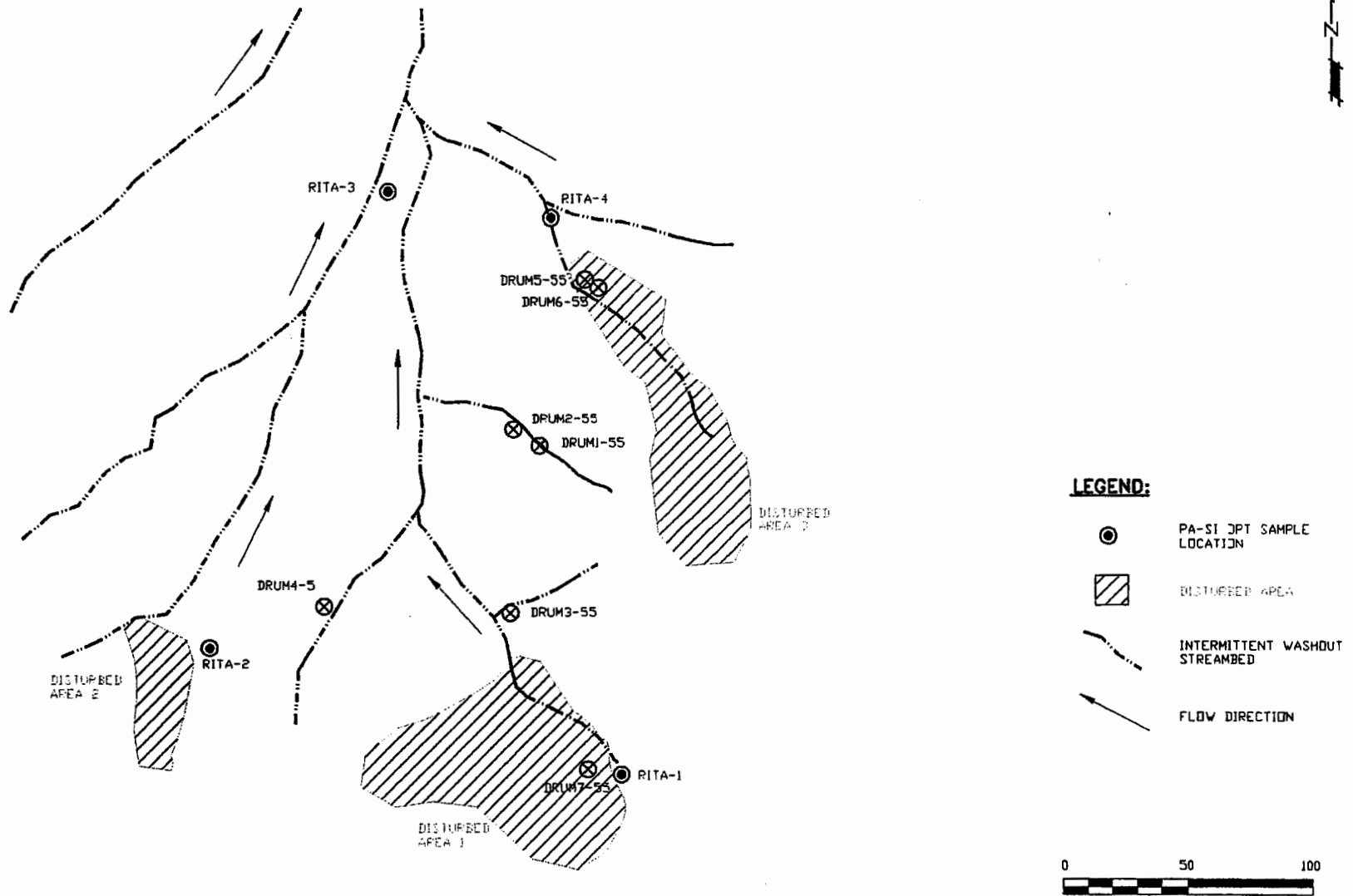
DP-62 is located approximately 300 feet from the Acid Trailer Burial Site (OT-04, SWMU 102), where waste materials were dumped and buried on a one-half acre tract of land along the banks Ritas Draw. The majority of the waste at OT-04 may have originated from the former Unconventional Fuels Storage Area, which is located approximately ½-mile to the south. The Unconventional Fuels Storage Area housed propellants, oxidizers, and other fuel components that were used by the 6585<sup>th</sup> Test Group for rocket and sled tests conducted at HAFB. Investigations of DP-62 assumed that similar wastes may have been disposed of at this site.

