

KAFB 3I

KIRTLAND AIR FORCE BASE ALBUQUERQUE, NEW MEXICO

Interim Corrective Measure Completion Report
for SWMU ST-66, Trestle Facility (ST-66)

Final Draft - July 1997



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Kirtland Air Force Base
Albuquerque, New Mexico
Restoration Branch
Environmental Management Division

Interim Corrective Measure Completion Report
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KAFB-3T

**INSTALLATION RESTORATION PROGRAM
KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO**

**Interim Corrective Measure Completion Report
for
SWMU ST-66, Trestle Facility (ST-66)**

July 1997

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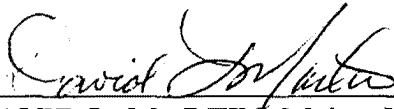
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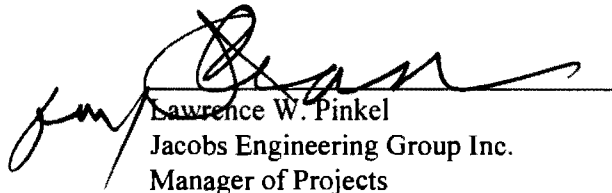
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PREFACE

This Resource Conservation and Recovery Act (RCRA) Facility Investigation Interim Corrective Measure completion report summarizes the activities conducted during 1997 at one solid waste management unit in Appendix II of Module IV to the RCRA Part B Permit for Kirtland Air Force Base (AFB). This completion report was prepared to address the requirements of the U.S. Air Force Statement of Work, dated February 28, 1997 and in accordance with the Interim Corrective Measure Work Plan, dated May 12, 1997. This completion report was prepared by Jacobs Engineering Group Inc., from June through July, 1997. Mr. Rodney C. Arnold of the Air Force Center for Environmental Excellence served as the Contracting Officer's Representative.



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ACRONYMS

AFB	Air Force Base
AFWL	Air Force Weapons Laboratory (currently Phillips Laboratory)
DERA	Defense Environmental Restoration Account
ECP	Environmental Compliance Program
EMP	electromagnetic pulse
EPA	U.S. Environmental Protection Agency
HHRB	human health risk based
ICM	interim corrective measure
IRP	Installation Restoration Program
mg/kg	milligrams per kilogram
N/A	not applicable
ND	not detected
OWS	oil/water separator
PCB	polychlorinated biphenyl
PID	photoionization detector
ppm	parts per million
PQL	practical quantitation limit
RCRA	Resource Conservation and Recovery Act
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TPH	total petroleum hydrocarbon
USAF	U.S. Air Force
UTL	upper threshold limit
VOC	volatile organic compound

EXECUTIVE SUMMARY

This Interim Corrective Measure (ICM) Completion Report at Kirtland Air Force Base (AFB) was performed as part of the Environmental Compliance Program (ECP). Kirtland AFB is located in central New Mexico, southeast and adjacent to the city of Albuquerque and the Albuquerque International Airport. Kirtland AFB encompasses approximately 52,287 acres, and is the host to the 377th Air Base Wing of the Air Force Materiel Command.

This ICM Completion Report presents the results of the solid waste management unit ST-66 vehicle pit oil/water separator (OWS) demolition/removal and assessment of the soils underlying the Trestle Facility main structure.

Fieldwork for this task was conducted during June 1997. Activities associated with the vehicle pit OWS included draining the liquid contained in the OWS; analyzing the liquid for total petroleum hydrocarbons (TPH); disposing of the liquid in the Kirtland AFB sanitary sewer system; excavating and removing the OWS and associated piping; backfilling and regrading the site to original conditions; plugging the drain pit; and installing two additional posts on the vehicle pit ramp. Activities associated with the Trestle Facility included surface and subsurface soil and sediment sample collection using a hand auger, and laboratory analysis. Soil samples were analyzed for volatile organics, semivolatile organics, TPH, polychlorinated biphenyls, metals, and soil moisture.

The vehicle pit OWS and associated piping were removed from the site. Two organic contaminants, acetone and methylene chloride, were detected in the soils underlying the Trestle Facility. The levels detected are below U.S. Environmental Protection Agency Region 3 industrial human health risk-based action limits for soil ingestion. Industrial limits were used since this area is not suitable for housing. A comparison was also made with the residential human health risk-based limits for soil ingestion. Neither contaminant exceeded the residential action limits.

Based on the findings, the Trestle Facility is recommended for no further action.

1. INTRODUCTION

Jacobs Engineering Group Inc., (Jacobs) has prepared this completion report for Kirtland Air Force Base (AFB) as part of the Environmental Compliance Program (ECP) under Contract Number F41634-94-D-8115, Delivery Order 0046. The objective of this completion report is to describe the activities conducted during the removal of the vehicle pit oil/water separator (OWS) at solid waste management unit (SWMU) ST-66, and assessment results of the soils underlying the Trestle Facility.

The Trestle Facility was investigated under Appendix V of Module IV to the Resource Conservation and Recovery Act (RCRA) Part B Permit. In December 1995 the U.S. Environmental Protection Agency (EPA) Region 6 approved a Class 2 permit modification, under which this site was moved to Appendix II. The site is a medium relative-risk area.

Removal activities associated with SWMU ST-66 consisted of verification sampling of all liquid in the OWS, and the excavation and removal of the OWS structure and associated piping.

