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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 October 1996 through 31 December 1996, 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 & Johnston)
 - IT Corp. (Ms. Jercinovic)
 - FWE (Mr. Weber)
 - AFCEE/ERDM (Mr. Arnold)
 - USACE Omaha (Mr. Rowe)

KAFB1833


Quarterly Report

Kirtland AFB, New Mexico
October 1, 1996 through December 31, 1996

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 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 Flr 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 ST-206 ST-207 ST-208 ST-212 ST-217 ST-218 ST-222 ST-226 ST-230 ST-234 ST-235 ST-236 ST-238 ST-239			Oil/Water Separator, Bldg 333 3 Oil/Water Separators, Bldg 336 Oil/Water Separator, Bldg 381 Oil/Water Separator, Bldg 481 Oil/Water Separator, Bldg 482 Oil/Water Separator, Bldg 1031 Oil/Water Separator, Bldg 1037 Oil/Water Separator, Bldg 1046 3 Oil/Water Separators, Bldg 1051 2 Oil/Water Separators, Bldg 1056		

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
	ST-316			Bldgs 57003/57012		
	ST-317			Bldg 57011		
	ST-318			Bldg 37200		
	ST-319			Bldg 37541		
	ST-320			Bldg 20149		
	ST-322			Bldgs 37507/37508/37513		
	ST-323			Bldg 29042		
	ST-324			Bldg 29051		
	ST-328			Blast Overpressure Site Cesspools		
	ST-330			Bldg 1032		
	ST-333			Bldg 66001		
	ST-342			Bldg 66029		
	ST-343			Bldgs 66000/66008		
	ST-344			Bldg 66042		
	ST-345			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. Due to a delay in receiving FY97 funds, we will not be able to submit SWMU assessment reports (SARs) for four 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) by the previously determined date of 15 Feb 1997. A request for extension will be submitted. We have received funds, and field work has started at SS-77. A substantial level of characterization is scheduled for these sites. One SAR will be submitted to include SS-77, SS-78, and ST-80; the SAR for SS-76 will be submitted separately. We will request a 16-week extension for submittal of these SARs. All four sites are currently listed as Areas of Concern (AOCs).

3. RW-75, South Tijeras Trench: We received analytical data for soil and decontamination water samples collected during field activities at this AOC. We are currently preparing a site investigation report presenting the results. The analytical results support the field survey and screening data, which indicate no evidence of contamination.

4. We submitted an addendum to the Appendix III Phase 2 SAP for the newly identified septic tanks (ST-342, ST-343, ST-344, and ST-345), the cesspools at the BOP site (ST-328), and the Bldg 381 Spill Site (SS-79). Characterization results will be included in the Appendix III Phase 2 RFI Report.

B. RCRA Facility Investigation

1. Kirtland AFB completed field activities under the Phase 2 RFI at Appendix I, II, and III SWMUs during this quarter. Investigations were conducted in accordance with the May 1996 Final Base-Wide Plans for Investigations. Land surveying of all sites was completed in October 1996. The Appendix I Phase 2 Sampling and Analysis Plan (SAP) was submitted in May 1996; the Appendix II Phase 2 RFI SAP in August 1995; and the Appendix III Phase 2 RFI SAP in May 1996. Kirtland responded to or incorporated draft comments from the NMED and EPA prior to finalizing the SAPs. **Currently, we still have not received official approval of the SAPs.** Site demobilization took place during November 1996 after RFI field activities were substantially completed. All activities were conducted in accordance with the Phase 2 SAPs.

a). Appendix I SWMUs in Phase 2 RFI:

- SWMU 6-1, Landfill No. 1 (LF-01): No activity. Field work was completed during the previous quarter.
- SWMU 6-2, Landfill No. 2 (LF-02): No activity. Field work was completed during the previous quarter.
- SWMU 6-4, Landfill No. 4,5,6 (LF-08): We completed seven borings to a depth of 150 ft each and collected 35 environmental soil samples and 20 soil samples for geotechnical analysis.
- SWMU 6-16, Kirtland Fire Training Area (FT-13): We completed hand-auger sampling at 12 locations. Samples were collected from the 6 - 8-ft interval.
- SWMU 6-22, Lake Christian (OT-46): We resampled sediments due to exceedence of holding times during an earlier sampling event.
- SWMU 6-24, Manzano Sewage Treatment Facility (WP-16): No activity. Field work was completed during the previous quarter.
- SWMU 6-29, Manzano Landfill (LF-20): No activity. Field work was completed during the previous quarter.
- SWMU 6-31, McCormick Ranch Range (OT-28): We resampled groundwater due to exceedence of holding times during an earlier sampling event.
- SWMU 6-32, Manzano Fire Training Area (FT-14): No activity. Fieldwork was completed during the previous quarter.
- SWMU ST-70, KAFB Oil/Water Separators (ST-70) We completed hollow-stem auger drilling of four borings at the oil/water separators at Bldg 481/482 (former ST-219) and Bldg 377 (former ST-210). We completed the two borings at Bldg 377 as 2-inch PVC soil venting wells; ST-210A is screened from 60 - 100 ft below ground surface, and ST-210B is screened from 20 - 60 ft below ground surface. We also completed two borings at Bldg 481/482 as 2-inch soil venting wells.

Both venting wells (ST-219-28 and ST-219-29) have two screened intervals, one at 10 - 35 ft and one at 50 - 90 ft below ground surface. We collected 30 soil samples, 18 at ST-210 and 12 at ST-219.

b). Appendix II SWMUs in Phase 2 RFI:

- SWMU 6-3, Landfill 3 (LF-07): We completed two borings to a depth of 120 ft each and collected 10 environmental soil samples and eight soil samples for geotechnical analysis.
- SWMU 6-7, Landfill A (LF-18): No activity. Field work was completed during the previous quarter.
- SWMU 6-8, Landfill B (LF-15): No activity. Field work was completed during the previous quarter.
- SWMU 6-11, Fill Area SE of Sewage Lagoons (LF-44): No activity. Field work was completed during the previous quarter.
- SWMU 6-15, Unnamed Dump (LF-45): No activity. Field work was completed during the previous quarter.
- SWMU 8-13, Bldg 1001/1002 Oil/Water Separator (ST-71): No activity. Field work was completed during the previous quarter.
- SWMU 8-28, Oil/Water Separator, Bldg 20338 (ST-250) We completed five Geoprobe borings and collected 15 soil samples.
- SWMU 9-15, Neutralization Pit, Bldg 617 (ST-271): No activity. Field work was completed during the previous quarter.
- SWMU 9-16, Evaporation/Infiltration Pond, Bldg 617 (ST-272): No activity. Field work was completed during the previous quarter.
- SWMU 10-7A, Oil/Water Separator, Bldg 482 (ST-218): We completed four Geoprobe borings and collected 11 soil samples.
- SWMU 10-7B, Holding Tank, Bldg 1037 (ST-227): We completed four Geoprobe borings and collected eight soil samples.
- SWMU 10-7C, Sewage Ejector Unit (ST-229): We completed one Geoprobe boring and collected one soil sample.

- SWMU ST-64, Corps of Engineers Vehicle Maintenance Yard (ST-64): No activity. Field work was completed during the previous quarter.
- SWMU ST-72, Manzano Security Garage Oil/Water Separator (ST-72): We completed hollow-stem auger drilling and installed a groundwater monitoring well. The well was completed with 15 ft of screen from 20 - 35 ft below ground surface. We collected two soil samples and one groundwater sample.
- SWMU ST-73, CERF Drain (ST-73): No activity. Field work was completed during the previous quarter.

c). Appendix III SWMUs in Phase 2 RFI:

- SWMU 6-10, Abandoned Landfill (LF-09): We completed two borings at SWMU 6-10 to a depth of 50 ft each.
- SWMU 9-4, Waste Accumulation Area, Bldg 617 (ST-276): We completed three Geoprobe borings and collected 10 soil samples.
- SWMU 9-20, Bldg 909 Inactive Waste Accumulation Area (SS-62): We completed four Geoprobe borings and collected eight soil samples.
- SWMU 10-2A, Corrosion Control Shop, Bldg 482 (ST-325): We completed two Geoprobe borings and collected 15 soil samples.
- SWMU 10-2F, H-3/H-53, Phase Dock, Bldg 1000 Floor Drains (ST-325): We completed two Geoprobe borings and collected 12 soil samples.
- SWMU 10-2G, C-130 Maintenance Shop, Bldg 1009 Storm Sewer (ST-331): We completed four Geoprobe borings and collected eight soil samples.
- SWMU 10-2H, West Storm Sewer System (ST-285): We completed six Geoprobe borings and collected 25 soil samples.
- SWMU 10-2I, East Storm Sewer System, (ST-286): We completed three Geoprobe borings and collected 10 soil samples.

