

Steve P

DEPARTMENT OF THE AIR FORCE
Headquarters 377th Air Base Wing (AFMC)

CERTIFIED MAIL: P560 008 122
RETURN RECEIPT REQUESTED

ENTRANCE
15 MAY 1997

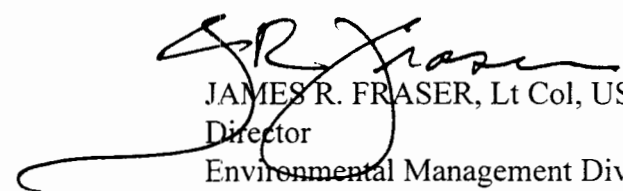
MEMORANDUM FOR MR. BENITO GARCIA, CHIEF
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
NEW MEXICO ENVIRONMENT DEPARTMENT
PO BOX 26110
SANTA FE NM 87502



FROM: 377 ABW/EM
2000 Wyoming Blvd SE, Ste D-4
Kirtland AFB NM 87117-5659

SUBJECT: Quarterly Report

1. We are submitting the quarterly report for the period 1 January 1997 through 31 March 1997, as required by the conditions of our RCRA Part B Permit, Module IV, Section E. This report is submitted in the format defined in the permit.
2. Please contact Mr. Christopher DeWitt, (505) 846-0053, or me, (505) 846-2751, if you have any questions.


 JAMES R. FRASER, Lt Col, USAF
 Director
 Environmental Management Division

Attachment:
Quarterly Report

- cc:
- NMED-HRMB (Mr. Pullen)
 - NMED-GWQB (Mr. Rogers)
 - EPA Region 6 (Ms. Morlock)
 - B&RE (Mssrs. Clark & Donnelly)
 - IT Corp. (Ms. Jercinovic)
 - FWE (Mr. Weber)
 - AFCEE/ERDM (Mr. Arnold)
 - USACE Omaha (Mr. Rowe)

KAFB1862


Quarterly Report

**Kirtland AFB, New Mexico
January 1, 1997 through March 31, 1997**

I. INTRODUCTION

A. Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended by RCRA Statute (42 U.S.C. 6701, et seq.), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), a permit has been issued to Kirtland AFB to operate a hazardous waste disposal facility (ID No. NMD9570024423, October 10, 1990).

B. This Quarterly Report is consistent with the terms and conditions of the permit found under HSWA Module IV, Section E.

II. DESCRIPTION OF WORK COMPLETED

A. The following is a list of solid waste management units (SWMUs) and Installation Restoration Program (IRP) sites investigated under the IRP and the Environmental Compliance Program (ECP). Also listed are the site descriptions, relative risk, and status as of this quarter.

SUMMARY OF KIRTLAND AFB IRP & ECP SWMU SITES

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
6-1		LF-01	I	Landfill No. 1	High	RFI
6-2		LF-02	I	Landfill No. 2	High	RFI
6-3		LF-07	II	Landfill No. 3	Medium	RFI
6-4		LF-08	I	Landfill No. 4,5,6	High	RFI
6-7		LF-18	II	Landfill A	Medium	RFI
6-8		LF-15	II	Landfill B	Medium	RFI
6-10		LF-09	III	Abandoned Landfill	Low	RFI
6-11		LF-44	II	Fill Area SE of Sewage Lagoons	Medium	RFI
*6-14		ST-51	III	Sewage Effluent Line	Low	RFI
6-15		LF-45	II	Unnamed Dump	Medium	RFI
6-16		FT-13	I	Kirtland Fire Training Area	High	RFI/ICM
6-19		OT-29	II	EOD Range	Medium	RFI
6-22		OT-46	I	Lake Christian	High	RFI
6-24		WP-16	I	Manzano Sewage Treatment Facility	High	RFI/ICM
6-29		LF-20	I	Manzano Landfill	High	RFI
6-30		RW-06	IV	Radioactive Burial 11	Medium	RFI
6-31		OT-28	I	McCormick Ranch Range	High	RFI
6-32		FT-14	I	Manzano Fire Training Area	High	RFI/ICM
*6-A1		RW-21	IV	Radioactive Burial 7	Low	RFI/ICM
*6-A2		RW-04	IV	Radioactive Holding Tank 4	High	RFI/ICM
		RW-05	IV	Radioactive Holding Tank 5	High	RFI/ICM
		RW-17	IV	Radioactive Holding Tank 6	High	RFI/ICM
		RW-19	IV	Radioactive Holding Tank 8	High	RFI/ICM
		RW-23	IV	Radioactive Holding Tank 9	High	RFI/ICM
8-5	ST-201		II	Oil/Water Separator, Bldg 255	Medium	RFI
*8-6		WP-47	II	Silver Recovery Unit	Medium	RFI/ICM
8-13		ST-71	II	Bldg 100/1001 Oil/Water Separator	Medium	RFI