### Evaluation of Relevant Information

In 1998, a PA/SI was performed at DP-62. The PA portion of the investigation did not conclusively identify a source for the operational material debris present at the site. However, given the proximity to OT-04 (Acid Trailer Burial Site), it was speculated that similar materials were most likely present at DP-62. The SI field investigation activities at DP-62 consisted of a geophysical survey followed by the installation of direct push technology (DPT) soil borings and DPT groundwater monitoring points.

The geophysical survey identified approximately five areas of high magnetic response which are assumed to be the result of buried metal objects such as drums or debris. Three DPT borings (RITA-1, RITA-2, and RITA-4) were advanced in the immediate proximity of areas of high magnetic response and visible surface disturbance. DPT boring RITA-3 was installed at the confluence of drainage to

# RITAS DRAW



**LEGEND:**

- PA-SI DPT SAMPLE LOCATION
- ▨ DISTURBED AREA
- - - - - INTERMITTENT WASHOUT STREAMBED
- FLOW DIRECTION

0      50      100



## SITE MAP DP-62 RITAS DRAW

PROJECT NO.	SCALE	DATE	DRAWN BY:
9030167	AS SHOWN	10/26/04	MRM
			DRAWING NO:
			9030167-10

Figure 13  
 HOLLOMAN AIR FORCE BASE  
 NEW MEXICO

determine if contamination was present down slope of the debris. DPT borings RITA-3 and RITA-4 were converted into groundwater monitoring points in order to collect groundwater samples.

Table 6 presents a summary of soil analytical results for DP-62. Select soil samples from the boreholes were analyzed for VOCs, SVOCs, explosives, and TAL metals. SVOCs and explosives were not detected in the soil samples. VOCs were not detected with the exception of acetone at 20 µg/kg and 25 µg/kg in samples from 12 and 18 feet below ground surface (bgs) at boring RITA-2. Acetone was also detected in the laboratory blanks and was presumed to be a laboratory artifact in the samples. Results from the analysis of metals in soil samples were compared to NMED SSLs for residential soil. Only arsenic exceeded the residential SSL with RITA-2-12) at 17.4 mg/kg, and the duplicate sample of RITA-2-12DUP at 9.1 mg/kg

Groundwater samples were analyzed for VOCs, SVOCs, explosives, and TAL Metals. Table 7 presents a summary of the groundwater analytical results at DP-62. No VOCs, SVOCs, or explosives were detected in groundwater samples. Eight metals were detected in one or more samples; however, only the detections of arsenic (maximum 0.032 mg/L), antimony (0.036 mg/L) and manganese (1.84 mg/L) exceeded the NMWQCC screening criteria for drinking water.

Additional investigation was requested by NMED to examine soil from directly beneath or as close as possible to the existing drum carcasses. On March 31, 2004, four hand augured soil borings were advanced at the site to an approximate depth of 5 feet. Based on screening results and other relevant observations, one soil sample from each soil boring was selected for laboratory analyses. The sample obtained from the bottom of the boring was selected if the screening failed to identify an appropriate interval. All four soil samples submitted for analysis were collected from the bottom of each boring. The soil samples were analyzed for VOCs, SVOCs, TPH, and RCRA. No VOCs or SVOC were detected above the method detection limits for the samples submitted for laboratory analysis.

Five of the eight RCRA metals were detected above the method detection limits. Arsenic was detected in soil borings SB-01, SB-02, and SB-03 but at concentrations below the Residential Soil Screening Level (SSL) of 3,900 µg/kg. Barium was detected above the method detection limit in all four soil borings but below the Residential SSL. Cadmium was detected in one sample collected from soil boring SB-01 well below the Residential SSL. Chromium was detected in all four soil samples at concentrations below the residential SSL. Selenium was also detected in all four samples but below the Residential SSL.