Assessment activities at the Trestle Facility consisted of collecting and analyzing soil borings adjacent to the test stand for constituents of concern.

Section 2 describes site facilities and past operations. Sections 3 through 6 present a summary of site activities, conclusions, and recommendations for future activities.

The U.S. Air Force Environmental Compliance Program

The ECP is a funding source for sites not eligible for Defense Environmental Restoration Account (DERA) and are therefore not listed in the Installation Restoration Program (IRP). Non-DERA sites are those suspected or confirmed hazardous waste sites that were created after 1984, or are otherwise ineligible for DERA funds and inclusion in the IRP.

The ECP sites are also listed on the Corrective Action Schedule of the RCRA Part B Permit.

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2. SITE BACKGROUND

Site background information is provided below.

2.1 Kirtland AFB Location

Kirtland AFB is in Bernalillo County in central New Mexico, southeast and adjacent to the city of Albuquerque and the Albuquerque International Airport (Figure 2-1).

2.2 Trestle Facility Description and History

As shown in Figure 2-2, the Trestle Facility is located in the southern portion of Kirtland AFB near Pennsylvania Avenue off Trestle Tow Road. Phillips Laboratory (formerly Air Force Weapons Laboratory [AFWL]) used the Trestle Facility for electromagnetic pulse (EMP) testing of military aircraft. Construction of the Trestle Facility began in 1976, with the first aircraft test conducted in 1980. The facility was turned over to the U.S. Army in 1994, and currently is operated by Orion International Technologies, Inc., in a caretaker status for the U.S. Army at White Sands Missile Range. There are no plans to continue EMP testing at this facility. The Trestle Facility consists of aircraft support facilities, a tow way ramp, vehicle and aircraft maintenance pits, test stand, pulser support structures, terminator support tower, and the Central Ground Plane Wedge Building.

2.2.1 Trestle Facility Test Stand

The test stand (or trestle) is the major structure on the site, and was the focus of the background sampling. The trestle, composed completely of wood, is 118 ft high with a deck approximately 200 ft wide on each side. Access to the test deck is by a ramp or a walkway leading from the Wedge Building to the south side of the deck. The structure was not routinely treated with preservatives. Originally, structural members were pressure-treated with a pentachlorophenol-based fungicide in a gas carrier. No efforts have been made to preserve the structure with any outside material except coating the top surface of the deck and ramp planks with a noninvasive dielectric coating (U.S. Air Force [USAF], 1990).

2.2.2 Trestle Facility Vehicle Pit

The Trestle Facility vehicle pit, shown in Figure 2-3, is concrete, 5 ft deep. The inside dimensions are 5.3 ft x 28 ft and the outside dimensions are 9.3 ft x 32 ft, with a service entrance on the east side. The removed concrete OWS was 11.5 ft north of the pit, with outside dimensions of 4 ft x 4 ft x 4 ft. Buried pipes with drain and check valves connected the vehicle pit to the OWS. The OWS piping flowed to the vehicle pit outfall, an open drainage ditch 50 ft north of the pit.

