

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

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

8 August 1997

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

SUBJECT: Quarterly Report

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1. We are submitting the quarterly report for the period 1 April 1997 through 30 June 1997, as required by the conditions of our RCRA Part B Permit, Module IV, Section E.
2. Please contact me at (505) 846-0053 if you have any questions.

Christopher B. DeWitt
CHRISTOPHER B. DEWITT, R.P.G.
Acting 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)

KAFB1874


Quarterly Report

Kirtland AFB, New Mexico
April 1, 1997 through June 30, 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
	LF-268			Active Landfill		
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
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

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
8-29	ST-251		II	Oil/Water Separator, Bldg 20344	Medium	RFI
8-31	ST-252		II	2 Oil/Water Separators, Bldg 20348	Medium	RFI
	ST-253					
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 Flr Drm 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 Drms, Bldg 336		
E		SS-63	III	Jet Engine Test Cell		
F	ST-325			H-3/H-53, Phase Dock, Bldg 1000 Flr Drms		
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					
	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					

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
				Oil/Water Separator, Bldg 20422		
				Oil/Water Separator, Bldg 23226		
				Oil/Water Separator, Bldg 30142		
				Oil/Water Separator, Bldg 57007		
B				Holding Tank, Bldg 1031		
				Holding Tank, Bldg 1037		
				Holding Tank, Bldg 1046		
				Holding Tank, Bldg 1058		
				Holding Tank, Bldg 1064		
C				Sewage Ejector Unit, Bldg 1031		
				Sewage Ejector Unit, Bldg 1043		
				Sewage Ejector Unit, Bldg 1046		
D				Catch Basin, Bldg 336		
E				Sediment Trap, Bldg 333		
F				Area Drain, Bldg 381		
				Area Drain, Bldg 1031		
				Area Drain, Bldg 1040		
				Area Drain, Bldg 1046		
				Area Drain, Bldg 1051		
10-21			III	44 Septic Systems	Low	RFI
				Bldg 525		
				Bldg 614		
				Bldgs 617/620		
				Bldg 619		
				Bldg 617		
				Bldg 622		
				Bldg 37570		
				Bldg 633		
				Bldg 638		
				Bldg 702		
				Bldg 707		
				Bldgs 730/734		
				Bldg 751		
				Bldg 20199		
				Bldg 20560		
				Bldg 20599		
				Bldg 20749		
				Bldg 20797		
				Bldg 28054		
				Bldg 28054		
				Bldg 30101		
				Bldg 37511		
				Bldg 37504		
				Bldgs 37507/37508/37513		
				Plant 1 and Bldg 37501		
				Plant 2 and Bldg 37503		
				Bldgs 37529/37530		
				Bldgs 48056/48059		
				Bldg 30102		
				Bldgs 57003/57012		
				Bldg 57011		
				Bldg 37200		
				Bldg 37541		
				Bldg 20149		
				Bldgs 37507/37508/37513		
				Bldg 29042		
				Bldg 29051		
				Bldg 1032		
				Bldg 66001		

SWMU No.	ECP No.	IRP No.	APPX No.	DESCRIPTION	REL. RISK	STATUS
				Bldg 66029		
				Bldgs 66000/66008		
				Bldg 66042		
				Bldg 66006		
				Trestle Site Septic Tank		
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/ICM
ST-66	ST-66		II	Trestle Facility OWS and Pit	Medium	RFI/ICM
RW-68		RW-68	IV	Rad Dump/Slag Pile and Cratering Area	High	RFI/ICM
SS-69		SS-69	IV	Drum Storage Area	High	RFI
ST-70		ST-70	I	KAFB Oil/Water Separators	High	RFI/ICM
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
ST-328		ST-328	III	Blast Overpressure Site Cesspools	Low	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/ICM

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
N/A		SS-81	N/A	Bldg 907 Detention Pond and Yard	NR	SAR
N/A	SS-82		N/A	ALECS Facility	NR	SAR
N/A	SS-83		N/A	Skeet Range and Landfill Road	NR	SAR
N/A		RW-84	N/A	Manzano Burial Site	NR	SAR
N/A		OT-86	N/A	Former Small Arms Range	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
N/A		RW-85	N/A	Manzano Maintenance Building	NR	SI

* Sites With NFRAP Pending

III. SUMMARY OF ACTIVITIES AND FINDINGS

A. New Sites and SWMU Assessment Reports

1. We identified a new SWMU, ALECS Facility (SS-82). We are scheduled to submit a SAP on or before December 31, 1997 and an RFI report on or before December 31, 1998. This site will be ECP funded.

