



**UNITED STATES AIR FORCE
ELMENDORF AIR FORCE BASE, ALASKA**

ENVIRONMENTAL RESTORATION PROGRAM

SA99 SITE INVESTIGATION REPORT

FINAL

SEPTEMBER 2004

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AFB	Air Force Base
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DRO	diesel-range organics
EPA	U.S. Environmental Protection Agency
GRO	gasoline-range organics
mg/kg	milligrams per kilogram
MILCON	military construction
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector
POL	petroleum, oil, and lubricant
PRG	preliminary remediation goals
RCRA	Resource Conservation and Recovery Act
RRO	residual range organics
SERA	State-Elmendorf Environmental Restoration Agreement
SI	site investigation
SVOC	semivolatile organic compounds
TCLP	toxicity characteristic leaching procedure
TOC	total organic carbon
UTL	upper tolerance limit
VOC	volatile organic compound

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EXECUTIVE SUMMARY

This report describes activities, findings, conclusions, and recommendations associated with the 2003 Site Investigation (SI) conducted at Site SA99 on Elmendorf Air Force Base, Alaska. The purpose of this SI was to delineate the drum disposal area and to assess potential soil and groundwater contamination associated with the drum disposal area.

A geophysical survey was conducted by Arctic Geosciences in June 2003 using magnetometer, electromagnetometer, and ground penetrating radar technologies. Results from the survey suggested the presence of ferrous and non-ferrous metallic debris in several locations across the SA99 site. Using the survey results as a guide, four test pits/trenches were excavated in July 2003 to intercept the debris and assess potential soil contamination in close proximity to the debris. Drums were encountered in each of the four test pits to depths of 6 feet below ground surface. Soil samples were collected from each of the trenches and submitted for laboratory analysis. Additionally, soil borings were advanced in July 2003 down gradient of the debris area. Groundwater was encountered in each of the soil borings and monitoring wells were installed. Soil boring and groundwater samples were collected and submitted for laboratory analysis.

Analytical results for all contaminants were below Alaska Department of Environmental Conservation cleanup levels and US Environmental Protection Agency Region IX preliminary remediation goals, or below previously measured background concentrations, thus indicating that no significant levels of contamination are present at Site SA99. Therefore, the 3rd Civil Engineer Squadron recommends that no further actions are necessary for Site SA99.

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1.0 INTRODUCTION

This Site Investigation (SI) Report presents the results, conclusions, and recommendations for the 2003 investigation performed at Site SA99 on Elmendorf Air Force Base (AFB). Information regarding the SA99 site is presented in the following sections:

- Section 1.0 provides a site description and history, results of previous investigations, and background concentrations for soil and groundwater on Elmendorf AFB.
- Section 2.0 is a summary of the 2003 SI field activities.
- Section 3.0 presents the relevant 2003 analytical data.
- Section 4.0 defines the nature and extent of contamination.
- Section 5.0 presents the conclusions and recommendations.
- Section 6.0 provides references used in preparation of this report.

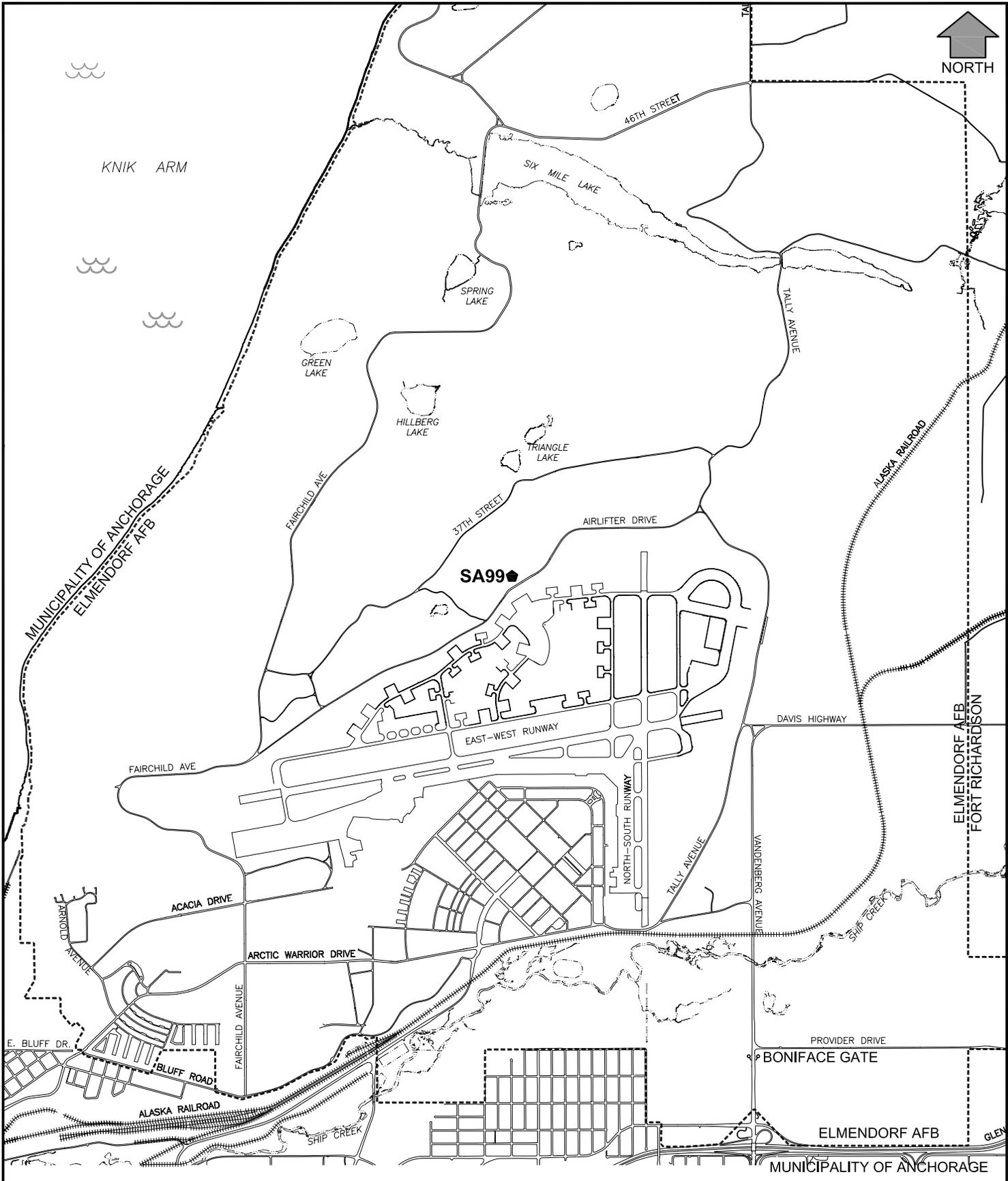
1.1 SITE DESCRIPTION AND BACKGROUND

Provided below is a general site description and background information for the SA99 site. Information was obtained from SI, aerial photographs, site drawings, previous investigation reports, and correspondence with Elmendorf AFB.

1.1.1 Site Location

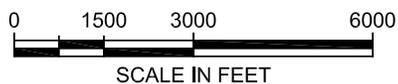
Elmendorf AFB is located in Southcentral Alaska, along the head of the Knik Arm of Cook Inlet and adjacent to the City of Anchorage (Figure 1-1). Elmendorf AFB comprises 13,130 acres, bordered to the north and west by Cook Inlet, to the east by Fort Richardson, and to the south by the City of Anchorage.

The SA99 site is located approximately 70 feet north of Airlifter Drive near the new petroleum, oil, and lubricants (POL) distribution station located just north of Hangar 18. As shown in Figure 1-2, the area of investigation between the gravel fire lane on the interior of the refueling station fence and Airlifter Drive is split down the middle by the POL distribution station perimeter fence. Figure 1-2 also presents soil sample results from previous investigations (described further in Section 1.2).



LEGEND:

--- ELMENDORF AIR FORCE BASE BOUNDARY

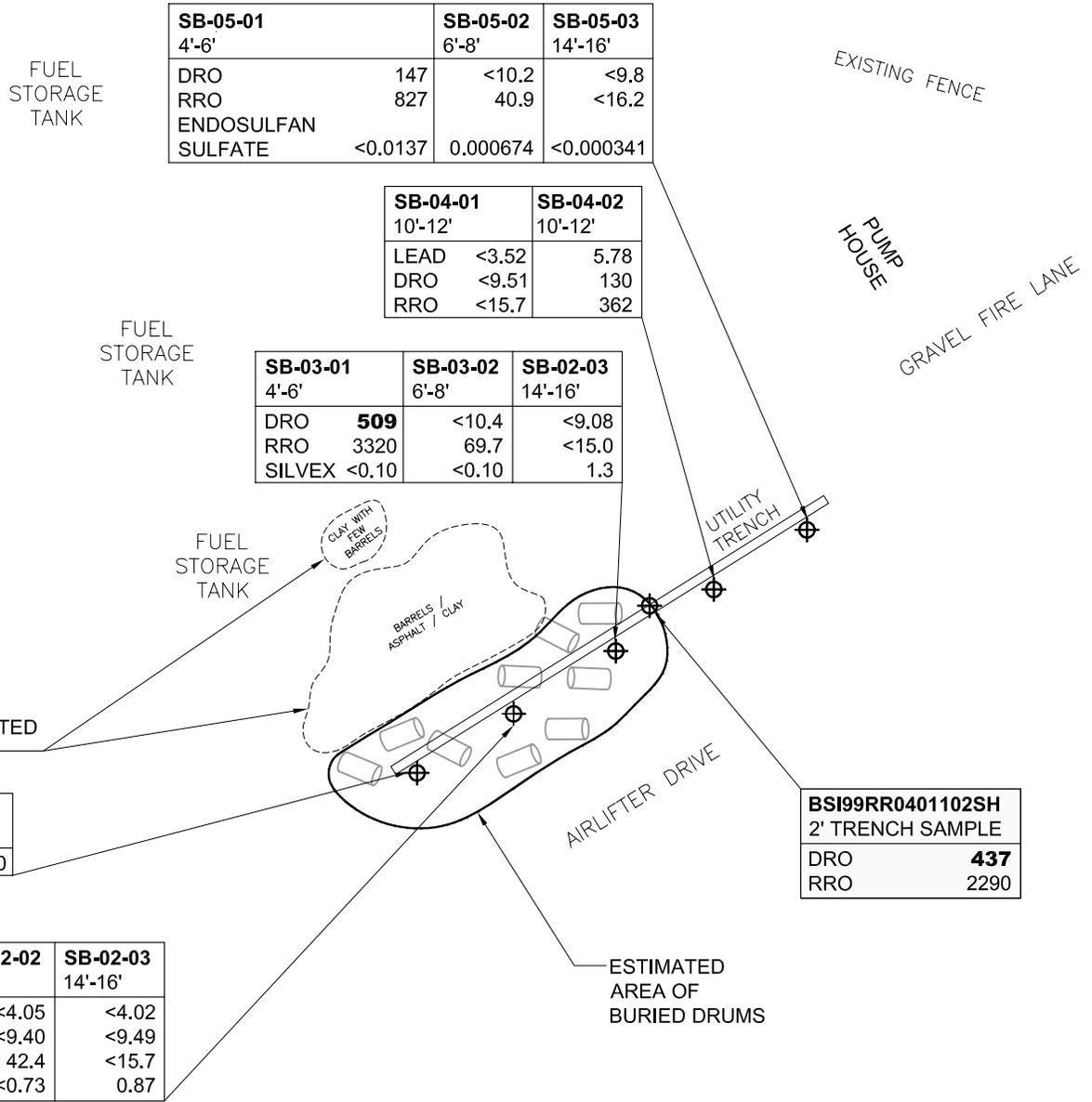


SA99 SITE LOCATION MAP

ELMENDORF AIR FORCE BASE, ALASKA

PROJECT MANAGER: K. McGovern	FILE NAME: Location Map.dwg	DATE: Aug. 31, 04
JE	LAYOUT TAB: Location Map	FIGURE NO. : 1-1
	FILE LOCATION: Elmendorf \ 05Z04501 \ 2004 SI Report	

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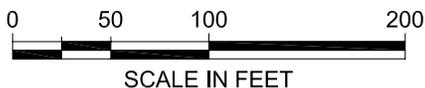
⊕ 1999 SOIL BORING LOCATION

ANALYTE LEGEND:

LEAD (6010) = METALS ANALYSIS
 SILVEX (2,4-5-TP) (SW8151) = HERBICIDES ANALYSIS
 ENDOSULFAN SULFATE (8081) = PESTICIDES ANALYSIS
 DRO = DIESEL RANGE ORGANICS
 RRO = RESIDUAL RANGE ORGANICS
 <# = NO CONCENTRATIONS ABOVE LABORATORY DETECTION LIMITS

NOTES:

- RESULTS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg).
- RESULTS IN BOLD EXCEED REGULATORY LIMITS.



SA99 SITE BOUNDARY AND HISTORIC SOIL SAMPLE RESULTS

ELMENDORF AIR FORCE BASE, ALASKA

PROJECT MANAGER: K. McGovern		FILE NAME: SA99 Historic.dwg	DATE: Aug. 31, 04
DRAWN BY: JE BJP		LAYOUT TAB: SA99 Historic	FIGURE NO. : 1-2
FILE LOCATION: Elmendorf \ 05Z04501 \ 2004 SI Report			

1.1.2 Site History and Use

SA99 is the site of a former drum disposal and storage area. Historical aerial photographs indicate that the area may have been a landfill and show that the area was initially used sometime between 1952 and 1962. The site was initially designated as SS-602 during previous investigations and has been subsequently designated as SA99 for this Comprehensive Environmental Response, Compensation, and Liability Act action.