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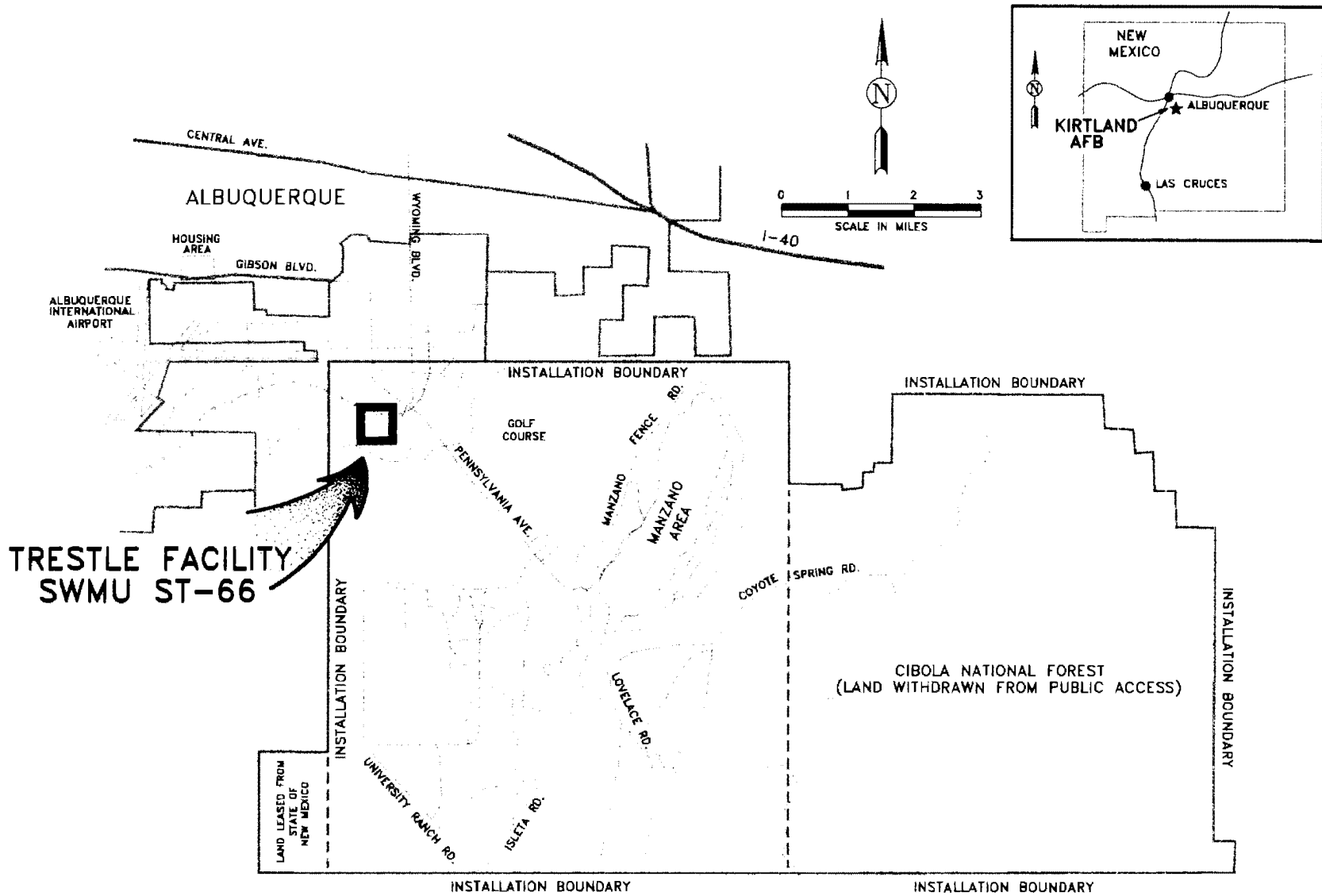
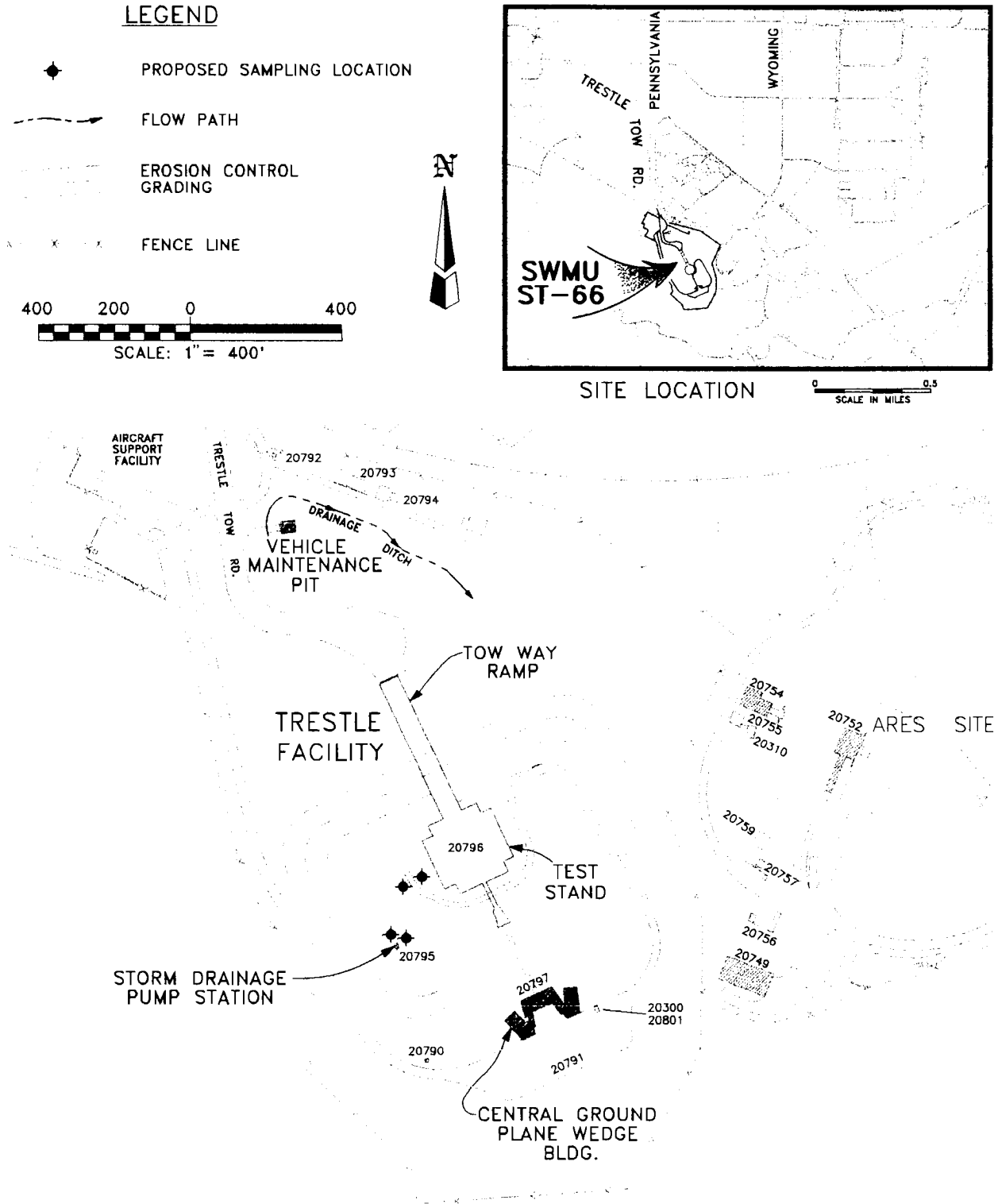