2. We identified four potential SWMUs: Building 907 Detention Pond and Yard (SS-81), Manzano Burial Site (RW-84), Manzano Maintenance Building (RW-85), and Former Small Arms Range (OT-86). We are scheduled to submit a SWMU Assessment Report (SAR) for SS-81, RW-84, RW-85, and OT-86 on or before April 30, 1998. All four sites are currently listed as Areas of Concern (AOCs) and are ERA funded.

3. We proposed adding Skeet Range and Landfill Road (SS-83) as a SWMU to the corrective action schedule of the permit. We are scheduled to submit a RFI report on or before December 31, 1997. This site will be ECP funded.

4. We completed field work and submitted the SWMU assessment reports for Fuel Tank Burn Area (AOC SS-76), Abandoned Railroad Spur (AOC SS-77), Water Tower Soils (AOC SS-78), and Building 30124, Auto Hobby Shop (AOC ST-80) in June 1997. We are recommending SS-76, ST-80, and portions of SS-77 and SS-78 be designated SWMUs and placed into the corrective action schedule of the permit.

5. We completed field activities at Building 381 Spill Site (SS-79). Results will be included in the Appendix III Phase 2 RFI Report to be submitted in the next quarter.

6. We completed final site restoration at RW-75.

7. We submitted the RFI SAP for SWMU OT-74 and initiated pre-mobilization activities for the field work in June 1997.

B. RCRA Facility Investigation. In future quarterly reports, we will no longer refer to these sites in reference to the appendices in the corrective action schedule of the permit. Due to delays in document review and variations in level of effort, the corrective action schedules for all appendices are now concurrent.

1. We continued work on the Phase 2 RFIs for Appendix I, II, and III SWMUs during this quarter. We anticipate submitting the reports in August 1997. To date, we have not received formal NMED review comments of the Phase 2 RFI SAPs submitted in May 1996 (Appendix I and Appendix III) and August 1995 (Appendix II).

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 preparation of draft and final draft Quality Control Summary Reports according to U.S. Army Corps of Engineers (COE) requirements, preparation of the draft RFI report with internal review and discussion, execution of field work and document reviews to support an Ecological Screening Risk Assessment at identified sites, and development of Human Health Risk Assessment approaches to support risk-based cleanup of identified sites. 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. Work on the Phase 2 RFI Report included preparation of draft and final draft Quality Control Summary Reports according to U.S. Army Corps of Engineers (COE) requirements, preparation of the draft RFI report with internal review and discussion, execution of field work and document reviews to support an Ecological Screening Risk Assessment at identified sites, and development of Human Health Risk Assessment approaches to support risk-based cleanup of identified sites. We submitted the Phase 2 RFI SAP for SWMU WP-58 in May 1997 and completed field activities in June 1997. 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)
- SWMU WP-58, East Laundry, Bldg 20451 (WP-58)

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. Work on the Phase 2 RFI Report included preparation of draft and final draft Quality Control Summary Reports according to U.S. Army Corps of Engineers (COE) requirements, preparation of the draft RFI report with internal review and discussion, execution of field work and document reviews to support an Ecological Screening Risk Assessment at identified sites, and development of Human Health Risk Assessment approaches to support risk-based cleanup of identified sites. The 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)
 - 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 ST-328, Blast Overpressure Site Cesspools (ST-328)
- SWMU ST-341, Condensate Holding Tank, Bldg 1033 (ST-341)
- AOC SS-79, Bldg 381 Spill Site (SS-79)

2. Appendix IV SWMUs: We submitted the SAP for the Phase 2 RFI at SWMU 6-30 in May 1997 and completed field activities in June. To date, we have not received formal NMED review comments of the Appendix IV, Stage 2D-2 RFI Report submitted in June 1996.

3. Former Appendix V SWMUs: There was no RFI activity at the Appendix V SWMUs. To date, we have not received formal NMED review comments of the Appendix V RFI Report submitted in February 1996.

4. We submitted the RFI SAPs for SWMUs RW-68 and SS-69 in April 1997. Field activities at RW-68 were completed in June 1997. Field activities were initiated at SS-69 in June 1997 and will be completed after an ICM to remove contaminated soil.