Crushed drums and contaminated soil were discovered at this site during excavation work in 1998 for the military construction (MILCON) "Replace Tankage" project. Metal drums in various stages of decay and POL-contaminated soil were excavated and transported for disposal (see Section 1.2.1).

Utility line excavation activities in 1999 revealed additional crushed drums in this area. Section 1.2.2 discusses the 1999 utility trench investigation results.

Additional investigation was performed in 1999 under the State-Elmendorf Environmental Restoration Agreement (SERA) Phase VI to further investigate the nature and extent of contamination (see Section 1.2.3).

The area is currently the location of a POL distribution station operated by the 3rd Supply Squadron.

1.2 PREVIOUS INVESTIGATIONS

Previous investigations at the SA99 site have included the 1998 MILCON Replace Tankage Project, the Basewide SI associated with the 1999 Utility Line Excavation, and the 1999 SERA Phase VI. Pertinent area investigations are described in the 1992 Basewide Background Sampling Report. Results of these investigations are discussed in the following sections.

1.2.1 1998 MILCON Replace Tankage Project

Summary data on this investigation was obtained from the 1999 Year Three Summary Report for Site Evaluation and Bioventing Studies at SERA VI Site SS-602 (USAF 1999a) and 1998 analytical data (USAF 1999b).

Crushed drums and petroleum-contaminated soil were discovered during excavation for the MILCON "Replace Tankage" project. Crushed drums and contaminated soil were excavated to the extent necessary to complete the Replace Tankage project, segregated, and stockpiled. The removal effort was discussed with Mr. Jim Caruth at the 3rd Civil Engineer

Squadron in May 2003. Mr. Caruth was involved in the construction project and stated that crushed drums were removed to the limits of the construction project at the south side of the gravel fire lane. He provided a drawing that showed the locations where contaminated soil and drums were removed at the site.

Eight soil samples were collected from the contaminated soil stockpiled. Six samples were analyzed for polychlorinated biphenyls (PCBs), pesticides, and four metals (arsenic, cadmium, chromium, and lead). Two samples were analyzed for diesel-range organics (DRO) and residual-range organics (RRO).

Table 1-1 summarizes contaminants that exceeded Alaska Department of Environmental Conservation (ADEC) Method Two cleanup levels, U.S. Environmental Protection Agency (EPA) Region 9 preliminary remediation goals (PRGs), and/or background concentrations for soils removed from Site SA99.

**Table 1-1
MILCON “Replace Tankage Project”: Exceedances of Regulatory Criteria and
Associated Background Upper Tolerance Limits**

Analyte	Maximum Result (mg/kg)	EPA Region 9 PRG (mg/kg)	ADEC Method Two cleanup level (mg/kg)	Background UTL (mg/kg)
DRO	2,800	NA	1,000 ¹	NA
RRO	4,700	NA	10,000	NA
Arsenic	35	0.39	2	9.24-16.18
Chromium	30	38	26	48.4-76.1

Notes:

1 ADEC Method 1 criteria for DRO.

It was originally reported that trace PCBs had been detected. However, further review of the 1998 analytical data revealed that PCB detections were only in the method blank spike, matrix spike, and matrix spike duplicate rather than in the samples.

mg/kg = milligrams per kilogram

UTL = upper tolerance limit

For additional definitions, see acronyms and abbreviations list.

The Air Force subsequently transported the approximately 2,400 cubic yards of stockpiled soil to Alaska Soil Recycling for thermal treatment and disposal.

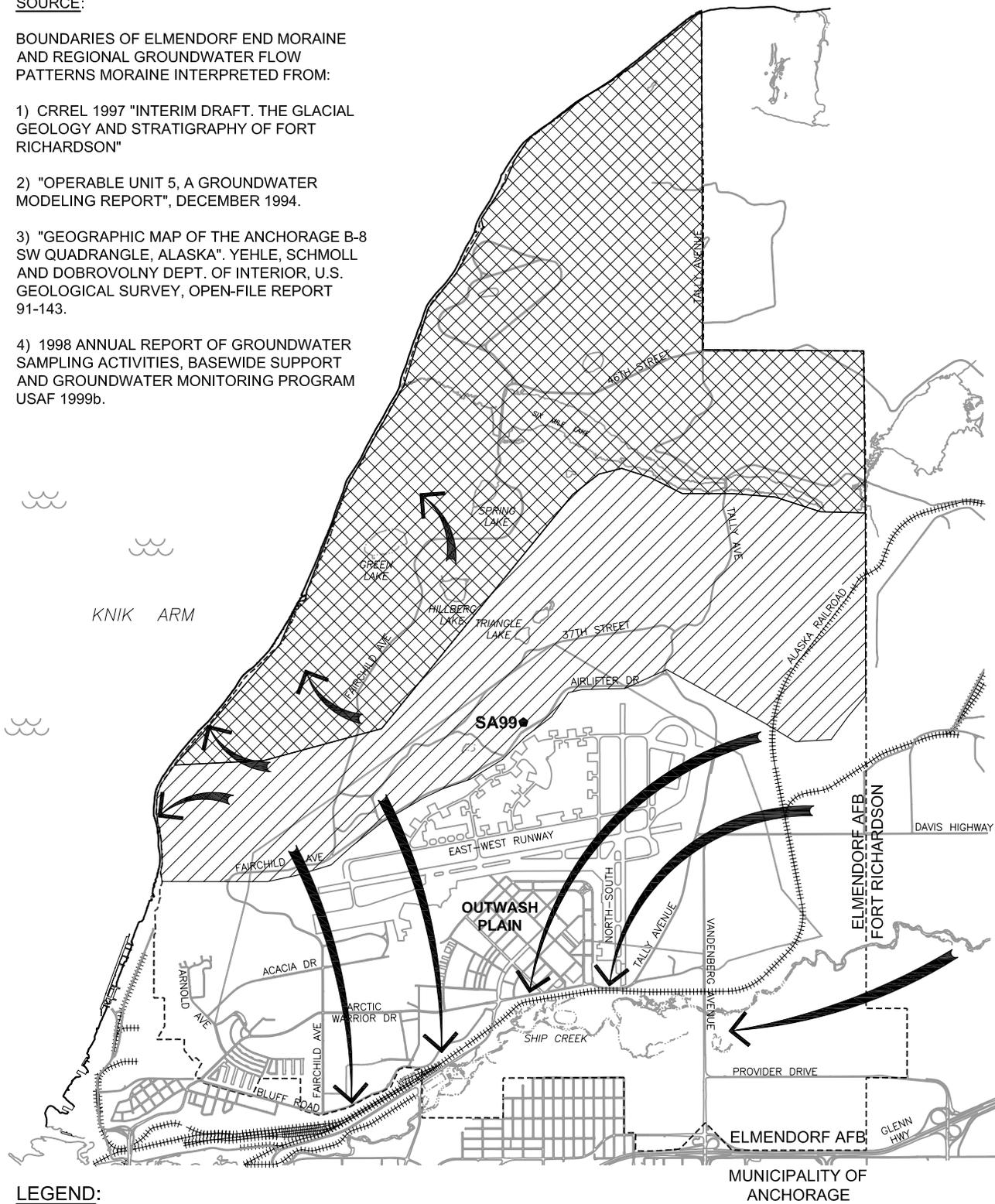
1.2.2 1999 Utility Line Excavation

Excavation of a utility trench in June 1999 uncovered a layer of asphalt from 1.5 to 2 feet below ground surface (bgs) and a layer of crushed drums from 2 to more than 4 feet bgs.

SOURCE:

BOUNDARIES OF ELMENDORF END MORAIN
AND REGIONAL GROUNDWATER FLOW
PATTERNS MORAIN INTERPRETED FROM:

- 1) CRREL 1997 "INTERIM DRAFT. THE GLACIAL GEOLOGY AND STRATIGRAPHY OF FORT RICHARDSON"
- 2) "OPERABLE UNIT 5, A GROUNDWATER MODELING REPORT", DECEMBER 1994.
- 3) "GEOGRAPHIC MAP OF THE ANCHORAGE B-8 SW QUADRANGLE, ALASKA". YEHLE, SCHMOLL AND DOBOVOLNY DEPT. OF INTERIOR, U.S. GEOLOGICAL SURVEY, OPEN-FILE REPORT 91-143.
- 4) 1998 ANNUAL REPORT OF GROUNDWATER SAMPLING ACTIVITIES, BASEWIDE SUPPORT AND GROUNDWATER MONITORING PROGRAM USAF 1999b.



LEGEND:

- ELMENDORF GROUND MORAIN
- APPROXIMATE LOCATION OF ELMENDORF END MORAIN
- ELMENDORF AIR FORCE BASE BOUNDARY
- GENERAL GROUNDWATER FLOW DIRECTION
- RAILROAD TRACKS



REGIONAL GROUNDWATER FLOW PATTERNS		
ELMENDORF AFB, ALASKA		
PROJECT MANAGER: K. McGovern	FILE NAME: Groundwater Flow.dwg	DATE: Aug. 31, 04
JE	DRAWN BY: BJP	LAYOUT TAB: Groundwater Flow
		FILE LOCATION: Elmendorf \ 05Z04501
		FIGURE NO.: 1-3

The trench had been partially backfilled to 2 feet bgs when one soil sample was collected from this trench at 2 feet bgs as part of the Basewide SI project. This sample was analyzed for gasoline-range organics (GRO), DRO, RRO, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and eight Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver). The utility line was installed in the trench, and the trench was backfilled with excavated soil.

Table 1-2 summarizes contaminants that exceeded ADEC Method One and Two cleanup levels, EPA Region 9 PRGs, and/or background concentrations. All other results were below ADEC Method Two cleanup levels (USAF 2000).

Table 1-2
1999 Utility Line Excavation: Exceedances of Regulatory Criteria and Associated Background Upper Tolerance Limits

Analyte	Maximum Result (mg/kg)	EPA Region 9 PRG (mg/kg)	ADEC cleanup level (mg/kg)	Background UTL (mg/kg)
DRO	437	NA	1000 ¹	NA
Arsenic	1.21	0.39	2	9.24-16.18
Chromium	36.5	38	26	48.4-76.1

Notes:

1 ADEC Method 1 criteria for DRO
For definitions, see acronyms and abbreviations list.

1.2.3 1999 SERA Phase VI Program

In 1999, five soil borings were advanced under the SERA Phase VI program. Figure 1-2 shows the locations of these borings. Each boring was terminated at 12 to 16 feet bgs, after field screening and visual observations indicated that contamination was not present in the borehole. Samples were collected from each boring and analyzed for GRO, DRO, RRO, benzene, toluene, ethylbenzene, and xylenes (BTEX), lead, PCBs, and pesticides/herbicides.

DRO was detected at a concentration above the ADEC Method Two cleanup level, in the sample collected at 4 to 6 feet bgs in SB-03. Silvex (2,4,5-trichlorophenoxypropionic acid, 2,4,5-TP) was detected in three samples. The maximum concentration occurred at 8 to 10 feet bgs in boring SB-01 and slightly exceeded the EPA Region 9 PRG. A cleanup criterion for Silvex has not been established in ADEC, 18 Alaska Administrative Code (AAC) 75, Method Two. The silvex detected in the two other samples was well below the EPA Region 9 PRG. All other results were below ADEC Method Two cleanup levels.

Table 1-3 summarizes contaminants that exceeded ADEC Method Two cleanup levels, EPA Region 9 PRGs, and/or background concentrations. All other results were below ADEC Method Two cleanup levels (USAF 1999a).

**Table 1-3
1999 SERA Phase VI Program: Exceedances of Regulatory Criteria and Associated
Background Upper Tolerance Limits**

Analyte	Maximum Result (mg/kg)	EPA Region 9 PRG (mg/kg)	ADEC Method Two cleanup level (mg/kg)	Background UTL (mg/kg)
DRO	509	NA	250	NA
Silvex	520	490	NA	NA

Notes:

For definitions, see acronyms and abbreviations list.

Crushed drums were observed at approximately 4 feet bgs in two of the borings (SB-02 and SB-03). The SERA Phase VI report (USAF, 1999a) concluded that the vertical extent of petroleum contamination extends from 2 to 6 feet bgs and the horizontal extent in the east/west direction is defined between soil borings SB-12 and SB-45. However, the horizontal extent of contamination in the north south direction is unknown. The extent of the silvex contamination is also unknown (USAF 1999a).

1.2.4 Basewide Background Soil and Groundwater Data

Existing background soil and groundwater data was used to evaluate soil and groundwater concentrations measured at the SA99 site. The following subsections describe the background data and how it was used to evaluate SA99 site conditions.

1.2.4.1 Soil

Elmendorf AFB undertook a background soil-sampling program in 1992 to collect data on metals concentrations in surface and subsurface soil on base (USAF 1993). These basewide background metals concentrations in soil were published for comparative use when assessing whether concentrations of metals found at investigation sites represent naturally occurring background levels or levels representing impact by site activities (USAF 1993). The design of the basewide background sampling program took into consideration the variability in soil conditions, specifically, the potential difference in metals in alluvial and moraine deposits, and concentration as a function of depth bgs (surface - 0 to 0.5 feet, root zone - 0.5 to 3.0 feet, and deep - 3.0 feet to groundwater level).