Figure 2-1. General Site Plan, SWMU ST-66, Kirtland AFB, Albuquerque, New Mexico



Tijeras Arroyo

LANDFILL 1
(LF-01)

Figure 2-2. Trestle Facility Location Map

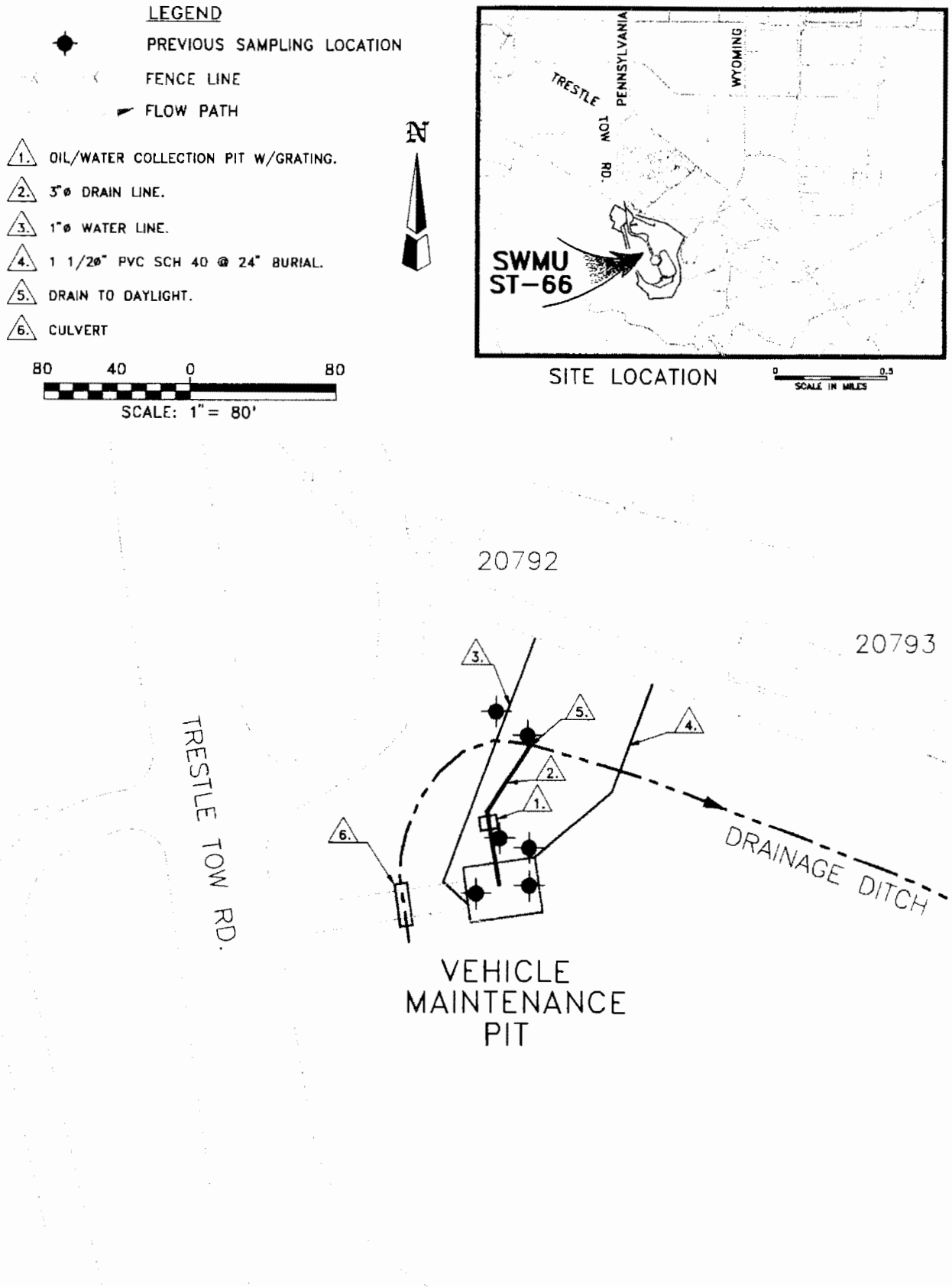


Figure 2-3. Trestle Facility Vehicle Pit/OWS

3. OIL/WATER SEPARATOR REMOVAL ACTIVITIES

This section provides an overview of the activities completed during the removal activities associated with the OWS located at the Trestle Facility vehicle maintenance pit. The field activities followed the procedures specified in the Interim Corrective Measure (ICM) Work Plan (USAF, 1997) and are discussed below.

3.1 General Site Preparation

Before any trenching activities began an excavation permit was obtained from Kirtland AFB personnel and the site utility map was used to visually inspect the area for any potential utility lines that may be encountered during trenching activities. A construction work zone was established around the site using barricades and caution tape.

3.2 Site Monitoring

Once the pipe and OWS were removed, the soil surrounding the pipe was monitored using a photoionization detector (PID) to determine if there were any leaks along the pipe. No visual stains or odors were observed. No elevated PID readings were noted during excavation. The initial reading inside the cast iron pipe was between 86 and 100 parts per million (ppm) but was not sustained. Additional readings, taken approximately one minute later, were 10 to 14 ppm. Material inside the pipe was a black, tar-like substance typically found in sewer lines. No staining was observed underneath the concrete OWS, and all PID readings were 0.0 ppm.