C. Other Investigations and Activities

1. Post Closure Care at WP-26: All activities at the Sewage Lagoons and Golf Course Main Pond are reported in the appropriate sections of this report. We are still awaiting a determination by NMED regarding the closure status of this unit.

2. Site Investigation at RW-10, Radiation Training Sites: Site investigation field work was completed 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 for all eight sites 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 fourth round of sampling under the long-term groundwater monitoring (LTGWM) program on March 29, 1997. We submitted the LTGWM Report for the third sampling quarter (November 1, 1996 - January 31, 1997) on April 29, 1997. The LTGWM Report for the fourth sampling quarter (February 1, 1997 - April 30, 1997) was submitted on July 3, 1997. We submitted the LTGWM Plan, Revision 1, on June 11, 1997. The LTGWM Work Plan has been revised to include two additional sites with eight associated wells. The two additional sites are the Fire Training Area (FT-13 - 1 well) and the Golf Course Main Pond area (WP-26 - 3 wells). In addition to these 6 wells, 2 wells at McCormick Ranch (OT-28 - wells 1006 and 1007) and 2 wells at Lake Christian (OT-46 - wells 1902 and 1904) have been included in the LTGWM program beginning with the third round of sampling. Sample collection at the two Sewage Lagoon wells has been eliminated from the LTGWM program due to lack of saturated screen intervals. The Background Determination Report for the Kirtland AFB Groundwater Monitoring System Plan (GSMP) was completed and submitted for 63 of 88 parameters listed on Table 1 of Appendix A of the New Mexico Solid Waster Management Regulations (NMSWMRs). Data will be collected for the remaining 25 parameters listed on Table 1, Appendix A during the next four sampling events. The fifth round of sampling commenced on June 16, 1997 and will be completed during the next reporting period. The two important changes in the sampling program for the fifth sampling quarter are: (1) coliforms analyses will no longer be performed for any sites and (2) laboratory reporting for the GSMP at Kirtland landfill will be limited to the 25 analytes listed on Table 1, Appendix A of the NMSWMRs for which additional background data are required. A summary of fourth round results is presented below.

a). At SWMU 6-1, arsenic (1.1 to 1.6 ug/L), barium (104 to 115 ug/L) and sodium ranging from 19,000 to 21,000 ug/L were detected in all four wells. Chromium at 10.7 ug/L was detected at KAFB-0111. Iron was detected in well KAFB-0111 (67.7 ug/L) and KAFB-0114 (127 ug/L). Selenium was detected in samples from KAFB-0111 (2 ug/L) and KAFB-0115 (1.2 ug/L). No total or fecal coliforms were detected in any of the wells except KAFB-0111, which contained levels too numerous to count (TNTC). Tetrachloroethene was detected in KAFB-0114 at 0.05 ug/L. No other VOCs were detected. No pesticides or chlorinated herbicides were detected in any of the wells. Some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards and the Safe Drinking Water Act (SDWA) MCLs for radioactivity.

b). At SWMU 6-2, arsenic (1.1 to 1.6 ug/L), barium (46.9 to 58.3 ug/L) and sodium (24,200 to 26,800 ug/l) were detected in all four wells. Iron (138 ug/L) was detected at well 0215. Chromium (6.1 ug/L) was detected at well 0214. No coliforms were detected in wells 0216 and 0218. Samples from KAFB-0214 and -0215 were invalid due to confluent growth of bacteria. No VOCs, pesticides or chlorinated herbicides were detected, but traces of some

inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards and the SDWA MCLs for radioactivity.

c). At SWMU 6-4, barium (51.6 to 137 ug/L), selenium (2.4 ug/L to 27.7 ug/L) and sodium ranging from 21,000 to 30,800 ug/L were detected in all six wells. Iron ranging in concentration from 51.6 to 76.1 ug/L was detected in wells KAFB-0307, -0310 and -0311. Arsenic was detected at wells KAFB-0310 and TJA-2 at concentrations of 4.3 and 3 ug/L, respectively. VOCs 1-1-dichloroethane (0.7 ug/L) and trichloroethene (2.7 ug/L) were detected in the sample from TJA-2. No pesticides or chlorinated herbicides were detected in any of the wells. Well KAFB-0309 contained coliforms at a level TNTC and the sample from TJA-2 was invalid due to confluent growth of bacteria. Traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards and the SDWA MCLs for radioactivity with the exception of the selenium detected in wells 0310 and TJA-2 at concentrations of 27.7 and 15.6 ug/L, respectively. The NMSWMR health-based groundwater standard for selenium is 10 ug/L.