The eight RCRA metals were included as target analytes during the SA99 field investigation. Table 1-4 provides a statistical summary for arsenic and chromium from the basewide background sampling program (USAF 1993). The other six metals were found in concentrations below the action criteria. Individual SA99 site data points were compared to the 99-percentile upper tolerance limit (UTL) with an associated 95 percent confidence level that has been calculated for each metal at three specific depth ranges. If the onsite value is greater than the UTL, it is unlikely that the data reflects background concentrations present in the population of soils analyzed in the *Basewide Background Sampling Report* (USAF 1993).

Table 1-4
Summary of Basewide Background Soil Concentrations

Metal	Depth Range	Concentration Summary Statistics				UTL
		Minimum	Mean	Maximum	Standard Deviation	
Arsenic	Surface	3.90	7.20	13.10	2.54	16.18
	Root Zone	4.70	6.87	9.60	1.28	11.40
	Deep	3.50	5.46	8.35	1.18	9.24
Chromium	Surface	9.6	19.8	34.3	8.1	48.4
	Root Zone	19.0	31.8	45.3	6.4	54.4
	Deep	18.5	31.6	80.9	13.9	76.1

Notes:

Source: USAF 1993.

All values in milligrams per kilogram (mg/kg).

For definitions, see acronyms and abbreviations list.

When evaluating SA99 metals concentrations in soil, site data was first compared to EPA Region 9 PRGs and ADEC Method Two soil cleanup levels. If site data exceeded either EPA Region 9 PRG or ADEC Method Two cleanup levels, it was then compared to the background data. This procedure for comparing onsite metals concentrations in soil to background values was used as a screening procedure for determining if additional investigation or cleanup of metals in soil at the SA99 site was warranted. If the site data fell within the background concentrations, then the sample results were assumed to be naturally occurring and the data was excluded from further risk evaluation.

1.2.4.2 Groundwater

U.S. Geological Survey data on metals concentrations in groundwater samples was collected in the Anchorage Bowl during 1987, 1988, and 1990 (USAF 1993). While these wells are not located in the immediate vicinity of Elmendorf AFB, the data are representative of the metals concentrations expected in uncontaminated groundwater in the Elmendorf AFB area. Table 1-5 provides a statistical summary of the metals concentrations reported in 28 background samples for four metals except mercury (21 samples).

**Table 1-5
Summary of Basewide Background Groundwater Concentrations**

Metal	Concentration Summary Statistics				UTL
	Minimum	Maximum	Mean	Standard Deviation	
Arsenic	0.00100	0.13000	0.02886	0.03361	0.13000
Chromium	ND	0.35000	0.04328	0.08170	0.35000
Lead	ND	0.30000	0.02836	0.06905	0.30000
Mercury	ND	0.00110	0.00027	0.00027	0.00110

Notes:

Source: Summary statistics as presented in USAF 1995a.

All values in milligrams per liter (mg/L).

ND = Not detected.

For additional definitions, see acronyms and abbreviations list.

The complete metals data set can be found in Appendix A of the *Alaska Basewide Background Sampling Report* (USAF 1993).

1.2.5 Site Features and Structures

The SA99 site contains three above ground POL storage tanks and a containment area, a pump house, gravel access roads and a six-foot high chain link perimeter fence. The perimeter fence divides Site SA99 down its length. Two high voltage electrical lines run parallel to the fence between the fence and the gravel drive on the interior of the POL distribution facility. The more southern electrical line connects to a transformer located between the fence and Airlifter Drive.

1.2.6 Topography

Site SA99 elevation varies less than 10 feet from the average elevation of 200 feet above mean sea level. The SA99 site slopes slightly toward the south ending in a drainage ditch on the north side of Airlifter Drive. Grass serves as the predominant ground cover.

1.2.7 Site Geology

Three boring logs and four test pit logs describe the soil interval from 0 to 7 feet bgs as fill. This fill designation may be glacial till. However, due to the construction of the POL Distribution facility and the proximity of the test pits and soil borings to Airlifter Drive, it is assumed that till either is absent or has been extremely altered across the SA99 site. The soil interval from 4 to 9 feet bgs at soil boring MW-4 may be consistent with an irregular layer of silt and sand of end moraine. It is more likely, however, to be the original undisturbed surficial soil.

Surficial soils near the SA99 site are mapped as Cryorthents and Deception-Estelle-Kichatna Complex (USDA 1979). The Cryorthents soils on the site are located along Airlifter Drive. They are composed of very gravelly sandy loam and are well drained. When the organic mat is removed, their erosion hazard is slight by water and moderate by wind. They have moderate permeability and are moderately acidic (5.6-6.0) to neutral (6.6-7.3). The Deception-Estelle-Kichatna Complex soils on the site are located north of Airlifter Drive. They are composed of a surface organic layer overtop silty loam with gravelly loam beginning at 4 to 24 inches. The complex is well drained and when the organic mat is removed, their erosion hazard is severe by water and wind. They have moderate to moderately rapid permeability and are very acidic (4.5-5.0) to neutral (6.6-7.3) as depth increases.

1.2.8 Hydrogeology

The SA99 site is located south of the terminal moraine and groundwater in this area generally flows in a southerly direction toward Ship Creek. Ship Creek flows to the west through downtown Anchorage and discharges south-southwest into Knik Arm (USAF 1999a).

Groundwater in the unconfined shallow aquifer occurs between 39 and 41 feet bgs and generally flows in the southwesterly direction toward Airlifter Drive, as shown in Figure 1-3.

1.2.9 Surrounding Land Use

The current land use designation near the SA99 site is industrial and according to the Elmendorf AFB Management Action Plan, this land use designation is not expected to change (USAF, conversation with Marvin Thomasson [August 2004]). The area north of the site toward Sixmile Creek is designated open space and may be used for outdoor recreation.

1.2.10 Sensitive Ecosystems

As evident in aerial photographs, the majority of the SA99 site was cleared of vegetation and graded during the early 1950s. As of 2000, re-vegetation in the area has resulted in a forest and woodland habitat type. This habitat consists primarily of fireweed, grasses, and horsetails. Mixed black cottonwood, paper birch and white spruce, alders, and willows are also found surrounding the site. Wetlands or other persistent surface water bodies are not present within the site boundary.

Small mammals, such as shrews, voles, mice, red squirrels, snowshoe hares, porcupines, mink, and beaver may reside at or near the site. Predators, such as brown and black bears, coyotes, red foxes, lynx, and weasels may also reside near the site. Moose are regularly found in the area, although their concentrations are low (USFWS 1983). Some of the

passerines include species of sparrows, warblers, thrushes, chickadees, and swallows. Other birds include bald eagles, hawks, owls, spruce grouse, common raven, and black billed magpies. No threatened or endangered species are known to inhabit the SA99 site or nearby habitat.

To the south of the SA99 site, Ship Creek flows west through downtown Anchorage and discharges south-southwest into Knik Arm. Several anadromous fish species may sporadically enter Ship Creek to spawn. King and silver salmon utilize Ship Creek between the inlet and the Chugach power plant dam. Rainbow/steelhead trout inhabit the portion of Ship Creek between the Chugach power plant dam and the Elmendorf power plant dam.

1.2.11 Climate

The climate of Elmendorf AFB is greatly affected by local and regional geographic features. Cook Inlet moderates the climate seasonally, while the four surrounding mountain ranges protect the area from Gulf of Alaska storms and extreme winter temperatures from the northern interior (USFWS 1983).

The average summer temperatures range from 48° to 65°F, and winter temperatures range between 7° and 25°F (Weather Channel 2004). The average annual precipitation on Elmendorf AFB is 16.15 inches, with a range of 13 to 20 inches. The majority of the precipitation falls from July through September when the wind is from the southwest. Snowfall averages 77 inches. The average wind is from the north at 5.8 knots, and the extreme wind is from the north-northeast at 53 knots (USFWS 1983).

2.0 2003 SA99 SITE INVESTIGATION

The SA99 SI was conducted in several phases in 2003 to further characterize the nature and extent of contamination across this ½ acre site. Investigation activities centered around locations where previous excavations revealed the presence of buried drums. Analytical results from this investigation are presented in Section 3.0.

2.1 GEOPHYSICAL INVESTIGATION

A geophysical investigation was conducted by Arctic GeoScience Inc. on 9 and 10 June 2003 (Arctic GeoScience 2003). This information served as the basis for additional site work during the 2003 field season. The following instruments were used during the geophysical investigation:

- An electromagnetometer (Geonics EM-61) to detect both ferrous and non-ferrous metallic objects to depths of approximately 9 feet
- A magnetometer (Geometrics G-858) to detect ferromagnetic objects to depths of approximately 16 feet
- A EM-31 electromagnetometer to identify changes in (electrical) conductivity to depths of 16 feet
- Ground penetrating radar to locate metallic and non-metallic objects to depths of 50 feet

The geophysical investigation identified several areas of metallic debris. Results from the EM-61, G-858, and EM-31 indicated a larger debris area (approximately 40 feet by 45 feet by the EM-31) on the northwest side of the power line. Two smaller areas (approximately 20 feet by 45 feet by the EM-31) were identified on the southeast side of the power line. The electromagnetometer EM-61 revealed these areas in bright pink/raspberry colors as shown on Figure 2-1. The results of the electromagnetometer data suggested the presence of ferrous metals (e.g., steel) (Arctic GeoScience 2003).

2.2 TEST PIT/TRENCHING ACTIVITIES

Four test pits (trenches) were excavated from 16 through 18 July 2003 in order to investigate areas of debris identified during the geophysical survey. The areas of high magnetic flux density shown in Figure 2-1 can be associated with either:

- Small ferromagnetic objects that are close to the surface, or
- Large ferromagnetic objects that are buried well below the surface

The test pit excavations were positioned so excavation would start in a debris free area and progress into areas of concentrated debris, thus validating the results of the geophysical

survey and providing soil samples proximal to and within concentrated areas of drums and debris. These test pit locations are presented in Figure 2-2. The length of each trench varied, however, they were approximately 8 feet wide and 25 to 70 feet in length, and up to 15 feet deep. Test Pit No. 1 (TP01) was continuous with Test Pit No. 2 (TP02). Photographs of the trenching activities are provided in Appendix E.

Crushed drums were encountered in each of the test pits at depths between 1-foot bgs and 6 feet bgs. In general, the drums were crushed and no liquids were observed. One of the drums uncovered at 4 feet bgs in Test Pit No. 2 (TP02) contained a solid soft tar; however, no visible signs of contamination were noted in the soil surrounding this drum. An asphalt layer was discovered in three out of four test pits (TP01, TP02, TP04) from 0.5 foot bgs to 2.5 feet bgs.

Detailed descriptions of each test pit are provided below.

Test Pit No. 1 TP01 was started to the west of the largest area of suspected debris, and continued in a easterly direction for 25 feet and to a depth of 10 feet. Scattered drums were encountered between 10 feet and 25 feet from the western end of the excavation at depths of 2 to 4 feet. A gravel asphalt layer was observed at 2 to 3 feet bgs (approximately 1-foot thick).

Test Pit No. 2 TP02 was a continuation of TP01, 45 additional feet to the east and to a depth of 10 feet. Scattered drums were observed in the excavation from 0 to 40 feet from the west end of the TP02 excavation up to a depth of 6 feet. Drums with visible signs of asphalt were observed in the excavation. Many of these drums were not bung type. Asphalt pieces up to 2 feet in length, concrete slab, and pieces of wood timbers were also observed.

Test Pit No. 3 TP03 was located outside of the perimeter fence through one of the two smaller anomalies detected during the geophysical survey. The excavation measured 35 feet in length to a depth of 12 feet. Crushed drums were scattered throughout the excavation at depths up to 2 feet.