3.3 Field Activities

To support the removal activities at the Trestle Facility vehicle pit, the following tasks were accomplished.

3.3.1 Collection and Analysis of OWS Liquid

Two weeks prior to mobilization, the liquid in the OWS sump was collected and analyzed for total petroleum hydrocarbons (TPH) to determine if the liquid could be discharged into the Kirtland AFB sanitary sewer system. The sample was collected on May 12, 1997, and sent to EMAX Laboratory, an AFCEE-approved laboratory, the same day. The liquid in the OWS was clear, had no odor, and was approximately 2.5 ft deep. The laboratory results provided in Table 3-1, did not indicate the presence of TPH above the city of Albuquerque Sewer Use and Wastewater Control Ordinance discharge limits. Full analytical results and laboratory validation sheets are provided in Appendix A.

Table 3-1 Analytical Results from OWS Water Sample

<i>Sample ID</i>	<i>Result (mg/L)</i>	<i>Hydrocarbon Range</i>	<i>Discharge Limit (mg/L)</i>
WS-ST66-OWS-0.0	4.0	C7-C32 (diesel)	150.0

3.3.2 Draining of OWS Liquid and Disposal in Kirtland AFB Sanitary Sewer System

After analytical results were received and reported to be below local discharge limits for TPH, the results were submitted to the Environmental Management Division for approval. Once approval was granted, the liquid (two 55-gallon drums of water) was discharged into the sanitary sewer system on June 4, 1997, at manhole R8, located north of Building 381.

3.3.3 Excavation/Demolition and Removal of OWS and Associated Piping

The piping between the vehicle pit and the OWS was removed and then the remaining piping from the OWS to the drainage ditch was removed. The OWS was removed in one piece and then broken into smaller pieces using a hydraulic hammer attached to the backhoe as shown in Figures 3-1 and 3-2.

3.3.4 Transportation of Construction Debris to the Kirtland AFB Landfill, and Recyclable Metal Debris to the Defense Reutilization and Marketing Office

All concrete and scrap pipe were accumulated and loaded into an end dump tractor trailer and taken to the Kirtland AFB Landfill on June 4, 1997. Written approval from the Kirtland AFB landfill was received on June 4. A copy of the approval letter is provided in Appendix B. Two metal protective grates and the drain cover inside the vehicle pit were taken to the Defense Reutilization and Marketing Office on June 4, 1997.

3.3.5 Removal of Vehicle Pit Drain Grating and Cement Plugging

The drain inside the vehicle pit and exit pipe on the north side of the vehicle pit were filled flush with the existing structure using cement grout.

3.3.6 Backfill and Regrading of Project Area to Original Elevations

Once all the construction debris was removed, several cubic yards of clean fill were used as backfill material. The site was compacted using existing equipment and regraded to the original contours. Final site conditions are shown in Figure 3-3.

3.3.7 Installation of Removable Posts on Vehicle Pit Ramp

Removable posts were installed on the vehicle pit ramp by using a concrete core to cut two 5 1/2-inch diameter holes in the 10-inch-thick concrete slab. The removable protective posts were installed and placed in the core holes and painted to match the existing posts, as shown in Figure 3-4.