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
8-26	ST-242 ST-243		II	2 Oil/Water Separators, Bldg 1063	Medium	RFI
8-28	ST-250		II	Oil/Water Separator, Bldg 20338	Medium	RFI
8-29	ST-251		II	Oil/Water Separator, Bldg 20344	Medium	RFI
8-31	ST-252 ST-253		II	2 Oil/Water Separators, Bldg 20348	Medium	RFI
8-35	ST-214		II	Waste Oil Storage Tank, Bldg 471	Medium	RFI
8-41	ST-274		III	Waste Battery Storage Area, Bldg 20423	Low	RFI
8-47	ST-261		II	Oil/Water Separator, Bldg 20423	Medium	RFI
8-49		SS-61	III	Fuel Shop Wst Batt Strg Area, Bldg 20677	Low	RFI
8-53	ST-335		III	Pnt Shop Fir Drn to Rock Bed, Bldg 20681	Low	RFI
8-55	ST-262		II	Oil/Water Separator, CE Bldg 20698	Medium	RFI
8-58	ST-321		III	Battery Storage Area, Bldg 57007	Low	RFI
9-4	ST-276		III	Waste Accumulation Area, Bldg 617	Low	RFI
9-14	ST-270		II	Buried Caustic Drain Line, Bldg 617	Medium	RFI
9-15	ST-271		II	Neutralization Pit, Bldg 617	Medium	RFI
9-16	ST-272		II	Evaporation/Infiltration Pond, Bldg 617	Medium	RFI
9-20		SS-62	III	Bldg 909 Waste Accumulation Area	Low	RFI
10-1			III	Sanitary Sewer System	Low	RFI
A	ST-278			Sanitary Sewer System A		
B	ST-279			Sanitary Sewer System B		
C	ST-280			Sanitary Sewer System C		
D	ST-281			Sanitary Sewer System D		
E	ST-282			Sanitary Sewer System E		
F	ST-283			Sanitary Sewer System F		
G	ST-284			Sanitary Sewer System G		
H	ST-327			Manzano Sanitary Sewer System		
10-2			III	Storm Sewer System	Low	RFI
A	ST-325			Corrosion Control Shop, Bldg 482		
B	ST-220			Paint Shop, Bldg 1001, Storm Drain		
C	ST-220			Plating & Anodizing, Bldg 1001, Storm Drain		
D	ST-329			Propulsion Branch Flr Drns, Bldg 336		
E		SS-63	III	Jet Engine Test Cell		
F	ST-325			H-3/H-53, Phase Dock, Bldg 1000 Flr Drns		
G	ST-331			C-130 Mntnc Shop, Bldg 1009, Strm Sewer		
H	ST-285			West Storm Sewer System		
I	ST-286			East Storm Sewer System		
10-3	ST-249		II	Waste Oil Storage Tank, Bldg 20205	Medium	RFI
10-7			II	41 Oil/Water Separators, Holding Tanks, Sewage Ejector Units, Catch Basins, Sediment Traps, and Area Drains	Medium	RFI
A	ST-205			Oil/Water Separator, Bldg 333		
	ST-206			3 Oil/Water Separators, Bldg 336		
	ST-207					
	ST-208					
	ST-212			Oil/Water Separator, Bldg 381		
	ST-217			Oil/Water Separator, Bldg 481		
	ST-218			Oil/Water Separator, Bldg 482		
	ST-222			Oil/Water Separator, Bldg 1031		
	ST-226			Oil/Water Separator, Bldg 1037		
	ST-230			Oil/Water Separator, Bldg 1046		
	ST-234			3 Oil/Water Separators, Bldg 1051		
	ST-235					
	ST-236					
	ST-238			2 Oil/Water Separators, Bldg 1056		
	ST-239					