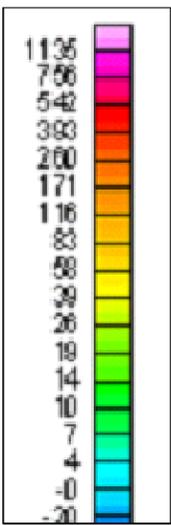
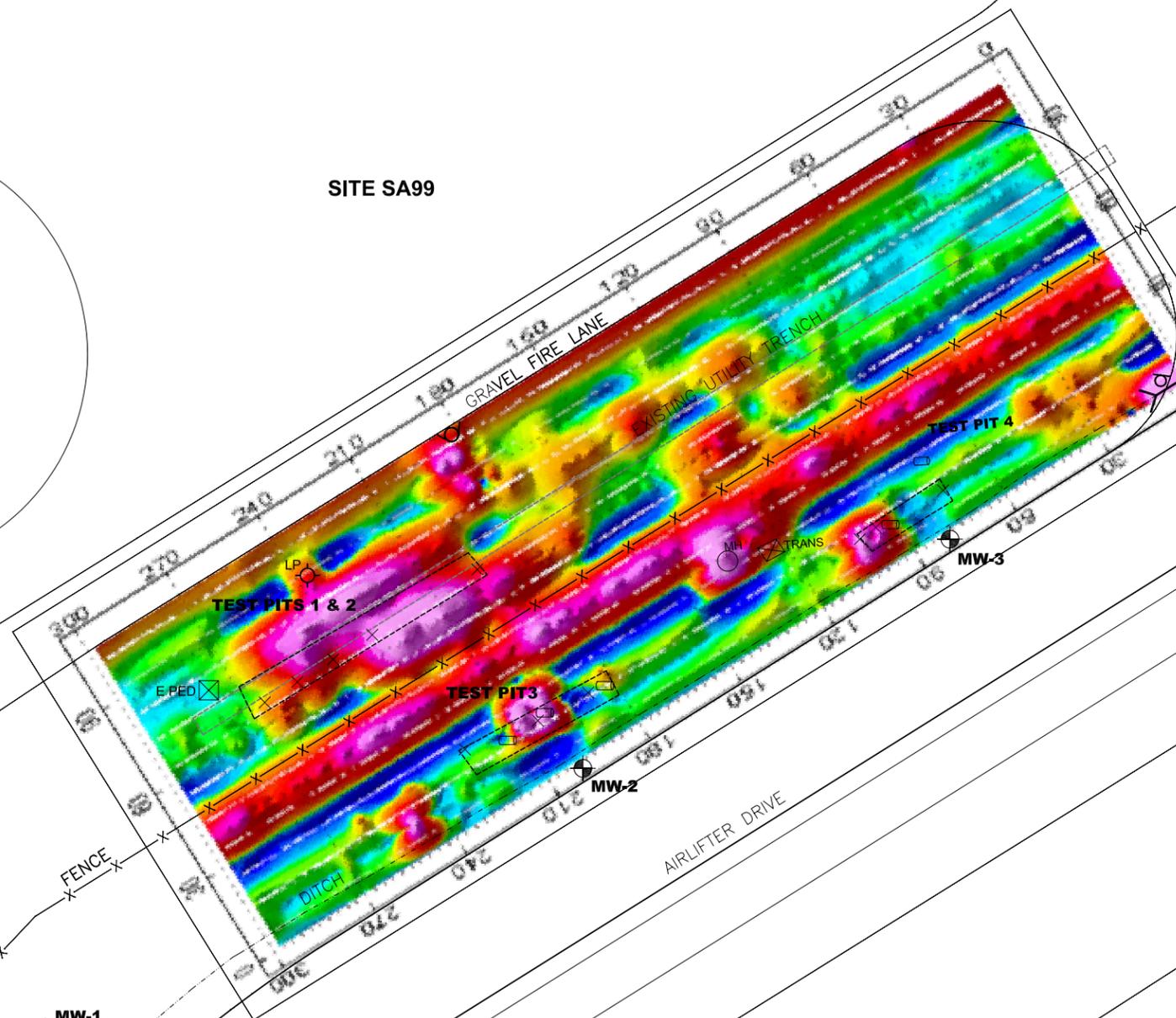
Test Pit No. 4 TP04 was located outside of the perimeter fence through one of the two smaller anomalies detected during the geophysical survey. Excavation measured 25 feet in length to a depth of 10 feet. Braided steel cable, wood timber, and asphalt pieces were observed in the excavation. Crushed drums were also scattered throughout the excavation at depths up to 2 feet.

Photoionization detector (PID) headspace field screening samples were collected and analyzed during test pitting activities. Three to four samples (14 total) were collected from each trench at various depths for fixed laboratory analysis. In general, these samples were



SITE SA99

FUEL STORAGE TANK



LEGEND:

- MONITORING WELL
- SAMPLE LOCATION
- EXCAVATION
- MANHOLE
- ELECTRIC TRANSFORMER
- ELECTRIC PEDESTAL
- FIRE HYDRANT
- LIGHT POLE
- STREET SIGN
- DRUM ENCOUNTERED DURING EXCAVATION



SA99 ELECTROMAGNETOMETER SURVEY DATA

ELMENDORF AFB, ALASKA

PROJECT MANAGER: K. McGovern	FILE NAME: Electro Survey.dwg	DATE: Aug. 31, 04
JE BJP	LAYOUT TAB: Electro Survey	FIGURE NO.: 2-1
	FILE LOCATION: Elmendorf \ 05Z04501 \ 2004 SI Report	

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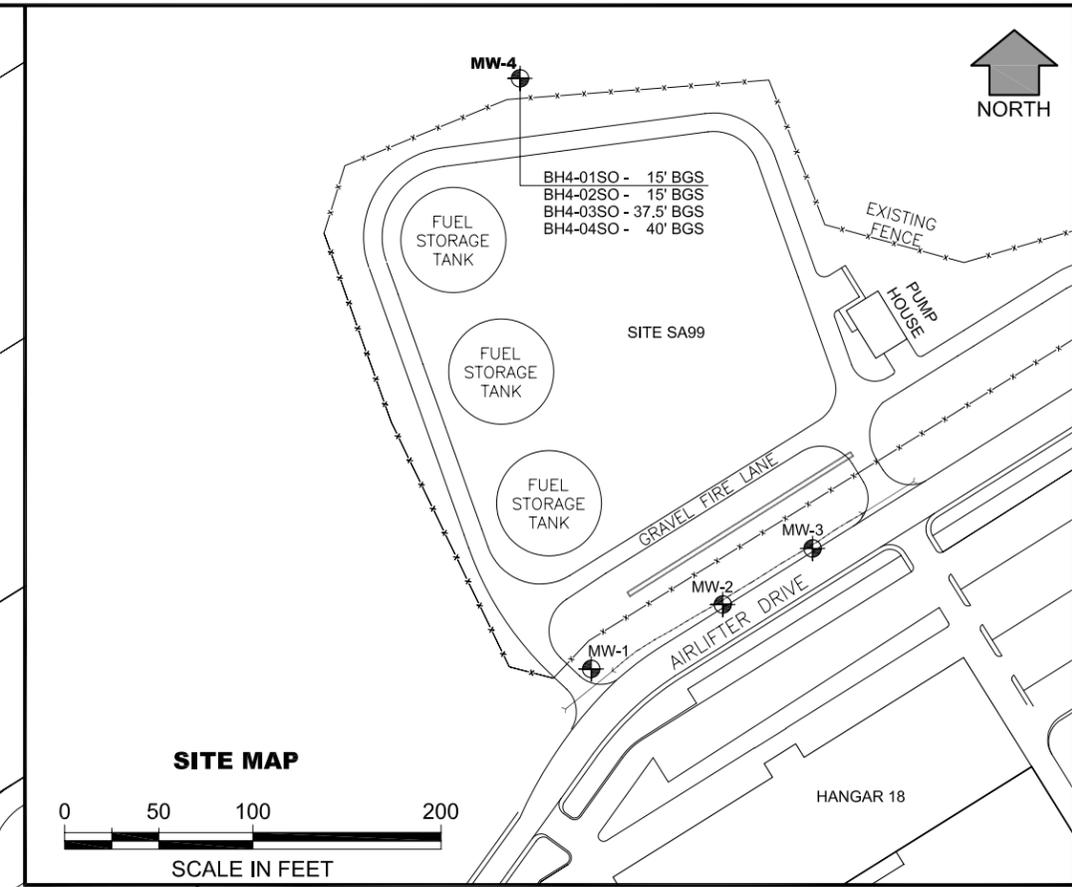
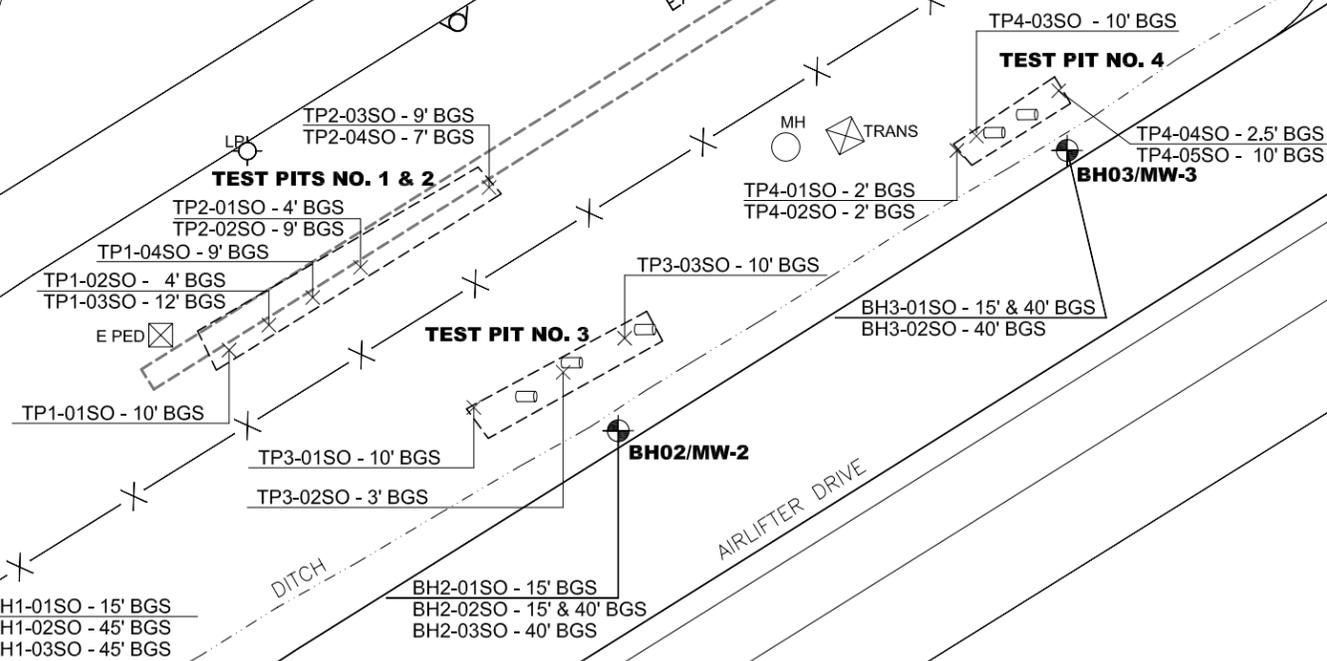
SITE SA99

FUEL STORAGE TANK

GRAVEL FIRE LANE

EXISTING UTILITY TRENCH

CULVERT



LEGEND:

- MONITORING WELL
- SAMPLE LOCATION
- EXCAVATION
- MH MANHOLE
- TRANS ELECTRIC TRANSFORMER
- E PED ELECTRIC PEDESTAL
- FIRE HYDRANT
- LP LIGHT POLE
- STREET SIGN
- DRUM ENCOUNTERED DURING EXCAVATION



SA99 2003 SITE ACTIVITIES AND SAMPLE LOCATIONS		
ELMENDORF AFB, ALASKA		
PROJECT MANAGER: K. McGovern	FILE NAME: SA99 Samples.dwg	DATE: Aug. 31, 04
DRAWN BY: AV/BJP	LAYOUT TAB: SA99 Samples	FIGURE NO.: 2-2
FILE LOCATION: Elmendorf \ 05Z04501 \ 2004 SI Report		

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either collected from the area just outside the concentrated debris area, co-located with the debris, or immediately underneath areas of concentrated debris. Within these general areas, PID results and visual observations were used to locate specific soil sample locations. Samples were submitted to the laboratory for herbicides, GRO, DRO, RRO, VOCs, and polynuclear aromatic hydrocarbon (PAH) analyses. One sample from each trench was also analyzed for eight RCRA metals, SVOCs, toxicity characteristic leaching procedure (TCLP) herbicides, and total organic carbon (TOC).

2.3 SOIL BORING/WELL INSTALLATION ACTIVITIES

Soil boring and groundwater monitoring activities were conducted to investigate potential down gradient migration of contamination associated with the SA99 area. Soil boring/well locations were selected primarily on the results of the 2003 geophysical investigation; locations were also determined based on the assumption that groundwater in the area flows toward the south. Soil borings were advanced on 17 and 18 July 2003; their locations are presented in Figure 2-2.

Three borings, soil borings BH01, BH02, and BH03, were advanced downgradient of the disposal area to 48 feet bgs, 46.5 feet bgs, and 46.5 feet bgs, respectively. Borings BH01, BH02, and BH03 were advanced down gradient from the area of concentrated debris and known contamination on the north side of Airlifter Drive. An additional boring, BH04, was advanced upgradient of the drum disposal area to 45 feet bgs. The location of BH04 was placed north of the tank farm to eliminate the possibility of damaging the lined containment area under the POL storage tanks. Field screening samples were collected at 5-foot intervals and were analyzed using the PID headspace technique. Two soil samples were collected from each boring; one from the 5-foot interval with the highest field screening readings and one from soil just above the water table in the suspected smear zone. Analytical samples were submitted to the laboratory for herbicides, GRO, DRO, RRO, VOCs, and PAHs. One sample from each boring was also submitted to the laboratory for TOC and bulk density analyses.

Each of the four borings encountered groundwater at depths between 28 and 42 feet bgs and monitoring wells were installed in the boreholes on 23, 24, 28, and 29 July 2003. Groundwater samples were collected from each of the wells and submitted to the laboratory for herbicides, GRO, DRO, RRO, VOCs, SVOCs, PAHs, and eight RCRA metals.

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3.0 ANALYTICAL DATA

This section summarizes the analytical data collected during the 2003 SI at the SA99 site.

3.1 ANALYTICAL DATA

Data for the SA99 site is subdivided into the following subsections:

- Soil data
- Groundwater data

3.1.1 Comparison and Regulatory Criteria

Soil data analyzed for petroleum hydrocarbons were compared to ADEC Method One cleanup levels as listed in 18 AAC 75.341 (ADEC 2003). The 2003 SI provided the basis for determining these cleanup levels (see Appendix C for additional discussion on calculating the Method One cleanup level). These cleanup levels differ from ADEC Method Two, Table B2 cleanup levels as shown below:

Source (18 AAC 75.341)	Cleanup Level (mg/kg)		
	Gasoline-range Organics	Diesel-range Organics	Residual-range Organics
Method One, Table A1. Part B Category C: 21-26	500	1,000	2,000
Method Two, Table B2. soil Cleanup level, under 40 inch zone, most stringent pathway	300	250	11,000

Notes:

For definitions see acronyms and abbreviations list.