d). At SWMU 6-16, arsenic (2.7 ug/L), barium (118 ug/L) and sodium (17,700 ug/L) were detected in well KAFB-0417. No VOCs were detected, but traces of some inorganic analytes were detected. No pesticides or chlorinated herbicides were detected. The coliforms sample was invalid due to confluent growth of bacteria. All detected concentrations were below applicable NMSWMR health-based groundwater standards and the SDWA MCLs for radioactivity.

e). At SWMU 6-22, arsenic (1.7 to 2.4 ug/L), barium (21.6 to 130 ug/L), selenium (2.6 to 10.8 ug/L) and sodium (82,800 to 123,000 ug/L) were detected in all three wells. Manganese was detected in KAFB-1902 (72.3 ug/l) and KAFB-1904 (286 ug/L). Iron was detected in KAFB-1903 (17,300 ug/L) and -1904 (89.9 ug/L). No pesticides, chlorinated herbicides or coliforms were detected in any wells. Other inorganic parameters were detected in the wells, including fluoride (2.6 to 4.9 mg/L) and sulfate (64 to 300 mg/L). All detected concentrations were at or below applicable NMSWMR health-based groundwater standards, with the exception of fluoride concentrations, which exceeded the NMSWMR health-based standard of 1.6 mg/L in all three wells, and selenium (10.8 ug/L), which exceeded the NMSWMR health-based standard of 10 ug/L at KAFB-1902. NMSWMR aesthetic standards for iron and manganese of 300 ug/L and 50 ug/L respectively, were exceeded at KAFB-1903 (iron, 17,300 ug/L, manganese, 286 ug/L) and -1902 (manganese, 72.3 ug/L). Sulfate (300 mg/L) in KAFB-1902 also exceeded the NMSWMR aesthetic groundwater standards of 250 mg/L. Gross alpha radioactivity in KAFB-1903 (21 pCi/L) exceeded the SDWA MCL of 15 pCi/L. Gross beta radioactivity in KAFB-1902 (4.4 mrem/yr), -1903 (6.9 mrem/yr) and -1904 (4.7 mrem/yr) exceeded the SDWA MCL of 4 mrem/yr.

f). At SWMU 6-31, arsenic (1.7 to 3.2 ug/L), barium (56.1 to 96.3 ug/L), selenium (2.4 to 3.3 ug/L) and sodium (20,600 to 29,800 ug/L) were detected in all five wells sampled. Iron was detected in KAFB-1006 (144 ug/L). No explosives, pesticides or chlorinated herbicides were detected in any wells. Well KAFB-1006 contained total coliform at a level TNTC. The coliform sample from KAFB-1007 was invalid due to confluent growth of bacteria. Traces of some inorganic analytes were detected. All detected concentrations were below

applicable NMSWMR health-based groundwater standards. Gross beta radioactivity in well 1002 (4.5 mrem/yr) exceeded the SDWA MCL of 4 mrem/yr.

g). At Tijeras Arroyo, barium (39.7 to 149 ug/L), selenium (1.8 to 3.2 ug/L) and sodium (21,600 to 29,800 ug/L) were detected in both wells sampled. Arsenic (1.7 ug/L) was detected in KAFB-0902. No VOCs were detected, but traces of some inorganic analytes were detected. No pesticides, chlorinated herbicides or coliforms were detected in the wells. All concentrations were below applicable NMSWMR health-based groundwater standards and the SDWA MCLs for radioactivity.

h). At the Sewage Lagoons, toluene was detected at both wells sampled (KAFB-0501 and -0504) at concentrations of 4.4 and 2.1 ug/L, respectively. Nitrate-N concentrations were 5.5 and 8.8 mg/L for KAFB-0501 and -0504, respectively. All concentrations were below applicable NMSWMR health-based groundwater standards. Due to dropping water levels, sampling will no longer be possible at this site until replacement monitoring wells are installed in 1998.

i). At the Golf Course Main Pond, no VOCs were detected in KAFB-0608 or -0610. Trichloroethene was detected in KAFB-0609 at 0.9 ug/L. Nitrate-N concentrations ranged from 15 to 23 mg/L for all three wells. Nitrate-N concentrations exceeded the NMSWMR health-based groundwater standard of 10 ug/L.