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
	ST-241			Oil/Water Separator, Bldg 1061		
	ST-244			Oil/Water Separator, Bldg 1064		
	ST-246			Oil/Water Separator, Bldg 1070		
	ST-254			Oil/Water Separator, Bldg 20365		
	ST-255			3 Oil/Water Separators, Bldg 20375		
	ST-256					
	ST-257					
	ST-259			Oil/Water Separator, Bldg 20422		
	ST-263			Oil/Water Separator, Bldg 23226		
	ST-264			Oil/Water Separator, Bldg 30142		
	ST-267			Oil/Water Separator, Bldg 57007		
B	ST-225			Holding Tank, Bldg 1031		
	ST-227			Holding Tank, Bldg 1037		
	ST-231			Holding Tank, Bldg 1046		
	ST-240			Holding Tank, Bldg 1058		
	ST-245			Holding Tank, Bldg 1064		
C	ST-223			Sewage Ejector Unit, Bldg 1031		
	ST-229			Sewage Ejector Unit, Bldg 1043		
	ST-232			Sewage Ejector Unit, Bldg 1046		
D	ST-209			Catch Basin, Bldg 336		
E	ST-204			Sediment Trap, Bldg 333		
F	ST-213			Area Drain, Bldg 381		
	ST-224			Area Drain, Bldg 1031		
	ST-228			Area Drain, Bldg 1040		
	ST-233			Area Drain, Bldg 1046		
	ST-237			Area Drain, Bldg 1051		
10-21			III	44 Septic Systems	Low	RFI
	ST-287			Bldg 525		
	ST-288			Bldg 614		
	ST-289			Bldgs 617/620		
	ST-290			Bldg 619		
	ST-291			Bldg 617		
	ST-292			Bldg 622		
	ST-293			Bldg 37570		
	ST-294			Bldg 633		
	ST-295			Bldg 638		
	ST-296			Bldg 702		
	ST-297			Bldg 707		
	ST-298			Bldgs 730/734		
	ST-299			Bldg 751		
	ST-300			Bldg 20199		
	ST-301			Bldg 20560		
	ST-302			Bldg 20599		
	ST-303			Bldg 20749		
	ST-304			Bldg 20797		
	ST-305			Bldg 28054		
	ST-306			Bldg 28054		
	ST-307			Bldg 30101		
	ST-308			Bldg 37511		
	ST-309			Bldg 37504		
	ST-310			Bldgs 37507/37508/37513		
	ST-311			Plant 1 and Bldg 37501		
	ST-312			Plant 2 and Bldg 37503		
	ST-313			Bldgs 37529/37530		
	ST-314			Bldgs 48056/48059		
	ST-315			Bldg 30102		

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
				Bldgs 57003/57012		
				Bldg 57011		
				Bldg 37200		
				Bldg 37541		
				Bldg 20149		
				Bldgs 37507/37508/37513		
				Bldg 29042		
				Bldg 29051		
				Blast Overpressure Site Cesspools		
				Bldg 1032		
				Bldg 66001		
				Bldg 66029		
				Bldgs 66000/66008		
				Bldg 66042		
				Bldg 66006		
LF-56		LF-56	II	Landfill D	Medium	RFI
WP-58		WP-58	II	East Laundry	Medium	RFI
ST-59		ST-59	II	ART Drum	Medium	RFI/ICM
ST-60		ST-60	II	ART Pit	Medium	RFI/ICM
ST-64		ST-64	II	COE Vehicle Maintenance Yard	Medium	RFI
SS-65		SS-65	III	Horizontal Dipole Drum Rack	Low	RFI
ST-66	ST-66		II	Trestle Facility OWS and Pit	Medium	RFI
RW-68		RW-68	IV	Rad Dump/Slag Pile and Cratering Area	High	RFI
SS-69		SS-69	IV	Drum Storage Area	High	RFI
ST-70		ST-70	I	KAFB Oil/Water Separators	High	RFI
ST-72		ST-72	II	MWSA Security Garage OWS	Medium	RFI
ST 73		ST-73	II	CERF Drain	Medium	RFI
OT-74		OT-74	II	Former Pistol Range	Medium	RFI
ST-273	ST-273		III	Bldg 618 Septic Tank	Low	RFI
ST-326	ST-326		II	Waste Oil Storage Tank, Bldg 20375	Medium	RFI
WP-339	WP-339		III	Contractor Yard West of Bldg 20423	Low	RFI
ST-340	ST-340		III	Bldgs 57001 and 57002	Low	RFI
ST-341	ST-341		III	Condensate Tank, Bldg 1033	Low	RFI
Potential SWMUs						
N/A		DP-67	N/A	Three Mine Shafts	Low	RFI
N/A		SS-76	N/A	Fuel Tank Burn Area	NR	SAR
N/A	SS-77		N/A	Abandoned Railroad Spur	NR	SAR
N/A	SS-78		N/A	Water Tower Soils	NR	SAR
N/A	SS-79		N/A	Bldg 381 Spill Site	NR	RFI
N/A	ST-80		N/A	Bldg 30124, Auto Hobby Shop	NR	SAR
Sites Not Regulated Under the RCRA Part B Permit						
N/A		WP-26	N/A	Sewage Lagoons & Golf Course Pond	High	LTM
N/A		RW-10	N/A	Radiation Training Sites 1-8	High	SI
N/A		RW-75	N/A	South Tijeras Rad Trench	NR	SI