In addition to meeting the soil cleanup levels in Table A1, sample results were also compared to the most stringent standards for BTEX compounds in Table B1 as follows:

Analyte	Table B1. Method Two Soil Cleanup Level, under 40 inch zone, most stringent pathway (mg/kg)
Benzene	0.02
Ethylbenzene	5.5
Toluene	5.4
Xylenes, total	78

All other soil analytical results were compared to EPA Region 9 PRGs and ADEC Method Two cleanup levels, under 40 inch zone. For Method Two cleanup levels, the most stringent of the ingestion, inhalation, and migration to groundwater standards was used. These values are included in the analytical tables presented in the following sections. The concentrations of inorganic compounds were also compared to the background concentrations listed in Tables 1-4 and 1-5 for soil and groundwater samples, respectively.

Groundwater analytical results were compared to ADEC 18 AAC 75.345, Table C groundwater cleanup levels (ADEC 2003).

3.1.1.1 Soil Test Pit/Trench Data

During the 2003 field season, four test pits were excavated at the SA99 site. Sixteen total samples were collected (three to five samples from each trench). Samples were collected based on field screening results, depth bgs, and location relative to unearthed crushed drums. All of the samples were analyzed for GRO, DRO, RRO, VOCs, and PAHs. In addition, one of the samples from each trench was analyzed for eight RCRA metals, SVOCs, TCLP herbicides, and TOC. Based on results of previous historical investigations, one sample was collected from each trench at 9 to 10 feet bgs and tested for Silvex (2,4,5-TP) contamination.

The measured concentrations of all detected analytes are presented in Table 3-1. Silvex was not detected in any samples. Although DRO and RRO were detected in several samples, results did not exceed ADEC Method One cleanup levels. However, several PAHs did exceed ADEC Method Two cleanup levels and EPA Region 9 PRGs in these same samples. Several samples exceeded the ADEC Method Two and the EPA Region 9 PRG for arsenic and chromium with maximum detections of 9.13 mg/kg and 32.3 mg/kg, respectively. No other compounds exceeded regulatory criteria.

3.1.1.2 Soil Boring Data

Between two to three soil samples were collected from each of the four soil borings advanced in 2003 (Figure 2-2). A duplicate sample was also collected from borehole BH04. Samples were analyzed for GRO, DRO, RRO, VOCs, PAHs, and herbicides. One sample from each borehole was also analyzed for TOC and bulk density.

The measured concentrations of all detected analytes are presented in Table 3-2. The result for the PAH benzo(a)pyrene for one sample marginally exceeded the EPA Region 9 PRG criteria, but did not exceed the ADEC Method Two cleanup level. All other results were below EPA Region 9 PRGs and ADEC Methods One and Two cleanup levels.

3.1.2 Groundwater Data

In 2003, groundwater samples were collected from the four monitoring wells at the site (Figure 2-2) using both bailers and low-flow methods. Samples collected with bailers were analyzed for GRO, DRO, RRO, PAHs, VOCs, and SVOCs. Samples taken using low-flow techniques were analyzed for herbicides and the eight RCRA metals. The measured concentrations of all detected analytes are presented in Table 3-3. All results were below cleanup levels or background.

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**Table 3-1
Elmendorf SA99 2003 Test Pit Soil Analytical Results Greater than the Detection Limits**

Analyte	Method	Units	Screening Criteria		Test Pit No. 1	Test Pit No. 1	Test Pit No. 1	Test Pit No. 1	Test Pit No. 2	Test Pit No. 3			
			ADEC	EPA R9	TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO
			Location Sample ID: (JE03ELM99) Collection Date Depth bgs		7/16/2003 10 feet bgs	7/16/2003 4 feet bgs	7/16/2003 12 feet bgs	7/16/2003 9 feet bgs	7/17/2003 4 feet bgs	7/17/2003 9 feet bgs	7/17/2003 9 feet bgs	7/17/2003 7 feet bgs	7/17/2003 10 feet bgs
Total Solids	A2540G	PERCENT	--	--	95.9 [0]	96.6 [0]	95.9 [0]	--	96.5 [0]	--	96.1 [0]	97.8 [0]	95.9 [0]
Diesel Range Organics	AK102	mg/kg	1,000	--	4.15 [21.3] J UBRL	7.19 [21.2] J UBRL	3.89 [21.1] J UBRL	--	4.89 [21.4] J UBRL	--	4.24 [21.3] J UBRL	452 [1040] J	4.11 [20.6] J UBRL
Residual Range Organics	AK103	mg/kg	2,000	--	10.7 [21.3] J UBRL	15.6 [21.2] J UBRL	7.59 [21.1] J UBRL	--	14 [21.4] J UBRL	--	11 [21.3] J UBRL	2560 [1040]	11 [20.6] J UBRL
Total Solids	E160.3M	PERCENT	--	--	--	--	--	96.8 [0]	--	96.6 [0]	--	--	--
Total Organic Carbon (TOC)	E415.1	mg/kg	--	--	724.7 [535]	--	--	--	907.3 [517]	--	--	--	2264 [518]
Acenaphthene	PAHSIM	µg/kg	210,000	3,700,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Acenaphthylene	PAHSIM	µg/kg	6,100,000	--	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Anthracene	PAHSIM	µg/kg	4,300,000	22,000,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Benzo(a)anthracene	PAHSIM	µg/kg	6,000	620	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	23.7 [65.8] J	ND [5.25]
Benzo(a)pyrene	PAHSIM	µg/kg	1,000	62	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	38 [65.8] J	ND [5.25]
Benzo(b)fluoranthene	PAHSIM	µg/kg	11,000	620	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	1,500,000	--	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	37.4 [65.8] J	ND [5.25]
Benzo(k)fluoranthene	PAHSIM	µg/kg	110,000	6,200	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Chrysene	PAHSIM	µg/kg	620,000	62,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	30.5 [65.8] J	ND [5.25]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	1,000	62	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Fluoranthene	PAHSIM	µg/kg	2,100,000	2,300,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	26.2 [65.8] J	ND [5.25]
Fluorene	PAHSIM	µg/kg	270,000	2,600,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	11,000	620	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Naphthalene	PAHSIM	µg/kg	43,000	56,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Phenanthrene	PAHSIM	µg/kg	4,300,000	--	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	ND [65.8]	ND [5.25]
Pyrene	PAHSIM	µg/kg	1,500,000	2,300,000	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]	--	ND [5.07]	30 [65.8] J	ND [5.25]
Arsenic	SW6020	mg/kg	2	0.39	--	6.26 [1.78]	--	--	--	--	6.51 [1.79]	5.91 [1.74]	--
Barium	SW6020	mg/kg	1,100	5,400	--	65.8 [0.297]	--	--	--	--	37.5 [0.298]	55.3 [0.29]	--
Cadmium	SW6020	mg/kg	5	37	--	0.0829 [0.198] J	--	--	--	--	0.105 [0.198] J	0.415 [0.193]	--
Chromium	SW6020	mg/kg	26	30	--	24.8 [0.396] B	--	--	--	--	21.8 [0.397] B	27.9 [0.387] B	--
Lead	SW6020	mg/kg	400	400	--	5.43 [0.198]	--	--	--	--	5.87 [0.198]	20.5 [0.193]	--
Selenium	SW6020	mg/kg	3.5	390	--	ND [0.495]	--	--	--	--	ND [0.496]	0.158 [0.484] J	--
Silver	SW6020	mg/kg	21	390	--	0.0588 [0.0989] J	--	--	--	--	0.0603 [0.0992] J	0.0697 [0.0967] J	--
Mercury	SW7471A	mg/kg	1.4	23	--	0.0552 [0.0387]	--	--	--	--	0.0503 [0.0381]	0.0479 [0.0398]	--
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	--	61	1100 [10000] J UBRL	ND [10000]	890 [10000] J UBRL	1100 [10000] J UBRL	1600 [10000] J UBRL	750 [10000] J UBRL	ND [9900]	--	1100 [10000] J UBRL
Acetone	SW8260B	mg/kg	10	1,600	ND [0.034]	0.0172 [0.0422] J	ND [0.0327]	--	0.0253 [0.0493] J	--	ND [0.0299]	--	ND [0.0395]
Carbon disulfide	SW8260B	mg/kg	--	--	ND [0.0068]	ND [0.0085]	ND [0.0065]	--	ND [0.0099]	--	ND [0.006]	--	ND [0.0079]
Methylene chloride	SW8260B	mg/kg	0.015	8.9	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	0.0023 [0.0049] J	--	ND [0.003]	--	ND [0.004]
Naphthalene	SW8260B	mg/kg	43	--	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049] UBRL	--	ND [0.003] UBRL	--	ND [0.004]
Anthracene	SW8270C	mg/kg	4,300	22,000	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Benzo(a)anthracene	SW8270C	mg/kg	6	0.62	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Benzo(a)pyrene	SW8270C	mg/kg	1	0.062	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	11	0.62	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	1,500	--	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	110	6.2	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Chrysene	SW8270C	mg/kg	620	62	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	1	0.062	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Dibenzofuran	SW8270C	mg/kg	15.6	290	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Fluoranthene	SW8270C	mg/kg	2,100	2,300	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Fluorene	SW8270C	mg/kg	270	2,600	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	11	0.62	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Phenanthrene	SW8270C	mg/kg	4,300	--	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--
Pyrene	SW8270C	mg/kg	1,500	2,300	--	ND [0.419]	--	--	--	--	ND [0.38]	--	--

Notes:
 18 AAC 75.341 Table A1. Method One - Petroleum Hydrocarbon Soil Cleanup Levels in Nonarctic Zones.
 Acronyms
 B - detected in associated blank as well as the sample
 J - estimated value
 M - a matrix effect was present, the data is usable
 UBRL - cross contamination, the sample result should be considered nondetect