Figure 3-1. Photo Showing OWS Removal



Figure 3-2. Photo Showing OWS Demolition

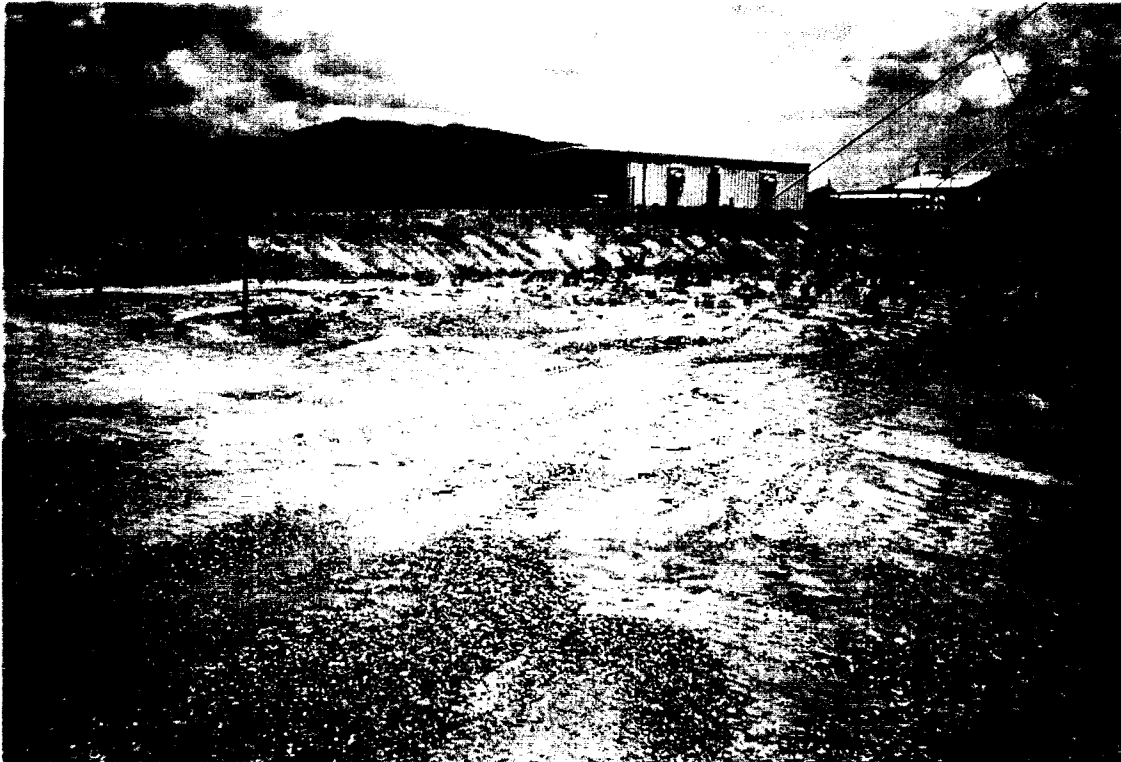


Figure 3-3. Photo Showing Final Site Condition



Figures 3-4. Photo Showing Vehicle Pit Protective Posts

4. TRESTLE FACILITY ASSESSMENT

This section provides an overview of the activities completed during the assessment of the soils underlying the Trestle Facility main structure. The field assessment activities followed the procedures specified in the ICM Work Plan (USAF, 1997), and are discussed below.

4.1 General Site Preparation

The surrounding drainage areas at the base of the trestle were inspected to get the most representative sample locations. Two borings were chosen at the lowest point near the storm drainage pump station of the Trestle Facility floor. The other two borings were located 20 ft on either side of the access road on the west side of the test stand. All locations were flagged and labeled according to the sample designation referenced in the ICM Work Plan (USAF, 1997). The sediment sample location was located on the catch basin below the Central Ground Plane Wedge Building.

4.2 Field Activities

To support assessment activities at the Trestle Facility test stand, the following tasks were accomplished.

4.2.1 Collection of Soil Samples from Soil Borings

Three soil samples were collected from each of the four soil boring locations. Samples were taken at the following depths: 0 to 6 inches, 20 to 26 inches, and 56 to 60 inches using a hand auger. Soil borings were identified as KAFB-SO-ST66-BH01, KAFB-SO-ST66-BH02, KAFB-SO-ST66-BH03, and KAFB-SO-ST66-BH04. One duplicate sample was also collected at BH02 and labeled as KAFB-SQFD-ST66-BH02-2.0-3.0.

4.2.2 Sediment Sample Collection

One sediment sample was collected from the drainage pathway on the south side of the trestle basin approximately 10 ft south of the catch basin below the Central Ground Plane Wedge Building. The sample was collected from the top 6 inches of soil on the concrete drainage pathway. The sample was dry-to-damp and consisted of a medium-grain sand.

4.2.3 Sample Analysis

Sixteen samples, including one field duplicate, one equipment rinseate, and one trip blank were collected from the Trestle Facility, and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), TPH (gas and diesel fraction), and soil moisture. Samples from the Trestle Facility were submitted to EMAX laboratory for analysis on May 29, 1997.

Samples for the Trestle Facility were included within analytical episode 97E139. Analyses were performed on the following samples: liquid in OWS WS-ST66-OWS-0.0; soil samples KAFB-SO-ST66-BH01 through KAFB-SO-ST66-BH04; sediment sample KAFB-SE-ST66-BH05; equipment rinseate KAFB-WQEB-ST66; and other quality assurance samples including a trip blank (WQTB), duplicate (SQFD), and matrix spike/matrix spike duplicates.

4.2.4 Borehole Survey

Each borehole was surveyed using a Kirtland AFB established control to generate a set of northing, easting, and elevation coordinates. The survey was completed by a professional land surveyor registered in the state of New Mexico. Coordinates of the boreholes are found on the map provided in Appendix C.

5. SITE CHARACTERIZATION

The following section describes the results of the assessment and the nature and extent of contamination.

5.1 Site Characterization

Site characterization activities are described below.

5.1.1 Geology

Boreholes were hand-augured to a depth of 5 ft. No boreholes penetrated into the Santa Fe Group sediments that presumably underlay this area. The soil samples consisted of a loamy sand, which is a mixture of clay (up to 25 percent), silt (up to 50 percent), and sand (up to 52 percent).

5.1.2 Hydrogeology

Groundwater beneath the Trestle Facility is found within the Upper Santa Fe sediments and is generally thought to be unconfined in the upper portion of the aquifer. Groundwater was not encountered during this assessment and is estimated to be approximately 450 ft below ground surface.

5.2 Contaminants of Concern

The following section describes the nature and extent of contamination based on analytical results for soil and sediment samples collected and submitted for analysis at the Trestle Facility. Analytical results for the trestle facility are summarized in Tables 5-1 (soil samples) and 5-2 (sediment sample), and show only reportable concentrations of detected analytes. Full analytical results and laboratory validation reports are provided in Appendix A.

5.2.1 Organic Compounds

Two organic compounds, acetone and methylene chloride, were detected in soil samples submitted for analysis. Acetone (0.089 to 2.2 milligrams per kilogram [mg/kg]) was detected in 11 out of 12 samples from the four boreholes, and in the sediment sample. Methylene chloride (0.006 to 0.034 mg/kg) was also detected in six out of 12 soil samples from the four boreholes, but not in the sediment sample. While acetone and methylene chloride were not detected in any of the blank samples, they are commonly attributed to laboratory contamination. Both of these constituents are below the U.S. EPA Region 3 industrial human health risk-based (HHRB) action levels of 200,000 mg/kg and 760 mg/kg, respectively, for soil ingestion. Industrial action levels were chosen since the area is not suitable for housing; however the detected values do not exceed residential action levels.