* Sites With NFRAP Pending

III. SUMMARY OF ACTIVITIES AND FINDINGS

A. New Sites

1. There were no new sites identified during this reporting period.

2. The NMED granted an extension for the submittal of the SWMU assessment reports (SARs) for the Fuel Tank Burn Area (SS-76), Abandoned Railroad Spur (SS-77), Water Tower Soils (SS-78), and Bldg 30124 Auto Hobby Shop (ST-80) to June 30, 1997. Field work continued at SS-77.

a). AOC SS-76: We completed an internal sampling and analysis plan which was implemented in March, 1997. The site investigation includes detailed surface mapping of the burn and debris areas, soil sampling at 19 locations, including six test pits, and collection of 45 soil samples for analyses.

b). AOC SS-77: Field activities consisting of Geoprobe sampling continued.

3. AOC RW-75: We submitted the site investigation report on January 17, 1997.

B. RCRA Facility Investigation

1. We began work on the Phase 2 RFI Reports for Appendix I, II, and III SWMUs during this quarter. We anticipate submitting the reports in July or August 1997.

a). Appendix I: We completed field work for all sites identified in the Appendix I (Phase 2) RFI SAP during the fourth quarter of 1996. On-going field activities were related to characterization and disposition of Investigation-Derived Waste (IDW) and support of the ICM at SWMU 6-24, Manzano Sewage Treatment Facility (WP-16). Work on the Phase 2 RFI Report included updates to site background information to incorporate additional hydrogeological information from the Long-Term Groundwater Monitoring Program (LTM) and consideration of Sandia National Laboratories' (SNL) Draft Site Background Study Report. The Appendix I SWMUs in Phase 2 RFI are:

- SWMU 6-1, Landfill No. 1 (LF-01)
- SWMU 6-2, Landfill No. 2 (LF-02)
- SWMU 6-4, Landfill No. 4,5,6 (LF-08)
- SWMU 6-16, Kirtland Fire Training Area (FT-13)
- SWMU 6-22, Lake Christian (OT-46)
- SWMU 6-24, Manzano Sewage Treatment Facility (WP-16)
- SWMU 6-29, Manzano Landfill (LF-20)
- SWMU 6-31, McCormick Ranch Range (OT-28)
- SWMU 6-32, Manzano Fire Training Area (FT-14)
- SWMU ST-70, KAFB Oil/Water Separators (ST-70)

b). Appendix II: We completed field work for all sites identified in the Appendix II (Phase 2) RFI SAP during the fourth quarter of 1996. On-going field activities were related to characterization and disposition of IDW. Work on the Phase 2 RFI Report included updates to site background information to incorporate additional hydrogeological information from the LTM Program and consideration of SNL's Draft Site Background Study Report. The Appendix II SWMUs in Phase 2 RFI are:

- SWMU 6-3, Landfill 3 (LF-07)
- SWMU 6-7, Landfill A (LF-18)
- SWMU 6-8, Landfill B (LF-15)
- SWMU 6-11, Fill Area SE of Sewage Lagoons (LF-44)
- SWMU 6-15, Unnamed Dump (LF-45)
- SWMU 8-13, Bldg 1001/1002 Oil/Water Separator (ST-71)
- SWMU 8-28, Oil/Water Separator, Bldg 20338 (ST-250)
- SWMU 9-15, Neutralization Pit, Bldg 617 (ST-271)
- SWMU 9-16, Evaporation/Infiltration Pond, Bldg 617 (ST-272)
- SWMU 10-7A, Oil/Water Separator, Bldg 482 (ST-218)
- SWMU 10-7B, Holding Tank, Bldg 1037 (ST-227)
- SWMU 10-7C, Sewage Ejector Unit (ST-229)
- SWMU ST-64, Corps of Engineers Vehicle Maintenance Yard (ST-64)
- SWMU ST-72, Manzano Security Garage Oil/Water Separator (ST-72)
- SWMU ST-73, CERF Drain (ST-73)

c). Appendix III: We completed field work for all sites identified in the Appendix III (Phase 2) RFI SAP during the fourth quarter of 1996. On-going field activities were related to characterization and disposition of IDW. Work on the Phase 2 RFI Report included updates to site background information to incorporate additional hydrogeological information from the LTM Program and consideration of SNL's Draft Site Background Study Report. Appendix III SWMUs in Phase 2 RFI are:

- SWMU 6-10, Abandoned Landfill (LF-09)
- SWMU 9-4, Waste Accumulation Area, Bldg 617 (ST-276)
- SWMU 9-20, Bldg 909 Inactive Waste Accumulation Area (SS-62)
- SWMU 10-2A, Corrosion Control Shop, Bldg 482 (ST-325)
- SWMU 10-2F, H-3/H-53, Phase Dock, Bldg 1000 Floor Drains (ST-325)
- SWMU 10-2G, C-130 Maintenance Shop, Bldg 1009 Storm Sewer (ST-331)
- SWMU 10-2H, West Storm Sewer System (ST-285)
- SWMU 10-2I, East Storm Sewer System, (ST-286)
- SWMU 10-21:
 - Septic System, Bldg 638 (ST-295)
 - Septic System Plant 1 and Bldg 37501 (ST-311)
 - Blast Overpressure Site Cesspools (ST-328)
 - Septic System, Bldg 66001 (ST-333)
 - Septic System, Bldg 66029 (ST-342)
 - Septic System, Bldgs 66000/66008 (ST-343)

- Septic System, Bldg 66042 (ST-344)
- Septic System, Bldg 66006 (ST-345)
- SWMU WP-339, Contractor Yard West of Bldg 20423 (WP-339)
- SWMU ST-341, Condensate Tank, Bldg 1033 (ST-341)
- AOC SS-79, Bldg 381 Spill Site (SS-79)

2. There was no activity at the Appendix IV SWMUs.

3. There was no activity at the Appendix V SWMUs.

C. Other Investigations and Activities

1. Post Closure Care at WP-26: We conducted a fourth round of post-closure sampling at site WP-26, Golf Course Main Pond and Two Sewage Lagoons. Chromium remained below 50 µg/L at all six wells sampled. No VOCs were detected, and nitrate was below 10 mg/L. The two remaining wells at the Sewage Lagoons, 0501 and 0504, can no longer be sampled due to falling water levels

2. Site Investigation at RW-10, Radiation Training Sites: Field work consisting of geophysical surveys and intrusive sampling continued throughout the reporting period at the abandoned training sites (TS-5 through TS-8). Preliminary results indicate additional characterization and investigation of subsurface features will be required at TS-5 and TS-8. We submitted the Phase 1 Field Investigation Report on February 4, 1997. Currently, these sites are regulated under a permit issued to the Air Force by the Nuclear Regulatory Commission.

3. Groundwater Monitoring: We completed the third round of sampling under the LTM on January 21, 1997. We completed the LTM Report for the second sampling quarter (August 31 - October 31, 1996) and submitted it on December 31, 1996. The LTM Work Plan amendment process commenced on March 17, 1997 and will continue through the next reporting period. It will include the addition of three additional sites with 10 associated wells. The three additional sites are the Sewage Lagoons (WP-26) (two wells), the SWMU 6-16, Kirtland Fire Training Area (FT-13) (one well), and the Golf Course Main Pond (WP-26) (three wells). In addition to these six wells, two wells at SWMU 6-31, McCormick Ranch/Range (OT-28) (wells 1006 and 1007), and two wells at SWMU 6-22, Lake Christian (OT-46) (wells 1902 and 1904) are being included in the LTM. These additional locations were sampled in the third round and will continue to be sampled in subsequent rounds. Eight dedicated pumps were installed at these new wells, with the exception of the Sewage Lagoon site, and 10 purge water tanks were installed (one at each new well) prior to the fourth round of sampling. The fourth round of sampling commenced on March 10, 1997 and was completed on March 29, 1997. Third round results are listed below.

a). At SWMU 6-1, sodium ranging from 19,000 to 21,000 µg/L was detected in all four wells. Lead was detected in well 0111 at 21 µg/L and cadmium was detected in well KAFB-0115 at 0.94 µg/L. No total or fecal coliforms were detected in any of the wells. No

VOCs were detected, but traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards. The pH of 8.61 measured for wells 0111 and 0115 exceeds the NMSWMR aesthetic groundwater standard of 6.5-8.5.

b). At SWMU 6-2, sodium ranging from 22,000 to 25,000 $\mu\text{g/L}$ was detected in all four wells and selenium was detected in well 0214 at 4.7 $\mu\text{g/L}$. No total or fecal coliforms were detected in any of the wells. No VOCs, pesticides, or chlorinated herbicides were detected in any of the wells, but traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards. Gross beta radioactivity in wells 0215 and 0216 (4.1 and 4.2 mrem/yr, respectively) exceeds the SDWA MCL of 4 mrem/yr.