**Table 3-1
Elmendorf SA99 2003 Test Pit Soil Analytical Results Greater than the Detection Limits**

Analyte	Method	Units	Screening Criteria		Location	Test Pit No. 3	Test Pit No. 3	Test Pit No. 4	Test Pit No. 4	Test Pit No. 4	Test Pit No. 4	Test Pit No. 4
			ADEC	EPA R9	Sample ID: (JE03ELM99)	TP3-02SO	TP3-03SO	TP4-01SO	TP4-02SO-D	TP4-03SO	TP4-04SO	TP4-05SO
					Collection Date	7/17/2003	7/17/2003	7/18/2003	7/18/2003	7/18/2003	7/18/2003	7/18/2003
				Depth bgs	3 feet bgs	3 feet bgs	2 feet bgs	2 feet bgs	10 feet bgs	2.5 feet bgs	10 feet bgs	
Total Solids	A2540G	PERCENT	--	--		95.8 [0]	--	97.6 [0]	96.9 [0]	96.8 [0]	97.1 [0]	--
Diesel Range Organics	AK102	mg/kg	1,000	--		4.5 [21.6] J UBRL	--	476 [204]	750 [212]	2.6 [19.5] J UBRL	2.98 [20.8] J UBRL	--
Residual Range Organics	AK103	mg/kg	2,000	--		11.7 [21.6] J UBRL	--	698 [204]	1130 [212]	9.35 [19.5] J UBRL	8.88 [20.8] J UBRL	--
Total Solids	E160.3M	PERCENT	--	--		--	95.9 [0]	--	--	--	--	96.2 [0]
Total Organic Carbon (TOC)	E415.1	mg/kg	--	--		--	--	--	--	507.3 [510] F	--	--
Acenaphthene	PAHSIM	µg/kg	210,000	3,700,000		6.69 [4.72]	--	2950 [523]	5630 [518]	ND [5.52]	ND [5.31]	--
Acenaphthylene	PAHSIM	µg/kg	6,100,000	--		ND [4.72]	--	240 [523] J	385 [518] J	ND [5.52]	ND [5.31]	--
Anthracene	PAHSIM	µg/kg	4,300,000	22,000,000		35 [4.72]	--	16300 [5230]	23300 [5180]	ND [5.52]	ND [5.31]	--
Benzo(a)anthracene	PAHSIM	µg/kg	6,000	620		115 [47.2]	--	20600 [5230]	33100 [5180]	ND [5.52]	ND [5.31]	--
Benzo(a)pyrene	PAHSIM	µg/kg	1,000	62		121 [47.2]	--	11600 [5230]	21100 [5180]	ND [5.52]	ND [5.31]	--
Benzo(b)fluoranthene	PAHSIM	µg/kg	11,000	620		122 [47.2]	--	16100 [5230]	25000 [5180]	ND [5.52]	ND [5.31]	--
Benzo(g,h,i)perylene	PAHSIM	µg/kg	1,500,000	--		52.7 [4.72]	--	5970 [523]	5860 [5180]	ND [5.52]	ND [5.31]	--
Benzo(k)fluoranthene	PAHSIM	µg/kg	110,000	6,200		52.1 [47.2]	--	6480 [523]	10200 [5180]	ND [5.52]	ND [5.31]	--
Chrysene	PAHSIM	µg/kg	620,000	62,000		128 [47.2]	--	20900 [5230]	35700 [5180]	ND [5.52]	ND [5.31]	--
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	1,000	62		14.2 [4.72]	--	1920 [523]	4240 [518]	ND [5.52]	ND [5.31]	--
Fluoranthene	PAHSIM	µg/kg	2,100,000	2,300,000		205 [47.2]	--	52400 [5230]	79000 [5180]	ND [5.52]	ND [5.31]	--
Fluorene	PAHSIM	µg/kg	270,000	2,600,000		4.3 [4.72] J	--	3430 [523]	5710 [518]	ND [5.52]	ND [5.31]	--
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	11,000	620		50.6 [4.72]	--	6090 [523]	5680 [5180]	ND [5.52]	ND [5.31]	--
Naphthalene	PAHSIM	µg/kg	43,000	56,000		1.47 [4.72] J	--	398 [523] J	748 [518]	ND [5.52]	ND [5.31]	--
Phenanthrene	PAHSIM	µg/kg	4,300,000	--		64.4 [4.72]	--	41600 [5230]	60700 [5180]	ND [5.52]	ND [5.31]	--
Pyrene	PAHSIM	µg/kg	1,500,000	2,300,000		220 [47.2]	--	44500 [5230]	73300 [5180]	ND [5.52]	ND [5.31]	--
Arsenic	SW6020	mg/kg	2	0.39		5.92 [1.74]	--	9.13 [1.8]	6.67 [1.82]	--	--	--
Barium	SW6020	mg/kg	1,100	5,400		39.3 [0.29]	--	130 [0.301]	132 [0.304]	--	--	--
Cadmium	SW6020	mg/kg	5	37		0.0774 [0.194] J	--	0.134 [0.201] J	0.107 [0.203] J	--	--	--
Chromium	SW6020	mg/kg	26	30		27.8 [0.387] B	--	29.8 [0.401] B	32.3 [0.405] B	--	--	--
Lead	SW6020	mg/kg	400	400		5.63 [0.194]	--	6.38 [0.201]	7.31 [0.203]	--	--	--
Selenium	SW6020	mg/kg	3.5	390		ND [0.484]	--	0.158 [0.501] J	ND [0.507]	--	--	--
Silver	SW6020	mg/kg	21	390		0.0642 [0.0968] J	--	0.077 [0.1] J	0.0671 [0.101] J	--	--	--
Mercury	SW7471A	mg/kg	1.4	23		0.0917 [0.0411]	--	0.062 [0.0395]	0.0662 [0.0395]	--	--	--
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	--	61		ND [10000]	ND [9900]	ND [10000]	ND [10000]	730 [10000] J UBRL	ND [10000]	1200 [9800] J UBRL
Acetone	SW8260B	mg/kg	10	1,600		0.0196 [0.0637] J	--	0.0458 [0.0359]	0.0365 [0.045] J	ND [0.0423]	0.0271 [0.0511] J	--
Carbon disulfide	SW8260B	mg/kg	--	--		ND [0.0127]	--	ND [0.0072]	ND [0.009]	0.0027 [0.0085] J	ND [0.0102]	--
Methylene chloride	SW8260B	mg/kg	0.015	8.9		ND [0.0064]	--	0.0013 [0.0036] J	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Naphthalene	SW8260B	mg/kg	43	--		ND [0.0064]	--	0.0072 [0.0036] UBRL	0.0042 [0.0045] J	ND [0.0042] UBRL	ND [0.0051]	--
Anthracene	SW8270C	mg/kg	4,300	22,000		ND [0.375]	--	23.9 [3.83] M	25.2 [3.92]	--	--	--
Benzo(a)anthracene	SW8270C	mg/kg	6	0.62		ND [0.375]	--	32.6 [3.83] M	41.6 [3.92]	--	--	--
Benzo(a)pyrene	SW8270C	mg/kg	1	0.062		ND [0.375]	--	26.9 [3.83] M	36.2 [3.92]	--	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	11	0.62		ND [0.375]	--	26.4 [3.83] M	30.3 [3.92]	--	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	1,500	--		ND [0.375]	--	11 [3.83] M	13.8 [3.92]	--	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	110	6.2		ND [0.375]	--	14.6 [3.83] M	25.5 [3.92]	--	--	--
Chrysene	SW8270C	mg/kg	620	62		ND [0.375]	--	35.2 [3.83] M	46 [3.92]	--	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	1	0.062		ND [0.375]	--	3.59 [3.83] J, M	4.86 [3.92]	--	--	--
Dibenzofuran	SW8270C	mg/kg	15.6	290		ND [0.375]	--	3.19 [3.83] J	2.34 [3.92] J	--	--	--
Fluoranthene	SW8270C	mg/kg	2,100	2,300		ND [0.375]	--	85.9 [3.83] M	105 [3.92]	--	--	--
Fluorene	SW8270C	mg/kg	270	2,600		ND [0.375]	--	6.67 [3.83] M	5.58 [3.92]	--	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	11	0.62		ND [0.375]	--	10.8 [3.83] M	13.7 [3.92]	--	--	--
Phenanthrene	SW8270C	mg/kg	4,300	--		ND [0.375]	--	70.5 [3.83] M	66.9 [3.92]	--	--	--
Pyrene	SW8270C	mg/kg	1,500	2,300		ND [0.375]	--	71.4 [3.83] M	88.7 [3.92]	--	--	--

Notes:

18 AAC 75.341 Table A1. Method One - Petroleum Hydrocarbon Soil Cleanup Levels in Nonarctic Zones.

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

M - a matrix effect was present, the data is usable

UBRL - cross contamination, the sample result should be considered nondetect

**Table 3-2
Elmendorf SA99 2003 Soil Boring Analytical Results Greater than the Detection Limits**

			Location Sample ID: (JE03ELM99) Collection Date Depth bgs		Soil Boring No. 1 BH1-01SO 7/23/2003 15 feet bgs	Soil Boring No. 1 BH1-02SO 7/24/2003 45 feet bgs	Soil Boring No. 2 BH2-01SO 7/25/2003 15 feet bgs	Soil Boring No. 2 BH2-02SO 7/25/2003 40 feet bgs	Soil Boring No. 3 BH3-01SO 7/28/2003 15 feet bgs	Soil Boring No. 3 BH3-02SO 7/28/2003 40 feet bgs	Soil Boring No. 4 BH4-01SO 7/29/2003 15 feet bgs	Soil Boring No. 4 BH4-02SO-D 7/29/2003 15 feet bgs	Soil Boring No. 4 BH4-03SO 7/29/2003 37.5 feet bgs
Analyte	Method	Units	Screening Criteria										
			ADEC	EPA R9									
Total Solids	A2540G	PERCENT	--	--	95.9 [0]	89.7 [0]	96 [0]	91.5 [0]	97.5 [0]	90.9 [0]	95.5 [0]	95.8 [0]	89.2 [0]
Diesel Range Organics	AK102	mg/kg	1,000	--	27.9 [21.8]	5.21 [23] J UBRL	4.87 [21.1] J UBRL	3.66 [25.9] J UBRL	9.53 [20.7] J UBRL	8.46 [21.7] J UBRL	5.76 [20.9] J UBRL	10.2 [20.7] J UBRL	6.17 [22.4] J UBRL
Residual Range Organics	AK103	mg/kg	2,000	--	135 [21.8]	17.1 [23] J UBRL	11.6 [21.1] J UBRL	8.86 [25.9] J UBRL	9.16 [20.7] J UBRL	11 [21.7] J UBRL	8.08 [20.9] J UBRL	12.1 [20.7] J UBRL	20.6 [22.4] J UBRL
Total Solids	E160.3M	PERCENT	--	--	96.2 [0]	90.7 [0]	96.3 [0]	89.6 [0]	96.9 [0]	93.6 [0]	96.5 [0]	96 [0]	86.7 [0]
Total Organic Carbon (TOC)	E415.1	mg/kg	--	--	--	--	--	1399 [523]	1666 [509]	--	--	--	976.1 [550]
Acenaphthene	PAHSIM	µg/kg	210,000	3,700,000	92.9 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Acenaphthylene	PAHSIM	µg/kg	210,000	--	3.53 [5.25] J-M	ND [5.94]	ND [5.27] J	ND [5.97] J	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Anthracene	PAHSIM	µg/kg	4,300,000	22,000,000	203 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(a)anthracene	PAHSIM	µg/kg	6,000	620	305 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	4.27 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(a)pyrene	PAHSIM	µg/kg	1,000	62	309 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	3.82 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(b)fluoranthene	PAHSIM	µg/kg	11,000	620	347 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	4.35 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	1,500,000	--	121 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	2.64 [5.42] J-M	ND [5.7]	ND [10.2] M	ND [9.56]	ND [5.88]
Benzo(k)fluoranthene	PAHSIM	µg/kg	110,000	6,200	73.1 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	2.3 [5.42] J	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Chrysene	PAHSIM	µg/kg	620,000	62,000	253 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]	4.83 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	1,000	62	39.6 [5.25] M	ND [5.94]	ND [5.27]	ND [5.97]	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Fluoranthene	PAHSIM	µg/kg	2,100,000	2,300,000	537 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	7.55 [5.42] M	ND [5.7]	ND [10.2]	3.91 [9.56] J	ND [5.88]
Fluorene	PAHSIM	µg/kg	270,000	2,600,000	108 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	11,000	620	131 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	2.05 [5.42] J-M	ND [5.7]	ND [10.2] M	ND [9.56]	ND [5.88]
Naphthalene	PAHSIM	µg/kg	43,000	56,000	56 [52.5] B-M	ND [5.94]	2.43 [5.27] J,B UBRL	5.08 [5.97] J,B UBRL	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Phenanthrene	PAHSIM	µg/kg	4,300,000	--	522 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	4.38 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Pyrene	PAHSIM	µg/kg	1,500,000	2,300,000	533 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]	8.24 [5.42] M	ND [5.7]	ND [10.2]	4.27 [9.56] J	ND [5.88]
Dalapon	SW8151A	µg/kg	--	1,800,000	ND [49]	ND [49]	ND [50]	ND [49]	ND [50]	13 [50]	18 [51]	ND [47]	ND [55]
Acetone	SW8260B	mg/kg	10.00	1,600.00	0.116 [0.0532] J-S	ND [0.0501]	ND [0.0342]	ND [0.0238]	ND [0.0662]	ND [0.02]	ND [0.0986]	ND [0.0659]	ND [0.053]
Benzene	SW8260B	mg/kg	0.02	0.65	0.0016 [0.0021] J, J-S	ND [0.002]	ND [0.0014]	ND [0.001]	ND [0.0027]	0.0101 [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Methylene chloride	SW8260B	mg/kg	0.02	8.90	ND [0.0053] J-S	ND [0.005]	0.0013 [0.0034] J UBRL	ND [0.0024]	0.002 [0.0066] J	ND [0.002]	0.0036 [0.0099] J	ND [0.0066]	ND [0.0053]
Naphthalene	SW8260B	mg/kg	43	0	0.0152 [0.0053] J-S, B UBRL	ND [0.005] UBRL	ND [0.0034]	ND [0.0024]	ND [0.0066]	ND [0.002]	0.0042 [0.0099] J,B	0.0022 [0.0066] J,B	ND [0.0053]
Toluene	SW8260B	mg/kg	5.4	520	0.0023 [0.0053] J, J-S	ND [0.005]	ND [0.0034]	ND [0.0024]	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]

Notes:
 18 AAC 75.341 Table A1. Method One - Petroleum Hydrocarbon Soil Cleanup Levels in Nonarctic Zones.
 18 AAC 75.341 Table B2. Method Two - Soil Cleanup Levels, under 40 inch, nonarctic zones.
 B - detected in associated blank as well as the sample
 J - estimated value
 J-M - a matrix effect was present, the sample result should be considered an estimate
 J-S - surrogate recovery, the sample result should be considered an estimate
 M - a matrix effect was present
 S - surrogate recovery
 UBRL - cross contamination, the sample result should be considered nondetect