- SWMU 10-21:
 - Septic System, Bldg 638 (ST-295): We completed four Geoprobe borings and collected eight soil samples.
 - Septic System Plant 1 and Bldg 37501 (ST-311): We completed three Geoprobe borings and collected six soil samples.
 - Blast Overpressure Site Cesspools (ST-328): We completed two Geoprobe borings and collected two soil samples.
 - Septic System, Bldg 66001 (ST-333): We completed two Geoprobe borings and collected two soil samples.
 - Septic System, Bldg 66029 (ST-342): We completed four Geoprobe borings and collected seven soil samples.
 - Septic System, Bldgs 66000/66008 (ST-343): We completed five Geoprobe borings and collected six soil samples.
 - Septic System, Bldg 66042 (ST-344): No activity. See Section IV.B.1.c).
 - Septic System, Bldg 66006 (ST-345): We completed three Geoprobe borings and collected six soil samples.

 - SWMU WP-339, Contractor Yard West of Bldg 20423 (WP-339): We collected six surface soil samples.

 - SWMU ST-341, Condensate Tank, Bldg 1033 (ST-341): We completed eight hollow-stem auger borings. We collected 54 soil samples. Seven of the borings were completed as soil venting wells. Four of the vent wells (ST-341-22, -23, -24, and -25) were screened from 25 - 65 ft below ground surface; one vent well (ST-341-13) was screened from 10 - 80 ft below ground surface; two vent wells (ST-341-14 and -17) were each screened from 10 - 50 ft and 60 - 80 ft below ground surface.

 - AOC SS-79, Bldg 381 Spill Site (SS-79). We completed five Geoprobe borings and collected 10 soil samples. We also collected one surface soil sample.
2. There was no activity at the Appendix IV SWMUs.
 3. There was no activity at the former Appendix V SWMUs and AOC.

C. Other Investigations

1. Post Closure Care at WP-26: We conducted a third round of post-closure sampling at site WP-26, Golf Course Main Pond and Two Sewage Lagoons. Chromium remained below 50 ug/l at all six wells sampled. Two wells, 0502 and 0503, can no longer be sampled due to falling water levels. No VOCs were detected, and nitrate was below 10 mg/l. **We are still awaiting NMED's determination of closure status.**

2. Groundwater Monitoring: We initiated the third round of sampling under the long-term groundwater monitoring (LTM) program during the week of December 13, 1996. We completed the LTM Report for the second sampling quarter (August 31 - October 31, 1996) and will submit it in January 1997. Second round results are listed below.

a). At SWMU 6-1, sodium, ranging from 19,000 to 21,000 ug/l, was detected in all four wells. Barium and lead detections recorded in well 0111 in the first sampling round were not duplicated in this round. 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. A pH of 6.43 measured for well 0115 exceeds the NMSWMR aesthetic groundwater standard of 6.5 - 8.5.

b). At SWMU 6-2, sodium, ranging from 24,000 to 28,000 ug/l, was detected in all four wells. Total and fecal Coliform were detected in well 0214. No total or fecal Coliforms were detected in wells 0214 or 0218. Coliform analysis was not performed on samples collected from wells 0215 and 0216 because sample holding times were exceeded by the subcontract laboratory. No VOCs were detected, but traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards. Gross beta radioactivity in well 0215 (5 mrem/yr) exceeds the SDWA MCL of 4 mrem/yr.