c). At SWMU 6-4, sodium ranging from 19,000 to 29,000 $\mu\text{g/L}$ was detected in all six wells. Chromium (840 $\mu\text{g/L}$), iron (6,500 $\mu\text{g/L}$), selenium (10 $\mu\text{g/L}$), and manganese (33 $\mu\text{g/L}$) were detected in well 0310. Selenium was also detected in well TJA-2 at a concentration of 5.7 $\mu\text{g/L}$. No total or fecal coliforms, pesticides, or chlorinated herbicides were detected in any of the wells. No VOCs or SVOCs were detected, but traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards with the exception of total chromium detected in well 0310. The iron levels in well 0310 exceed NMSWMR aesthetic groundwater standards. Gross beta radioactivity in well 0310 (4.2 mrem/yr) exceeds the SDWA MCL of 4 mrem/yr.

d). At SWMU 6-16, sodium was detected at a concentration of 18,000 $\mu\text{g/L}$ in well 0417. No VOCs were detected, but traces of some inorganic analytes were detected. No total or fecal coliforms, pesticides, or chlorinated herbicides were detected in the wells. All detected concentrations were below applicable NMSWMR health-based groundwater standards.

e). At SWMU 6-22, sodium ranging from 99,000 to 110,000 $\mu\text{g/L}$ was detected in all three wells sampled. Iron (15,000 $\mu\text{g/L}$) and manganese (230 $\mu\text{g/L}$) were detected in well 1903. No explosives, pesticides, chlorinated herbicides, or total or fecal coliforms were detected in the wells. Traces of some inorganic analytes were detected. All detected concentrations were at or below applicable NMSWMR health-based groundwater standards with the exception of fluoride in wells 1902 (3.8 mg/L) and 1904 (3.2 mg/L), which exceeds NMSWMR health-based standard of 1.6 mg/L. Iron and manganese concentrations in well 1903 exceed NMSWMR aesthetic groundwater standards of 300 $\mu\text{g/L}$ and 50 $\mu\text{g/L}$, respectively. Sulfate (320 mg/L) in well 1902 also exceeds the NMSWMR aesthetic groundwater standard of 250 mg/L. Gross alpha radioactivity in well 1903 (23 pCi/L) exceeds the SDWA MCL of 15 pCi/L. Gross beta radioactivity in wells 1902 (10 mrem/yr), 1903 (11 mrem/yr), and 1904 (6.1 mrem/yr) exceed the SDWA MCL of 4 mrem/yr.

f). At SWMU 6-31, sodium ranging from 19,000 to 31,000 µg/L was detected in all five wells sampled. No explosives, chlorinated herbicides, total or fecal coliforms were detected in any of the wells. Endrin, a pesticide, was detected at well 1006 at a concentration of 18 µg/L. Traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards.

g). At the Tijeras Arroyo, sodium ranging from 21,000 to 27,000 µg/L was detected in both wells. No VOCs were detected, but traces of some inorganic analytes were detected. No pesticides or chlorinated herbicides were detected in the wells. No total or fecal coliforms were detected in the wells. All detected concentrations were below applicable NMSWMR health-based groundwater standards.

h). At the Sewage Lagoons, no VOCs were detected in either of the two wells with the exception of 15 µg/L toluene detected in well 0504. Nitrate-N was detected in both wells. All detected concentrations were below applicable NMSWMR health-based groundwater standards.

i). At the Golf Course Main Pond, no VOCs were detected in either of the three wells with the exception of methylene chloride ranging from 5.1 to 7.6 µg/L in all three wells. Methylene chloride was also detected in the method blank for this site at a concentration of 4.39 µg/L; therefore, laboratory contamination may in effect. Nitrate-N was detected in all three wells in concentrations ranging from 17 to 23 mg/L. Both methylene chloride and Nitrate-N concentrations exceed applicable NMSWMR health-based groundwater standards of 5 µg/L and 10 mg/L, respectively.

3. Base-Wide Background and Hydrogeology: No Activity

D. Voluntary and Interim Corrective Measures

1. We completed field work at SWMU RW-68. Ten cu yds of low-level radioactive waste-contaminated soil were stabilized at the site because they failed TCLP analysis for lead, making the soil a mixed waste. A total of 166 cu yds of stabilized mixed waste (including the ten cu yds of soil), 188 cu yds of low-level radioactive waste-contaminated soil, and one cu yd of mixed waste-contaminated debris was containerized on site and is awaiting shipment for disposal at the Envirocare, Inc., low-level radioactive waste facility in Utah.