**Table 3-3
Elmendorf SA99 Groundwater Analytical Results Greater than the Detection Limits**

Location Sample ID: (JE03ELM99) Collection Date				Well No. 1 SA99WL1WGN1 8/5/2003 8/13/2003	Well No. 1 SA99WL1WGN2-D 8/5/2003 8/13/2003	Well No. 2 SA99WL2WGN1 8/13/2003 10/22/2003	Well No. 3 SA99WL3WGN1 8/5/2003 8/13/2003	Well No. 4 SA99WL4WGN1 8/13/2003 10/22/2003
Analyte	Method	Units	Screening Criteria					
			ADEC					
Gasoline Range Organics	AK101	mg/L		ND [0.09]	ND [0.09]	ND [0.09]	ND [0.09]	ND [0.09]
Diesel Range Organics	AK102	mg/L	1.5	0.222 [0.323] J-TE	0.268 [0.3] J	0.312 [0.326] J UBR	0.36 [0.31]	0.587 [0.357]
Residual Range Organics	AK103	mg/L	1.1	0.623 [0.538]	0.645 [0.5]	1.02 [0.543]	0.67 [0.52]	0.698 [0.595]
Acenaphthene	PAHSIM	µg/L	2,200	ND [0.0515]	ND [0.05]	0.0485 [0.0532] J	ND [0.05]	ND [0.05]
Anthracene	PAHSIM	µg/L	11,000	ND [0.0515]	ND [0.05]	0.0371 [0.0532] J	ND [0.05]	ND [0.05]
Benzo(a)anthracene	PAHSIM	µg/L	1	0.0219 [0.0515] J	0.0258 [0.05] J	0.087 [0.0532] J	0.0255 [0.05] J	ND [0.05]
Benzo(a)pyrene	PAHSIM	µg/L	0.2	0.0263 [0.0515] J	0.0341 [0.05] J	0.069 [0.0532]	0.0283 [0.05] J	0.147 [0.05]
Benzo(b)fluoranthene	PAHSIM	µg/L	1	ND [0.0515]	ND [0.05]	0.103 [0.0532]	ND [0.05]	ND [0.05]
Benzo(g,h,i)perylene	PAHSIM	µg/L	--	0.0184 [0.0515] J	0.0237 [0.05] J	0.053 [0.0532] J	0.018 [0.05] J	ND [0.05]
Benzo(k)fluoranthene	PAHSIM	µg/L	10	ND [0.0515]	ND [0.05]	0.0392 [0.0532] J	ND [0.05]	ND [0.05]
Chrysene	PAHSIM	µg/L	100	0.0274 [0.0515] J	0.034 [0.05] J	0.0957 [0.0532]	0.0276 [0.05] J	0.0254 [0.05] J, B
Dibenzo(a,h)anthracene	PAHSIM	µg/L	0.1	ND [0.0515]	ND [0.05]	0.0192 [0.0532] J	ND [0.05]	ND [0.05]
Fluoranthene	PAHSIM	µg/L	1,460	0.0373 [0.0515] J	0.0469 [0.05] J	0.19 [0.0532]	0.0542 [0.05]	ND [0.05]
Fluorene	PAHSIM	µg/L	1,460	ND [0.0515]	ND [0.05]	0.124 [0.0532]	ND [0.05]	ND [0.05]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/L	1	0.0159 [0.0515] J	0.0189 [0.05] J	0.0443 [0.0532] J	0.0152 [0.05] J	ND [0.05]
Naphthalene	PAHSIM	µg/L	700	0.0425 [0.0515] J,B UBRL	0.0596 [0.05] B UBRL	0.261 [0.0532] B	0.0395 [0.05] J,B UBRL	0.025 [0.05] J,B UBRL
Phenanthrene	PAHSIM	µg/L	--	0.0353 [0.0515] J	0.0429 [0.05] J	0.288 [0.0532]	0.0411 [0.05] J	0.0174 [0.05] J
Pyrene	PAHSIM	µg/L	1,100	0.0422 [0.0515] J	0.0534 [0.05]	0.188 [0.0532]	0.0588 [0.05]	0.0175 [0.05] J
Arsenic	SW6020	µg/L	50	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]
Barium	SW6020	µg/L	2,000	27.8 [3]	31.8 [3]	46.9 [3]	37.1 [3]	23.5 [3]
Cadmium	SW6020	µg/L	5	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Chromium	SW6020	µg/L	100	ND [7]	ND [7]	ND [7]	2.26 [7] J	ND [7]
Lead	SW6020	µg/L	15	ND [2]	ND [2]	0.712 [2] J	0.898 [2] J	0.659 [2] J
Selenium	SW6020	µg/L	50	3.89 [10] J UBRL	ND [10]	6.39 [10] J	7.67 [10] J	7.42 [10] J
Silver	SW6020	µg/L	180	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Mercury	SW7470A	mg/L	2	ND [0.0002]	0.0001 [0.0002] J	0.0001 [0.0002] J	ND [0.0002]	0.0001 [0.0002] J
Carbon tetrachloride	SW8260B	mg/L	5	ND [0.001]	--	0.0003 [0.001] J	ND [0.001]	ND [0.001]
Methylene chloride	SW8260B	mg/L	5	ND [0.005]	--	ND [0.005]	ND [0.005]	0.0014 [0.005] J, B, J-S UBRL

Notes:

- 18 AAC 75.345 Table C Groundwater Cleanup Levels (January 2003)
- B - detected in associated blank as well as the sample
- J - estimated value
- J-S - surrogate recovery, the sample result should be considered an estimate
- J-TE - temperature outside EPA guidelines, the sample result should be
- UBRL - cross contamination, the sample result should be considered

4.0 NATURE AND EXTENT OF CONTAMINATION

The available data indicate that anthropogenic activities at the SA99 site have not resulted in significant contamination at the site. Table 4-1 summarizes the inorganic contaminants detected at concentrations above site screening levels. Arsenic concentrations exceeded the ADEC Method Two cleanup level (2 mg/kg) and the EPA Region 9 PRG (0.39 mg/kg). Concentrations were, however, consistent with established background concentrations (9.24 mg/kg), which indicate that the arsenic concentrations are the result of naturally occurring processes and are not related to site activities. Although chromium marginally exceeded the ADEC Method Two cleanup level (26 mg/kg) in three primary and one duplicate sample, these concentrations did not exceed the EPA Region 9 PRG (38 mg/kg) or the background concentration (48.4 mg/kg).

**Table 4-1
Inorganic Concentrations Exceeding Screening Levels**

Analyte (mg/kg)	Screening Level		Sample Location					
	EPA	ADEC	TP1-02SO	TP2-03SO	TP2-04SO	TP3-02SO	TP4-01SO	TP4-02SO Dup of TP4-01
Arsenic	0.39	2	6.26	6.51	5.91	5.92	9.13	6.67
Chromium	38	26	24.8	21.8	27.9	27.8	29.8	32.3

Notes:

Units are in mg/kg.

Concentrations in excess of the screening levels are bolded.

For definitions, see acronyms and abbreviations list.

Several test pit and soil boring samples also exceeded ADEC Method Two cleanup levels and EPA Region 9 PRGs for several PAHS as listed in Table 4-2. High DRO results (in excess of ADEC Method Two, but not ADEC Method One) were measured in two samples; one collected from a Test Pit No. 4 location and one from a Test Pit No. 2 location. Black asphalt residue or asphalt roadbed material was observed at both of these locations. All but two PAH compound exceedances were associated with the same Test Pit No. 4 sample location. A review of the chromatograms for the samples with DRO exceedances was performed. The Test Pit No. 2 sample, TP2-04SO, chromatogram indicated the presence of a heavier weight hydrocarbon, consistent with the asphalt tar observed at the site. The Test Pit No. 4 samples, TP4-01SO, and the duplicate sample for the same location, TP4-02SO, show a lighter pattern, possibly an asphalt coating product. The two other PAH exceedances occurred at the Bore Hole/Monitoring Well No. 1 location (at a depth of 15 feet); and in a Test Pit No. 3 location. These locations are also adjacent to discarded empty asphalt drums. In general, the elevated organic concentrations may be attributable to asphalt and asphalt type materials.

**Table 4-2
Organic Concentrations Exceeding Screening Levels**

Analyte (mg/kg)	Screening Level		Sample Location				
	EPA	ADEC	TP2-04SO	TP3-02SO	TP4-01SO	TP4-02SO Dup of TP4-01	BH1-01SO
Diesel range organics	NA	1,000	452	4.5	476	750	27.9
Benzo(a)anthracene	0.62	6	0.0237	0.115	20.6	33.1	0.305
Benzo(a)pyrene	0.062	1	0.038	0.121	11.6	21.1	0.309
Benzo(b)fluoranthene	0.62	11	ND [0.0658]	0.122	16.1	25	0.347
Benzo(k)fluoranthene	6.2	110	ND [0.0658]	0.0521	6.48	10.2	0.0731
Dibenzo(a,h)anthracene	0.062	1	ND [0.0658]	0.0142	1.92	4.24	0.0396
Indeno(1,2,3-cd)pyrene	0.62	11	ND [0.0658]	0.0506	6.09	5.68	0.131

Notes:

The ADEC Method One cleanup level of 1,000 mg/kg is listed for DRO; the ADEC Method Two cleanup value is used for all other analytes.

Units are in mg/kg.

Concentrations in excess of the screening levels are bolded.

For definitions, see acronyms and abbreviations list.

All groundwater concentrations were below ADEC Table C groundwater cleanup level values.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Drums were encountered in each of the four test pits/trenches excavated in June 2003. In general, the drums were crushed and did not contain liquids, other than asphalt paving and asphalt splattered drums. Although samples collected during the test pitting activities indicated arsenic and chromium concentrations exceeding both the ADEC Method Two cleanup levels and EPA Region 9 PRGs, results did not exceed the established background concentrations. Soil samples also did not exceed the calculated ADEC Method One cleanup levels for petroleum hydrocarbons, therefore, the PAH exceedences associated with elevated hydrocarbon levels may be disregarded.

Groundwater samples collected from the four wells installed in these borings also did not exceed regulatory criteria.

5.2 RECOMMENDATIONS

Based on the results of the 2003 SI at the SA99 site, no further action is recommended.

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6.0 REFERENCES

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APPENDIX A
Data Quality Review

APPENDIX A

ANALYTICAL DATA QUALITY ASSESSMENT

The analytical data quality assessment process performed by the Contractor project chemist was used to evaluate data quality and usability against previously established project data quality objectives.

At a minimum, ten percent of the calibration, internal standard, retention times, and chromatogram raw data and laboratory instrument reports, preparatory bench sheets, and injection logs were reviewed. This ten percent review included a comparability review of the raw data and hardcopy data against the electronic data. CTE Environmental Services (located in Anchorage, Alaska) and Columbia Analytical Services (located in Kelso, Washington) provided the analytical support for the 2003 investigation. If method or laboratory established criteria were not met, the AFCEE QAPP in conjunction with the EPA *National Functional Guidelines* were referenced to determine appropriate qualification of the data. The applicable data review qualifiers or “flags” as defined in this report are included in Appendix B tables. Data usability is not only based upon the qualification, but also on the project DQOs that were established in the Work Plan. The review did not include verification of calculations from the raw analytical data.

All reported data within this package should be considered valid and usable. The qualifiers used to flag data are defined in order of severity and generally follow the AFCEE format described in Table 8.2-1 or the AFCEE QAPP:

- U - synonymous with ND for nondetect; compounds was analyzed for but not detected above the method detection limit (MDL); final numerical result is below the MDL.
- F - The analyte was positively identified but the associated numerical value is below the RL.
- UJ – analyte was not detected at the reporting limit; the numerical value of the reporting limit is approximate due to comprised quality control or inherent inability to analyze the sample (e.g. matrix effects) and is considered an estimated value.
- J - analyte was positively identified, but numerical value of concentration is approximate due to compromised quality control or inherent inability to analyze the sample (e.g., matrix effects) and considered an estimated value.
- M - A matrix effect was present.
- B - The analyte was found in an associated blank, as well as in the sample.
- UBRL – Although the analyte was detected, the result should be considered non-detected at the reporting limit or reported value (whichever is greater) due to cross contamination during shipping or handling by field or laboratory personnel.
- R - analyte was positively identified, but sample results were rejected due to significant deficiencies in quality control. Rejected data are not usable and sample should be recollected if loss of this data point creates a data gap.

Secondary flags are used in the attached data tables to define the quality parameter that failed criteria resulting in the qualification of the result. These flags are listed below in order of severity (least to most severe):

- **M** – Matrix spike and/or spike duplicate
- **TE** – Sample cooler temperatures
- **P** – Incorrect or inadequate preservation methods
- **H** – Holding times
- **S** – Surrogate recovery
- **L** – Lab control sample
- **I** – Internal standard
- **C** – Initial or Continuing Calibration

In the event that multiple flags apply to a particular sample, the most severe flag will be reported in the accompanying data tables. In addition, rejected results are considered more severe than estimated results; therefore, if both an R-flag and a J-flag apply, only the R-flag will be reported.

DATA QUALITY SUMMARY

Data quality is determined as acceptable, estimated, or rejected. Acceptable data are associated with QC data that meet all QC criteria or with QC samples that did not meet QC criteria but data quality objectives are not affected. Estimated (J) results are usable but considered inaccurate due to a bias created by matrix interference or QC acceptance criteria that were not met. Rejected (R) data are not usable to support closure or risk based decisions and may require recollection of samples where data gaps were created.

In general, the overall quality of the data are acceptable. Sample collection, handling, analysis and reporting procedures defined in the project SAP were followed with the following exceptions:

- Of 18 coolers sent to the primary laboratories, seven were received with temperatures outside the EPA guidance of $4\pm 2^{\circ}\text{C}$ as indicated below:
 - Three coolers were received at temperatures greater than 6°C (cooler 0806B received at 6.5°C , cooler 0806C received at 6.1°C , and cooler 0806V received at 7.2°C). The samples associated with coolers 0806B and 0806V were recollected by the field crew. The samples associated with cooler 0806C were groundwaters for methods SW8270C-SIM and AK102/103. Although the AFCEE QAPP recommends rejecting data associated with temperatures out of compliance, a slight temperature exceedance of 0.1°C will not significantly impact the results; therefore, data associated with cooler 0806C are considered estimated and flagged UJ/J-TE.

- Four coolers were received at temperatures less than 2°C but greater than 0.0°C. There was no indication from the laboratory that the samples were frozen in any way. Data are not qualified based on this criterion.
- Herbicides in water samples were collected and sent to Severn Trent Laboratories (STL) in Denver to be analyzed by method SW8321A rather than SW8151 as specified in the project QAPP.

Details of the laboratory data evaluation are provided below by method and include the associated samples and analytes:

Gasoline Range Organics (GRO) by AK101. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All acceptance criteria were met.
- Holding Times: All acceptance criteria were met.
- Method Blanks: Target analytes were not detected in the method blanks; therefore, all acceptance criteria were met for this parameter.
- Trip Blanks: Target analytes were not detected in the trip blanks; therefore, all acceptance criteria were met for this parameter.
- Surrogates: All acceptance criteria were met.
- LCS: All acceptance criteria were met.
- MS/MSD: All acceptance criteria were met.
- Calibration: All acceptance criteria were met.
- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99BH4-01SO/JE03ELM99BH4-02SO: All results are comparable for this sample location.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results are comparable for this sample location.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Diesel Range/Residual Range Organics (DRO/RRO) AK102/103. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All criteria were met except the following:
 - Sample receiving temperature was outside EPA guidance of 4±2°C for sample SA99WL1WGN1 (cooler 0806C). As discussed above, the results for this sample are estimated and flagged UJ/J-TE.
- Holding Times: All acceptance criteria were met.
- Method Blanks: DRO and/or RRO was detected in a number of method blanks at levels less than the laboratory reporting limit but greater than the laboratory method detection limit. The results for the associated samples in the table below were less than five times the associated method blank level, are considered nondetect, and are qualified UBRL.