c). At SWMU 6-4, sodium, ranging from 20,000 to 30,000 ug/l, was detected in all six wells. Chromium (82ug/l), iron (6,000 ug/l) and selenium (10 ug/l) were detected in well 0310. 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 the chromium detected in well 0310. The iron levels in well 0310 exceed NMSWMR aesthetic groundwater standards. Gross beta radioactivity in well 0311 (5.6 mrem/yr) exceeds the SDWA MCL of 4 mrem/yr.

d). At SWMU 6-22, iron (14,000 ug/l), manganese (210 ug/l), and sodium (100,000 ug/l) were detected in well 1903. No pesticides or chlorinated herbicides were detected in the well. No total or fecal Coliforms were detected in the well. Traces of some inorganic analytes were detected. All detected concentrations were at or below applicable NMSWMR health-based groundwater standards. The pH, iron, and manganese in well 1903 exceed NMSWMR aesthetic groundwater standards. Gross alpha radioactivity (19 pCi/L) and gross beta radioactivity (9.7 mrem/yr) exceed SDWA MCLs of 15 pCi/L and 4 mrem/yr, respectively.

e). At SWMU 6-31, sodium, ranging from 21,000 to 27,000 ug/l, was detected in all three wells sampled. No explosives, pesticides, chlorinated herbicides, or total or fecal Coliforms were detected, but traces of some inorganic analytes were detected. All detected concentrations were below applicable NMSWMR health-based groundwater standards. Total phenols (0.047 mg/l) and pH (6.11) at well 1005 exceeded the NMSWMR aesthetic groundwater standards of 0.0005 mg/l and 6.5-8.5, respectively. Gross beta radioactivity in wells 1002 (6.4 mrem/yr) and 1004 (4.3 mrem/yr) exceeds the SDWA MCL of 4 mrem/yr.

f). At Tijeras Arroyo, sodium, ranging from 21,000 to 27,000 ug/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.

3. Base-Wide Background and Hydrogeology: We procured transducers and prepared drilling and analytical bid packages for drilling activities in SNL/DOE Technical Area II (TA-II). This is to support the investigation into the origin of a suspected TCE plume under TA-II area, as part of the joint SNL/KAFB background study.

D. Voluntary and Interim Corrective Measures

1. We completed confirmatory sampling and engineer certification at SWMU 6-24, Manzano Sewage Treatment Facility (WP-16).

2. We initiated and completed the radioactive and mixed waste stabilization project at SWMU RW-68, Radium Dump/Slag Piles and Cratering Area (RW-68). The project consisted of waste segregation, screening, radiological and geophysical surveys, stabilization, and packaging. We screened 45 tons of industrial debris for radiation for release and disposed of it in the Kirtland AFB Landfill. Ten cubic yards of RCRA hazardous waste was stabilized and disposed of at the Waste Management of New Mexico facility in Rio Rancho; 152 cubic yards of mixed waste was stabilized and will be

disposed of at the Envirocare Low-Level Radioactive Waste Facility in Utah; 198 cubic yards of low-level radioactive contaminated soils were removed and will also be disposed of at Envirocare.

3. We removed the soil pile at SWMU ST-338, Horizontal Polarized Dipole Drum Rack, and disposed of it in the Kirtland AFB Landfill. We backfilled the excavation with clean fill.

4. We completed all site preparation activities at SWMU 6-32, Manzano Fire Training Area (FT-14) for the Radio Frequency-Enhanced Heating/Soil Vapor Extraction (RF/SVE) demonstration. A security fence was installed and three trailers were brought on site. Two RF antenna applicator wells, two SVE wells, two temperature wells, and six combination tracer test/pressure measurement wells were installed. We also installed the air treatment system, consisting of vacuum lines, a condenser, and three activated carbon canisters. We completed tracer tests, respiration tests, and SVE test prior to startup of the RF heating. We initiated RF heating and anticipate continued heating through February 1997.