4. Base-Wide Background and Hydrogeology: Sandia National Laboratories (SNL) received comments from the NMED DOE Oversight Bureau (OB) which included the OB's comments and recommended maximum acceptable background. These values have been accepted by SNL;

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

D. Voluntary and Interim Corrective Measures

1. We submitted the Interim Corrective Measures Report for SWMUs 6-24, 6-30, 8-6, ST-60, SS-65, and RW-68; AOC 6-A1; and NRC site RW-10 in April 1997.

a). We completed all activity at SWMU RW-68. In June 1997, 353 cubic yards of stabilized mixed waste and low level radioactive waste contaminated soil and debris were shipped to the Envirocare, Inc. low level radioactive waste facility in Utah for disposal. 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.

b). We completed demolition and grading activities at SWMU 6-24. The Imhoff tank and sludge drying beds were demolished, and all concrete debris was placed into the tank.

The remaining space in the tank was backfilled with clean fill obtained from Kirtland AFB. The security fence was removed and transported to DRMO for reutilization. The entire site was regraded and returned to the predevelopment grade and flow pattern. A cross country equestrian course with jumps was constructed at the site.

2. We completed all activities at the Radio Frequency Heating/Soil Vapor Extraction (RF/SVE) demonstration at SWMU 6-32. Confirmatory drilling, soil sampling, and a tracer study were conducted to determine the hydrocarbon removal effectiveness of the system. The sample analytical results are still pending. Tracer well abandonment was completed in June 1997.

E. Corrective Measures Studies (CMS):

1. Scoping continued for a focused CMS at SWMU 6-2. The focused CMS, scheduled to begin in July 1997, will evaluate 100-year flood inundation of the landfill and the adjoining reach of the Tijeras Arroyo. Flood evaluations will identify inundation (including migration potential), erosion, and scour mechanisms which adversely affect the site. The focused CMS will also identify mitigative measures which may be implemented as part of an ICM.

2. We initiated scoping and CMS Plan preparation for SWMUs WP-58, ST-64, and ST-70.

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

G. Program and Budget: The FY98 ERA budget was submitted on June 30, 1997. The ERA budget (\$9,268,000) contains 26 projects. Management accounts for 4.0%, study for 21%, and cleanup for 75% of the total. The FY98 ECP budget (\$3,500,000) contains five projects. Study accounts for 34% and cleanup for 66% of the total.

H. Restoration Advisory Board (RAB): The RAB meeting was held on May 22, 1997. Only three members of the public (including a newspaper reporter) attended. The FY98 program was presented and discussed. Cleanup actions and status were also presented. The Issues Committee of the Department of Energy's (DOE) Citizen Advisory Board (CAB) is currently considering the proposal to combine the two organizations and will determine if it should be formally presented to the CAB. The DOE and Air Force legal and public affairs staff are examining both organizations' charters and legal requirements in order to develop formal guidelines for the merger.

IV. SUMMARY OF PROBLEMS

A. New Sites and SWMU Assessment Reports: No problems encountered.

B. RCRA Facility Investigation: No problems encountered.

C. Other Investigations:

1. Post-Closure Care at WP-26: Due to dropping water levels, wells at the Sewage Lagoons were sampled for the last time during round four of the LTGWM.

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

3. Groundwater Monitoring: No problems encountered.

4. Base-Wide Background and Site-Wide Hydrogeological Studies: We are concerned with the direction the Base-Wide Background Study has taken. This study was funded by both the USAF and DOE and was a significant effort. The draft final report incorporated comments and addressed concerns of both the EPA and NMED. The NMED DOE/OB conducted a separate background study resulting in recommended maximum background levels. This study implies that the joint DOE/AF background study is invalid. The DOE/AF study was a significant undertaking with respect to cost and time, and was subjected to intense NMED and EPA scrutiny and review. We also computed base-wide background levels during two previous investigations, in addition to site specific background levels. It has become apparent that background levels are extremely variable and difficult to determine at Kirtland AFB. As a result, we will not formally approve the results of a fourth study conducted by the OB pending a detailed multi-agency, multilevel review of the OB background study and associated methodology. We also question why DOE/AF was required to fund a significant study if the OB had the resources to conduct one which both agencies may be held to. We will continue to compare analytical results with the SNL-DOE/OB background levels; however, we will also make comparisons to UTLs from some of the other background studies that have been conducted as well as site specific background measurements. We will also reference EPA Region 6 Human Health Risk Screening Levels as we continue with our community-based, risk-based approach to RCRA corrective action.