No SVOCs were detected in any of the soil samples collected from the Trestle Facility.

Table 5-1. Summary of Reportable Concentrations for Soil Analyses at Trestle Facility (Concentrations mg/kg)

Chemical Class	Analyte	HHRB Action Level	Borehole Number and Sample Depth Interval (ft)		
			BH01		
			0-1	2-3	4-5
VOCs	Acetone	200,000	.655	.089J	.101J
	Methylene chloride	760	ND	ND	.017
Metals	Aluminum	1E6	4470	5250	5500
	Antimony	820	ND	ND	ND
	Arsenic	610	ND	ND	ND
	Barium	140,000	61.2	68	72.4
	Beryllium	1.3	0.11J	0.126J	0.152J
	Cadmium	1,000	ND	ND	ND
	Calcium	N/A	24900	21200	14100
	Chromium, total	10,000	4.7J	5.25J	5.56J
	Cobalt	120,000	2.87J	3.49J	5.39J
	Copper	82,000	7.82	7.6	8.33
	Iron	610,000	7260	8340	8550
	Lead	400	ND	ND	ND
	Magnesium	N/A	1780	2140	2460
	Manganese	47,000	152	161	203
	Molybdenum	10,000	ND	ND	ND
	Nickel	41,000	5.17J	6.64J	7.72J
	Potassium	N/A	912	1180	1230
	Selenium	10,000	ND	ND	ND
	Silver	10,000	ND	ND	1.54J
	Sodium	N/A	ND	ND	ND
Thallium	N/A	ND	ND	ND	
Vanadium	14,000	11.9	13.2	13.9	
Zinc	610,000	23.5	24.3	28.1	
Other	Soil Moisture (%)	N/A	3.6	7.0	7.8

**Table 5-1. Summary of Reportable Concentrations for Soil Analyses at Trestle Facility
(Concentrations mg/kg) (Continued)**

Chemical Class	Analyte	HHRB Action Level	Borehole Number and Sample Depth Interval (ft)		
			BH02		
			0-1	2-3	4-5
VOCs	Acetone	200,000	.100J	.306	.176
	Methylene Chloride	760	.016	.006	ND
Metals	Aluminum	1E6	6030	3880	3520
	Antimony	820	ND	ND	ND
	Arsenic	610	ND	ND	ND
	Barium	140,000	76	53.1	47.9
	Beryllium	1.3	0.138J	0.0566J	0.0152J
	Cadmium	1,000	ND	ND	ND
	Calcium	N/A	23900	29900	20500
	Chromium, total	10,000	4.62J	3.72J	2.68J
	Cobalt	120,000	4.03J	2.7J	2.36J
	Copper	82,000	6.95	6.88	6.21
	Iron	610,000	7760	6210	5570
	Lead	400	ND	ND	ND
	Magnesium	N/A	2520	2130	1820
	Manganese	47,000	234	267	187
	Molybdenum	10,000	ND	ND	ND
	Nickel	41,000	5.75J	4.69J	4.52J
	Potassium	N/A	1760	939	996
	Selenium	10,000	ND	ND	ND
	Silver	10,000	ND	ND	ND
	Sodium	N/A	ND	ND	ND
Thallium	N/A	ND	ND	ND	
Vanadium	14,000	11.2	10.1	8.55	
Zinc	610,000	35.6	25.8	23.6	
Other	Soil Moisture (%)	N/A	7.3	3.1	4.0

Table 5-1. Summary of Reportable Concentrations for Soil Analyses at Trestle Facility (Concentrations mg/kg) (Continued)

Chemical Class	Analyte	HHRB Action Level	Borehole Number and Sample Depth Interval (ft)		
			BH03		
			0-1	2-3	4-5
VOCs	Acetone	200,000	.235	.507	.267
	Methylene chloride	760	ND	.008	.034
Metals	Aluminum	1E6	7680	5310	8060
	Antimony	820	ND	ND	ND
	Arsenic	610	ND	ND	ND
	Barium	140,000	95.8	54.5	88.1
	Beryllium	1.3	0.28J	0.164J	0.362
	Cadmium	1,000	0.172J	ND	ND
	Calcium	N/A	26400	19800	31200
	Chromium, total	10,000	6.51J	4.92J	6.8J
	Cobalt	120,000	4.51J	4.03J	5.39J
	Copper	82,000	10.9	7.32	10.6
	Iron	610,000	10100	7180	9520
	Lead	400	ND	ND	ND
	Magnesium	N/A	3020	2240	3260
	Manganese	47,000	263	172	264
	Molybdenum	10,000	ND	ND	ND
	Nickel	41,000	8.12J	7.12J	10.6J
	Potassium	N/A	1730	1200	1520
	Selenium	10,000	ND	ND	ND
	Silver	10,000	ND	ND	ND
	Sodium	N/A	ND	ND	ND
Thallium	N/A	ND	ND	ND	
Vanadium	14,000	17	11.3	14.6	
Zinc	610,000	36.7	26.4	33.8	
Other	Soil Moisture (%)	N/A	9.8	9.0	15.3