E. Corrective Measures Studies (CMS): No activity

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

IV. SUMMARY OF PROBLEMS

A. New Sites: No problems encountered.

B. RCRA Facility Investigation

1. Appendices I, II, and III

a). Appendix I SWMUs: We completed hollow-stem drilling operations at SWMU 6-4 after measures were taken to mitigate methane levels at the lower explosive limit (LEL). The borings were inerted during drilling operations by introducing dry ice and deionized water to the borings. Sampling operations were performed after purging the borings with nitrogen gas and monitoring indicated a safe atmosphere in and around the borings. Analytical holding times were exceeded for explosives in groundwater samples collected at SWMU 6-31 (wells 1006 and 1007) and for groundwater samples (well 1904) and sediment samples collected at SWMU 6-22. These locations were re-sampled in late December 1996; sampling will continue through early January 1997. This was an unapproved laboratory variance. A new subcontract laboratory, approved by project chemists, will be used for explosives analyses during future LTM sampling events.

b). Appendix II SWMUs: No problems encountered.

c). Appendix III SWMUs: We were not able to collect samples from SWMU 10-21, Bldg 66042 Septic Tank, after encountering bedrock at 6 inches.

2. Appendix IV SWMUs: No problems encountered.

3. Former Appendix V SWMUs: No problems encountered.

C. Other Investigations

1. Post-Closure Care at WP-26: We were not able to sample several of the wells at WP-26 during the third post-closure round due to lack of water in the wells.

2. Groundwater Monitoring: No problems encountered.

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

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

E. Corrective Measures Studies: N/A

F. No Further Action: N/A

V. PROJECTED WORK FOR THE NEXT REPORTING QUARTER

A. New Sites

1. We will initiate 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).

2. RW-75: We will perform final site restoration to include seeding. We will submit the site investigation report in January 1997.

B. RCRA Facility Investigation

1. Appendices I, II, and III

a). Appendix I SWMUs: We will complete data validation efforts associated with the Phase 2 RFI report. Preparation of the report will continue; however, 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 initiate data validation efforts associated with the Phase 2 RFI report. Preparation of the report will continue; however, 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 III SWMUs: We will initiate data validation efforts associated with the Phase 2 RFI report. Preparation of the report will continue; however, 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 prepare a SAP for Phase 2 RFI field activities at SWMU 6-30, Radioactive Burial 11 (RW-06).

3. Former Appendix V SWMUs: We will prepare a SAP for Phase 2 RFI field activities at SWMUs WP-58, East Laundry (WP-58), and ST-64, COE Vehicle Maintenance Yard (ST-64).

4. We will initiate RFI field activities at two Appendix IV sites: SWMU RW-68, Radium Dump/Slag Piles and Cratering Area (RW-68), and SWMU SS-69, Drum Storage Area (SS-69).

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: We will conclude the third round of sampling under the LTM Program and submit the report. The LTM Program Work Plan will be amended to include six wells at three additional sites: Sewage Lagoons, WP-26 (two wells), SWMU 6-16 (one well), and the Golf Course Main Pond, WP-26 (three wells). In addition, two wells at SWMU 6-31 (wells 1006 and 1007) and two wells at SWMU 6-22 (wells 1902 and 1904) will be included in the LTM Program. These additional locations

are scheduled to be sampled in the third round. Eight dedicated pumps will be installed at these new wells, with the exception of the Sewage Lagoon site. We will install 10 purge water tanks, one at each new well, prior to the fourth round of sampling, which is currently scheduled to begin on March 11, 1997.

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.

D. Voluntary and Interim Corrective Measures

1. We will utilize base Explosive Ordnance personnel to fracture the Imhoff tank at SWMU 6-24. We will then demolish the tank and sludge drying beds and regrade the site, including the evaporation ponds.

2. We will continue the RF/SVE demonstration project at FT-14 to include tracer tests prior to the actual RF/SVE activities.

4. We will dispose of the stabilized radiological waste, ash, and debris, and the low-level radiological contaminated soil from SWMU RW-68.

5. We will develop 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 begin preparation of CMS plans for the following sites:

SWMU 6-2	Protective Cap for 100-Year Flood Protection
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. We will be preparing project narratives and estimates for our FY98 program; however, we are concerned that most of the program will not be funded. We are awaiting NMED and or EPA review comments for numerous reports submitted during the previous 18 months. Without regulatory comments and or approvals or deficiency notices, we will not have the regulatory drivers needed for our program to compete with higher priorities within the command. We are at risk, therefore, of substantial cuts in the FY98 program.



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