2. We completed the Radio Frequency Heating/Soil Vapor Extraction (RF/SVE) demonstration at SWMU 6-32. The RF/SVE system was turned off in March 1997. A total of 31 gallons of diesel range hydrocarbon free product and 1,900 gallons of hydrocarbon contaminated water was removed during the demonstration project.

E. Corrective Measures Studies (CMS):

1. We initiated preliminary scoping to conduct a focused CMS at SWMU 6-2. The focused CMS will evaluate 100-year flood inundation of the landfill and the adjoining reach of the Tijeras Arroyo. The results of flood modeling will identify inundation, erosion, and scour mechanisms which adversely affect the site. The focused CMS will recommend an ICM to mitigate flood concerns, if required.

F. We did not prepare any No Further Action (NFA) documents.

G. Program and Budget: No activity to report.

H. Restoration Advisory Board (RAB): The RAB meeting scheduled for February 19, 1997 was canceled due to a lack of participation by citizen stakeholders. We proposed that a means be found to combine the RAB with the Department of Energy's (DOE) Citizen Advisory Board (CAB). We met with official from the DOE to conduct preliminary discussions regarding the combination of both boards. We presented the proposal to the CAB on April 16, 1997. The CAB was receptive and elected to pass the proposal to the Issues Committee for a formal presentation. Subsequent meetings with DOE personnel and the CAB's Executive Committee were held. Currently, the DOE and Air Force legal and public affairs staff will be developing formal guidelines for the merger.

IV. SUMMARY OF PROBLEMS

A. New Sites: No problems encountered.

B. RCRA Facility Investigation: No problems encountered.

C. Other Investigations:

1. Post-Closure Care at WP-26: Wells at the Sewage Lagoons, currently sampled with non-dedicated pumps, were observed to have low recharge rates and have become increasingly difficult to sample as the saturated screen interval decreases. In response, we will send a notification letter to the NMED stating that sampling at KAFB-0501 and 0504 will cease unless directed otherwise. As a result, no existing wells at the lagoons can be sampled.

2. Site Investigation at RW-10: No problems encountered.

3. Groundwater Monitoring: Pistons in dedicated pumps in many of the wells are sticking and only operate after jostling. The pump at KAFB-310 became separated from the head assembly and was temporarily inoperable in the well after the fastening screws corroded and failed. The pump was later retrieved. In response to these problems, pump equipment and maintenance will be evaluated to ensure the future success of the program. A sampling crew was

nearly struck by gun fire while sampling in the Tijeras Arroyo near the perimeter of the Base adjacent to the Four Hills area. In response, a SOP was developed to provide security for field crews working in this area.

4. Base-Wide Background and Hydrogeology: No problems encountered.

D. Voluntary and Interim Corrective Measures: No problems encountered.

E. Corrective Measures Studies: No problems encountered.

F. No Further Action: N/A

G. Budget & Program: N/A

V. PROJECTED WORK FOR THE NEXT REPORTING QUARTER

A. New Sites

1. We will complete SAR investigations at four new potential SWMUs: Fuel Tank Burn Area (SS-76), Abandoned Railroad Spur (SS-77), Water Tower Soils (SS-78), and Bldg 30124 Auto Hobby Shop (ST-80). We will perform all data validation and submit the enhanced SARs by June 30, 1997.

2. AOC RW-75: We will perform final site restoration to include seeding.

3. SWMU OT-74: We will submit a revised SAP for OT-74, which will include a baseline site characterization plan for the active pistol range, and the waste characterization plan for the soil mound. Mobilization for field activities is scheduled for June or July 1997.

B. RCRA Facility Investigation

1. Appendices I, II, and III

a). Appendix II SWMUs: We will complete data validation efforts associated with the Phase 2 RFI report. Internal review of a draft RFI report will be performed. We will not finalize the report until the Base-Wide Background Study, Site-Wide Hydrogeologic Characterization, and Future Land Use Reports submitted by SNL have been approved.

b). Appendix II SWMUs: We will complete data validation efforts associated with the Phase 2 RFI report. Internal review of a draft RFI report will be performed. We will not finalize the report until the Base-Wide Background Study, Site-Wide Hydrogeologic Characterization, and Future Land Use Reports submitted by SNL have been approved.

c). Appendix III SWMUs: We will complete data validation efforts associated with the Phase 2 RFI report. Internal review of a draft RFI report will be performed. We will not finalize the report until the Base-Wide Background Study, Site-Wide Hydrogeologic Characterization, and Future Land Use Reports submitted by SNL have been approved.