**TABLE 6**  
**SUMMARY OF SOIL ANALYTICAL RESULTS**  
**SWMU DP-62**  
**RITAS DRAW**  
**HOLLOMAN AFB, NEW MEXICO**

	Sample No. and Location	Maxium Reported Result for All Samples	NMED SSLs Residential (mg/kg)
<b>TRPH by Method 4184 (mg/Kg)</b>			
C6 to C10 (GRO)	All Samples	<3	940
C10 to C22 (DRO)	All Samples	<3	940
C22 to C36 (ORO)	All Samples	<3	940
<b>VOCs by Method 8260B ug/Kg</b>			
All Constituents	All Soil Samples	Not Detected	-
<b>Explosives by Method 8083 ug/Kg</b>			
All Constiuents	All Soil Samples	Not Detected	-
<b>Herbicides by Method 8151 ug/Kg</b>			
All Constituents	All Soil Samples	Not Detected	-
<b>SVOCs by Method 8270C ug/Kg</b>			
All Constituents	All Soil Samples	Not Detected	-
<b>TAL Metals by Methods 6007/0005 mg/Kg</b>			
Arsenic	RITA-2-12	<b>17.4</b>	3.9
Barium	RITA-1-9	79.3	5,450
Cadmium	DP62-SB01-5	0.192	74
Chromium	DP62-SB01-5A	8.5	10,000
Lead	RITA-1-15	5.3	400
manganese	RITA-1-9	99.3	1,550
Selenium	DP62-SB04-5	3.8	391
Silver	All Samples	<0.5	391
Mercury	All Samples	<0.140	6.11

Notes:

NM= Not Measured

NA= No value available for constituent

Bold Values = reported concentration exceeds NMED SSL (Residential)

**TABLE 7**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**SWMU DP-62**  
**RITAS DRAW**  
**HOLLOMAN AFB, NEW MEXICO**

CONSTITUENTS	Sample No. and Location	Maxium Reported Result for All Samples	NMWQCC <sup>(1)</sup>
<b>VOCs by Method 8260B µg/L</b>			<b>µg/L</b>
Benzene	RITA-4-GW-8	0.27J	6,400
Ethylbenzene	RITA-4-GW-8	0.22J	68,000
Toluene	RITA-4-GW-8	0.29J	180,000
Xylenes	RITA-4-GW-8	0.88J	63,000
<b>Explosives by Method 8083 µg/L</b>			<b>µg/L</b>
All Constiuents	All Soil Samples	Not Detected	-
<b>SVOCs by Method 8270C µg/L</b>			<b>µg/L</b>
All Constituents	All Soil Samples	Not Detected	-
<b>T/AL Metals by Methods 600/000s mg/L</b>			<b>mg/L</b>
Arsenic	RITA-3-GW-7	0.032	0.1 <sup>(2)</sup>
Barium	All Groundwater Samples	<0.050	1
Cadmium	RITA-3-GWDP-7	0.00012	0.01
Chromium	All Groundwater Samples	<0.050	0.05
Lead	All Groundwater Samples	<0.014	0.05
Selenium	All Groundwater Samples	<0.023	0.05
Silver	All Groundwater Samples	<0.010	0.05
Manganese	RITA-4-GWDP-8	<b>1.84</b>	0.200

Notes:

- Bold Values = reported concentration exceeds NMED or Federal Standard
- 1 NMWQCC - New Mexico Water Quality Control Commission
- 2 Federal MCL for Arsenic = 0.015 mg/L



## **Basis for Determination**

SWMU DP-62 (formerly known as AOC Ritas Draw) has been characterized or remediated in accordance with current applicable state or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

Based on the findings of the PA/SI and the RFI, the presence of barium, cadmium, chromium, and selenium do not pose any unacceptable risks. The presence of arsenic is within the range for soil in the Western United States (USGS 1984...). Similarly, the concentration of arsenic and antimony in groundwater above their respective MCLs were determined to be within the background range at the Base and, thus, do not pose any risk. Manganese in groundwater was also determined to be within the range for natural elemental concentrations. Therefore, no further investigations or corrective actions are recommended for soil and groundwater at DP-62. Further, surface debris at the site including drums were removed and recycled as scrap metal.

## **References**

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