Table 5-1. Summary of Reportable Concentrations for Soil Analyses at Trestle Facility (Concentrations mg/kg) (Concluded)

Chemical Class	Analyte	HHRB Action Level	Borehole Number and Sample Depth Interval (ft)		
			BH04		
			0-1	2-3	4-5
VOCs	Acetone	200,000	ND	.262	2.282
	Methylene chloride	760	ND	.010	ND
Metal	Aluminum	1E6	6040	5610	6470
	Antimony	820	ND	ND	ND
	Arsenic	610	7.51J	ND	ND
	Barium	140,000	86	58.8	78.4
	Beryllium	1.3	0.185J	0.172J	0.197J
	Cadmium	1,000	ND	ND	ND
	Calcium	N/A	22500	18400	20300
	Chromium, total	10,000	4.98J	4.84J	4.89J
	Cobalt	120,000	4.29J	3.91J	4.65J
	Copper	82,000	9.22	7.42	9.21
	Iron	610,000	7630	7380	10300
	Lead	400	ND	ND	ND
	Magnesium	N/A	2440	2170	3180
	Manganese	47,000	208	199	259
	Molybdenum	10,000	ND	ND	ND
	Nickel	41,000	7.09J	6.1J	6.74J
	Potassium	N/A	1480	1250	1530
	Selenium	10,000	ND	ND	ND
	Silver	10,000	ND	ND	ND
	Sodium	N/A	ND	ND	ND
Thallium	N/A	ND	ND	ND	
Vanadium	14,000	12.1	11.6	15.6	
Zinc	610,000	32.5	25.2	33.5	
Other	Soil Moisture (%)	N/A	10.6	9.6	11.1

FOOTNOTES

- 1 Complete laboratory results and method detection limits are presented in Appendix A.
- 2 Action level from EPA Risk-Based Concentration Tables, January-June 1996 (EPA, 1996).
- HHRB Human health risk-based
- J Estimated value
- N/A Not applicable
- ND Not detected above the method detection limit
- PQL Practical quantitation limit
- UTL Upper threshold limit

Table 5-2. Summary of Reportable Concentrations for Sediment Analyses at Trestle Facility (Concentrations mg/kg)

<i>Chemical Class</i>	<i>Analyte</i>	<i>HHRB Action Level</i>	<i>Sediment Sample</i>
VOCs	Acetone	200,000	.323
Metal	Aluminum	1E6	4180
	Antimony	820	ND
	Arsenic	610	5.72J
	Barium	140,000	49
	Beryllium	1.3	.0581J
	Cadmium	1,000	2.29J
	Calcium	N/A	19500
	Chromium, total	10,000	11
	Cobalt	120,000	3.63J
	Copper	82,000	15.5
	Iron	610,000	7280
	Lead	400	ND
	Magnesium	N/A	1670
	Manganese	47,000	180
	Molybdenum	10,000	ND
	Nickel	41,000	7.7J
	Potassium	N/A	974
	Selenium	10,000	ND
	Silver	10,000	ND
	Sodium	N/A	ND
Thallium	N/A	ND	
Vanadium	14,000	11.4	
Zinc	610,000	80.5	
Other	Soil Moisture (%)	N/A	4.3

FOOTNOTES

- 1 Complete laboratory results and method detection limits are presented in Appendix A.
 - 2 Action level from EPA Risk-Based Concentration Tables, January-June 1996 (EPA, 1996).
- HHRB Human health risk-based
 J Estimated value
 N/A Not applicable
 ND Not detected above the method detection limit
 PQL Practical quantitation limit
 UTL Upper threshold limit

5.2.2 Petroleum Hydrocarbons

No gasoline or diesel range hydrocarbons were detected in any of the soil samples collected from the Trestle Facility.

5.2.3 Polychlorinated Biphenyls

No PCBs were detected in any of the soil samples collected from the Trestle Facility.

5.2.4 Metals

No metals were detected above HHRB limits for industrial soil ingestion applications. Industrial concentrations were used since the area is not suitable for housing. Only beryllium exceeded the residential action level of 0.15 mg/kg. Beryllium is a naturally occurring metal in the soils on Kirtland AFB at levels exceeding the residential HHRB.

5.2.5 Soil Moisture

Soil moisture values ranged from 3.1 to 15.3 percent.

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6. CONCLUSIONS AND RECOMMENDATIONS

The following section provides the conclusions and recommendations for the field effort.

6.1 Oil/Water Separator

No stained soils or hazardous materials were encountered during removal activities associated with the OWS. The entire OWS and associated piping was removed, and the site restored to preconstruction conditions.

6.2 Trestle Facility

No contamination attributed to Trestle Facility operations above HHRB limits for industrial applications were detected during the assessment of the Trestle Facility. Based on the findings of this assessment, no further action is necessary; therefore the Trestle Facility does not require further investigation. A No Further Action proposal should be prepared.

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REFERENCES

42 USC §6901 et seq., Resource Conservation and Recovery Act, October 21, 1976.

EPA, 1996. *EPA Region III Risk-Based Concentration Table, January-June 1996*, Roy L. Smith, Ph.D., U.S. Environmental Protection Agency, Region III, Philadelphia, Pennsylvania. April 19, 1996.

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USAF, 1990. *Environmental Assessment for the Trestle Facility*, Kirtland AFB, New Mexico.