2. Appendix IV SWMUs: We will submit a SAP for Phase 2 RFI field activities at SWMU 6-30 and a SAP for the RFI at SWMUs RW-68 and SS-69. We will also initiate RFI field activities at these two SWMUs.

3. Former Appendix V SWMUs: We will submit a SAP for Phase 2 RFI field activities at SWMUs WP-58 and ST-64.

4. We will propose to combine all SWMUs into one appendix, each SWMU with a site-specific corrective action schedule. This is due to the fact that all of the corrective action schedules based on permit appendices have caught up with each other. Having SWMUs in separate appendices is no longer valid; therefore, after the next reporting period, each document will refer to only the corrective action phase and the SWMUs covered by the document.

C. Other Investigations

1. Post-Closure at WP-26: We will await NMED's determination regarding closure requirements for WP-26 before submitting new closure request. We will conduct a fourth round of post-closure sampling and submit the report for the third round.

2. Groundwater Monitoring: The LTM Work Plan amendment process commenced on March 17, 1997 and will continue through the next reporting period. The fourth quarter summary report will be issued during the next reporting period. The Background Study at SWMU 6-4 under the NMSWM program will commence during the next reporting period. Preliminary drafts of the first LTM Annual Report will be prepared as well.

3. Base-Wide Background, Hydrogeology, and TCE Abatement: We will initiate field activities to include installing the WYO 3 nested groundwater monitoring well and conducting neutron logging of existing wells.

4. Management Action Plan Update: We will commence with our annual update of the Management Action Plan (MAP) for submittal in December 1997. The MAP will address requirements stipulated by the Air Force and also satisfy RCRA Corrective Action Plan requirements. It will include both IRP and non-IRP sites.

D. Voluntary and Interim Corrective Measures

1. Due to the difficulty in coordinating the effort to utilize base Explosive Ordnance personnel to fracture the Imhoff tank at SWMU 6-24, we will demolish the tank and sludge drying beds by conventional means and regrade the site, including the evaporation ponds. The security fence enclosing the site will be removed and transported to DRMO for reutilization.

2. Confirmatory drilling and sampling will be conducted at the RF/SVE demonstration project at SWMU 6-32 to determine the effectiveness of hydrocarbon removal.

3 We will dispose of the stabilized radiological waste, ash, and debris, and the low-level radiological contaminated soil from SWMU RW-68 at the Envirocare, Inc., low-level radioactive disposal facility in Utah.

4. We will submit the Interim Corrective Measures report for seven SWMUs and one NRC site by April 30, 1997.

5. We will continue developing scopes of work and designs for interim corrective measures at:

SWMU 6-2	Arroyo Channel Stabilization; Surface Erosion Control
SWMU 8-28	Install Soil Vapor Monitoring/Extraction Wells
SWMU 8-35	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU 10-2A-I	Clean Out Storm Sewers
SWMU 10-3	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU 10-7A	Install Soil Vapor Monitoring/Extraction Wells
SWMU 10-7C	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU 10-21	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU ST-64	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU ST-66	Remove Oil/Water Separator and Lines, Remove and Dispose of Stained Surface Soil, Plug Drain in Maintenance Pit
SWMU ST-70	Install Soil Vapor Monitoring/Extraction Wells
SWMU ST-326	Install Soil Vapor Monitoring/Extraction Wells Stabilize and Remove Contaminated, Near-Surface Soil
SWMU ST-341	Install Soil Vapor Monitoring/Extraction Wells
SWMU WP-58	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU WP-339	Install Soil Vapor Monitoring/Extraction Wells

E. Corrective Measures Study: We will continue development of CMS plans for the following sites:

SWMU 6-2	Protective Cap for 100-Year Flood Protection Focused CMS, Including Arroyo Channel Stabilization and Surface Erosion Control
SWMU ST-64	Intrinsic Remediation/Bioventing/SVE
SWMU ST-70	Intrinsic Remediation/Bioventing/SVE
SWMU WP-58	Intrinsic Remediation/Bioventing/SVE

F. No Further Action: We do not anticipate submitting NFA documents during the next reporting period.

G. Program & Budget: We will complete project narratives and estimates for our FY98 ERA program and present it to the RAB at the May 22, 1997 meeting. The first draft of the program will be submitted to command on May 28, 1997.

H. Restoration Advisory Board: We will hold a separate RAB meeting on May 22, 1997; thereafter, we will combine or hold meetings in conjunction with DOE's quarterly meetings or CAB meetings. The CAB, DOE, and KAFB staff will continue toward completing the process to combine the two boards.



JAMES R. FRASER, Lt Col, USAF

Director

Environmental Management Division