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 and SWMU Assessment Reports:

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

2. SWMU OT-74: We will initiate RFI field activities on July 7, 1997 and complete them by July 28, 1997. We will submit the internal draft RFI report.

B. RCRA Facility Investigation

1. Appendices I, II, and III

a). Appendix I SWMUs: We will complete the final draft Phase 2 RFI Report for submittal in August 1997. The Ecological Screening Risk Assessment of identified sites will be completed with recommendations made regarding No Further Action or additional work which will assist with quantitative assessment of ecological risks. A meeting will be scheduled for Kirtland AFB, our service centers, and contractors to discuss human health risk assessment issues with the NMED.

b). Appendix II SWMUs: We will complete the final draft Phase 2 RFI Report for submittal in August 1997. The Ecological Screening Risk Assessment of identified sites will be completed with recommendations made regarding No Further Action or additional work which will assist with quantitative assessment of ecological risks. A meeting will be scheduled for Kirtland AFB, our service centers, and contractors to discuss human health risk assessment issues with the NMED. We will analyze and validate sample data, complete the human health risk assessment at SWMU WP-58.

c). Appendix III SWMUs: We will complete the final draft Phase 2 RFI Report for submittal in August 1997. The Ecological Screening Risk Assessment of identified sites will be completed with recommendations made regarding No Further Action or additional work which will assist with quantitative assessment of ecological risks. A meeting will be scheduled for Kirtland AFB, our service centers, and contractors to discuss human health risk assessment issues with the NMED.

2. Appendix IV SWMUs: We will continue RFI activities at SWMUs. 6-30, RW-68, and SS-69, to include field activities at SS-69, and analysis and validation of sample data, completion of human health risk assessment, and preparation of the internal draft Phase 2 RFI report at both SWMUs.

C. Other Investigations

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

2. Groundwater Monitoring: We will conclude the fifth round of sampling under the LTGWM and submit the report. An internal draft of the first LTGWM Annual Report will be issued in the next reporting period under the NMSWM program will commence during the next reporting period.

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

4. Management Action Plan Update: We will continue with MAP preparation, focusing upon development of site conceptual models, cleanup schedules, and cost estimates.

D. Voluntary and Interim Corrective Measures

1. We will complete final revegetation at SWMUs 6-24 and 6-32
2. We will prepare the ICM Work Plan, procure subcontractors for soil removal, and initiate a bioventing pilot test at SWMU ST-70.
3. We will submit the Interim Corrective Measure Completion Report for SWMU ST-66.
- 4 We will prepare the ICM Work Plan and procure subcontractors for soil removal at SWMUs WP-58 and ST-64.
5. We will submit the ICM Work Plan for Storm Sewer Cleanout for SWMU 10-2H, 10-2I, 10-2F, and 10 -2G in July 1997 and commence field activities later in the quarter.
6. We will continue developing scopes of work and designs for interim corrective measures at:

SWMU 6-2	Arroyo Channel Stabilization; Surface Erosion Control
SWMU 10-21	Stabilize and Remove Contaminated, Near-Surface Soil (ST-295 and ST-311)
SWMU WP-58	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU ST-64	Stabilize and Remove Contaminated, Near-Surface Soil
SWMU ST-70	Install Soil Vapor Monitoring/Extraction Wells
SWMU ST-341	Install Soil Vapor Monitoring/Extraction Wells

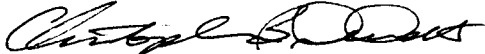
E. Corrective Measures Study: We will continue development of CMS plans for the following sites:

SWMU 6-2	100-Year Flood Study Focused CMS, Including Arroyo Channel Stabilization and Surface Erosion Control
SWMU WP-58	NFA following the ICM
SWMU ST-64	NFA following the ICM
SWMU ST-70	Intrinsic Remediation/Bioventing/SVE

F. No Further Action: We do not anticipate submitting NFA documents during the next reporting period. We will identify sites for NFA based on existing RFI and Phase 2 RFI data for submittal in the fourth quarter.

G. Program & Budget: We will complete line item budgets for our FY99 and FY00 ERA program and present it to the RAB at the August 20, 1997 meeting.

H. Restoration Advisory Board: We will hold a joint RAB/CAB meeting on August 20, 1997. We will host the meeting for both organizations. It will be a two-part meeting; the RAB from 5:30 p.m. to 6:30 p.m., followed by the CAB. The RAB, CAB, DOE, and KAFB staff will continue efforts to combine the two boards.


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Acting Director
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