JE03ELM99BH1-02SO	JE03ELM99BH2-01SO
JE03ELM99BH2-02SO	JE03ELM99BH3-01SO
JE03ELM99BH3-02SO	JE03ELM99BH4-01SO
JE03ELM99BH4-02SO	JE03ELM99BH4-03SO
JE03ELM99TP1-01SO	JE03ELM99TP1-02SO
JE03ELM99TP1-03SO	JE03ELM99TP2-01SO
JE03ELM99TP2-03SO	JE03ELM99TP3-01SO
JE03ELM99TP3-02SO	JE03ELM99TP4-03SO
JE03ELM99TP4-04SO	SA99WL2WGN1

- Surrogates: The surrogate in sample JE03ELM99BH2-02SO recovered at less than 1% below the lower laboratory acceptance limit. DRO was detected in this sample; therefore, the result is considered estimated and is flagged J-S.
- LCS: All acceptance criteria were met.
- MS/MSD: The MS and MSD for RRO in sample SA99WL1WGN1 recovered below laboratory acceptance limits. The associated LCS recovered within limits indicating that the laboratory systems were in control. Therefore, only the primary sample results are considered estimated and flagged M. The RRO MSD for sample JE03ELM99BH4-01SO recovered below laboratory acceptance limits; however, the associated LCS and MS recovered within limits indicating the laboratory systems were in control. Therefore, only the primary sample results are considered estimated and are flagged M for this analyte.
- Calibration: All acceptance criteria were met.
- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99BH4-01SO/JE03ELM99BH4-02SO: All results are comparable for this sample location.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results are comparable for this sample location.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Polynuclear aromatic hydrocarbons by SW8270C-SIM. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All criteria were met except the following:
 - Sample receiving temperature was outside EPA guidance of 4±2°C for sample SA99WL1WGN1 (cooler 0806C). As discussed above, the results for this sample are estimated and flagged UJ/J-TE.
- Holding Times: All acceptance criteria were met.
- Method Blanks: Naphthalene was detected in three method blanks. The results for the associated samples (JE03ELM99BH2-01SO, JE03ELM99BH2-02SO, SA99WL1WGN1, SA99WL1WGN2, SA99WL3WGN1, and SA99WL4WGN1) are less than five times the associated method blank level, are considered non-detect, and are qualified UBRL.
- Surrogates: All acceptance criteria were met.
- LCS: All acceptance criteria were met.

- MS/MSD: All acceptance criteria were met with the exception of the following:
 - The MS/MSD recoveries for sample JE03ELM99BH1-01SO for analytes Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Dibenz(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, and Pyrene were outside laboratory acceptance limits. However, the associated LCS met recovery limits indicating the laboratory systems were in control. Therefore, only the results for the primary sample are considered estimated and are flagged M.
 - For sample JE03ELM99BH3-01SO, the MS/MSD recoveries for the following analytes were outside laboratory acceptance limits: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene. However, the associated LCS met recovery limits indicating the laboratory systems were in control. Therefore, only the results for the primary sample are considered estimated and are flagged M.
 - For sample JE03ELM99BH4-01SO, the MS/MSD recoveries for Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene were outside laboratory acceptance limits. However, the associated LCS met recovery limits indicating the laboratory systems were in control. Therefore, only the results for the primary sample are considered estimated and are flagged M.
- Calibration: All acceptance criteria were met.
- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99BH4-01SO/JE03ELM99BH4-02SO: All results agree to within a factor of four for this sample location. All results are well below the project action limits, and data usability is not impacted.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results agree to within a factor of three for this sample location. All results are well below the project action limits, and data usability is not impacted.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Metals by SW6020/SW7470A/SW7471A. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All acceptance criteria were met.
- Holding Times: All acceptance criteria were met.
- Method Blanks: Selenium was detected in two method blanks. The positive results in the associated samples (SA99WL1WGN1, SA99WL1WN3T, SA99WL1WN3T-D, SA99WL2WGN31, SA99WL3WGN3T, and SA99WL4WGN3T) were less than 5 times the concentration in the associated method blanks; therefore, these samples are considered non-detect at their reported concentrations and are flagged UBRL.
- LCS: Silver recovered above the laboratory acceptance limits in one LCS by less than 1%. Only one associated sample (SA99WL1WGN1) was positive for this analyte; the silver result for this sample is well below the project action limit, is considered estimated, and is flagged J-L. Data usability is not impacted.

- MS/MSD: The MSD recovery for barium on sample SA99WL1WGN1 was below laboratory acceptance limits. The MS and LCS recoveries were within limits indicating the laboratory systems were in control. Therefore, only the barium results for the primary sample are considered estimated and are flagged M.
- Calibration: All acceptance criteria were met.
- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results except selenium are comparable for this sample location. Selenium results agree to within a factor of four. However, all results are well below the project action limits, and data usability is not impacted.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Herbicides by SW8151A (soils). The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All acceptance criteria were met.
- Holding Times: All initial extractions were within holding times. However, the laboratory re-extracted two sets of samples due to failing QC (as detailed below), and these extractions were done outside of holding time. The AFCEE QAPP recommends rejection of results extracted outside of hold time.
 - Samples JE03ELM99TP1-01SO, JE03ELM99TP2-02SO, JE03ELM99TP3-01SO, and JE03ELM99TP4-03SO were leached as per SW1311. The resulting leachates were then extracted and analyzed by method SW8151A. The samples failed various QC protocols (see details below) and were thus re-extracted four days outside of holding time. The AFCEE QAPP recommends rejection of this data.
- Method Blanks: MCPP was detected in one soil method blank. The positive results for the associated samples (JE03ELM99TP1-01SO, JE03ELM99TP1-03SO, JE03ELM99TP1-04SO, JE03ELM99TP2-01SO, JE03ELM99TP2-02SO, JE03ELM99TP3-01SO, JE03ELM99TP4-03SO, and JE03ELM99TP4-05SO) are therefore considered non-detect and are flagged UBRL.
- Surrogates: All acceptance criteria were met with the following exceptions:
 - The surrogate recoveries in TCLP samples JE03ELM99TP1-01SO, JE03ELM99TP2-, 2SO, JE03ELM99TP3-01SO, and JE03ELM99TP4-03SO were below laboratory acceptance limits. These samples were re-extracted outside holding time and the surrogate recoveries were still below laboratory limits. Because the re-extraction was done outside of holding time and the re-extraction results confirmed the initial extraction results, the initial extraction results are considered estimated but usable and are flagged UJ-S.
- LCS: All acceptance criteria were met with the following exceptions:
 - 2,4-D recovery for the LCS associated with TCLP samples JE03ELM99TP1-01SO, JE03ELM99TP2-02SO, JE03ELM99TP3-01SO, and JE03ELM99TP4-03SO was below laboratory acceptance limits. Consequently the associated 2,4-D results for these samples are rejected as per the AFCEE QAPP. However, this does not represent a data gap, as the full SW8151A method was also run on these samples and the data are acceptable. Note that the laboratory re-extracted these samples outside holding time

and the LCS met recovery limits for all compounds.

- Calibration: All criteria were met except the following:
 - Several CCV recoveries were outside the laboratory control limits. However, all non-compliant CCVs did not bracket project samples, and therefore data quality and usability is not impacted by this deviation.
 - The laboratory reported dalapon from the primary column; this column exhibited a failing second source calibration standard, and therefore the laboratory reported that this result is rejected in two samples. However, upon further review, it was discovered that the result should have been reported from the secondary column. Therefore, the dalapon result for sample 'JE03ELM99BH3-02SO has been changed from 13 µg/kg to 11 µg/kg; likewise, the dalapon result for sample JE03ELM99BH4-01SO has been changed from 18 µg/kg to 14 µg/kg. Because these results are much less than any project action limits, the results for these samples are not qualified.
- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99BH4-01SO/JE03ELM99BH4-02SO: All results are comparable for this sample location.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results are comparable for this sample location.

Herbicides by SW8321A (Waters only). The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All acceptance criteria were met.
- Holding Times: All samples were analyzed within holding times.
- Method Blanks: All acceptance criteria were met
- Surrogates: All acceptance criteria were met.
- LCS: All acceptance criteria were met.
- Calibration: All acceptance criteria were met.
- MS/MSD: All compounds demonstrated acceptable recoveries in the MS and MSD associated with the groundwater sample SA99WL1WGN3 with the exception of dalapon. The associated LCS recovered within limits indicating that the laboratory systems were in control. Therefore, only the primary sample results are considered estimated and flagged M.
- Field duplicates: All acceptance criteria were met as detailed below:
 - SA99WL1WGN3/SA99WL1WGN3-D: All results are comparable for this sample location.

Volatile Organic Compounds by SW8260B. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All acceptance criteria were met.
- Holding Times: All acceptance criteria were met.

- Method Blanks: All acceptance criteria were met with the following exceptions:
 - Methylene chloride was detected in one or more instrument blanks associated with the following samples: JE03ELM99TB-02SO, JE03ELM99BH3-01SO, JE03ELM99TB-12SO, JE03ELM99BH2-01SO, JE03ELM99BH4-01SO, JE03ELM99TB-10SO and JE03ELM99TB-14SO. Consequently, the positive results for this compound in these samples are considered non-detect and are flagged UBRL.
 - Methylene chloride was detected in the method blank associated with samples SA99TB01WGN1 and SA99WL4WGN1. Consequently, the positive results for this compound in these samples are considered non-detect and are flagged UBRL.
 - Naphthalene was detected in the method blank and an instrument blank associated with samples JE03ELMBH4-01SO and JE03ELMBH4-02SO. Consequently, the positive results for this compound in these samples are considered non-detect and are flagged UBRL.
- Trip Blanks: Methylene chloride was detected in the trip blanks associated with the following samples: JE03ELM99BH1-01SO, JE03ELM99BH1-02SO, JE03ELM99BH2-02SO, JE03ELM99BH3-01SO, JE03ELM99BH4-01SO, JE03ELM99TP2-01SO, JE03ELM99TP2-03SO, JE03ELM99TP4-01SO, JE03ELM99TP4-03SO, SA99WL1WGN2, and SA99WL4WGN1. However, these detections were most likely due to laboratory contamination as the above blank results would indicate. Consequently, the positive results for this compound are considered non-detect and are flagged UBRL in the above listed samples. Data usability is not impacted for this parameter.
- Surrogates: One surrogate recovered above laboratory acceptance limits in two samples (JE03ELM99BH1-01SO and SA99WL4WGN1). Consequently, the positive results for all compounds in these two samples are considered estimated and are flagged J-S.
- LCS: All acceptance criteria were met.
- MS/MSD: All acceptance criteria were met except for the following:
 - 1,2,4-Trichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, and naphthalene recovered below laboratory acceptance limits in the MS or MSD (or both) associated with sample JE03ELM99BH4-01SO. However, the LCS met all recovery criteria and data usability is not impacted. The primary sample results are flagged “M” as per the AFCEE QAPP.
 - 1,2,3-Trichlorobenzene and chloroethane recovered below laboratory acceptance limits in the MS associated with sample SA99WL1WGN1. However, the LCS met all recovery criteria and data usability is not impacted. The primary sample results are flagged “M” as per the AFCEE QAPP.
- Calibration: All acceptance criteria were met except the following:
 - 1,2,4-Trichlorobenzene, trichlorofluoromethane, 2-butanone, and acetone recovered above laboratory acceptance limits in one continuing calibration verification (CCV) standard. The results for all associated samples were non-detect. Because the CCV is biased high, all associated data is considered biased high as well; a non-detect considered biased high is still a non-detect, and the results are not impacted. Therefore, although the AFCEE QAPP recommends rejection of data based on this criterion, the data is considered usable and the results are not flagged.
 - Methylene chloride recovered above laboratory acceptance limits in one CCV. The results for some associated samples were non-detect and are not qualified due to

reasons stated above. Of seven positive hits for this compound associated with this parameter, five are considered non-detects due to blank contamination. The final two are trip blanks with probable methylene chloride contamination. (In all, four of the seven affected samples are trip blanks.) Although the AFCEE QAPP recommends rejection of data based on this criterion, the data is considered estimated but usable because the CCV is biased high, indicating that all associated data is considered biased high as well. Therefore, all positive samples (not to include those originally qualified UBRL) are considered estimated and are flagged J-C.

- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99BH4-01SO/JE03ELM99BH4-02SO: All results are comparable for this sample location.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results are comparable for this sample location.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Semivolatile Organic Compounds by SW8270C. The data quality objectives were met for this method with the following exceptions:

- Sample Handling: All criteria were met.
- Holding Times: All acceptance criteria were met.
- Method Blanks: Target analytes were not detected in the method blanks; therefore, all acceptance criteria were met for this parameter.
- Surrogates: All six surrogates for sample SA99WL1WGN1 were below laboratory acceptance limits, four of six surrogates for sample SA99WL1WGN2 were below laboratory acceptance limits, and one of six surrogates for sample SA99WL3WGN1 was below laboratory acceptance limits. All analytes were non-detect in each sample. The AFCEE QAPP recommends rejection of these data based on this criterion. However, the samples were re-extracted two days outside of hold time and all results were consistent. All surrogates in the extraction exceeding hold time met recovery criteria, and all other QC criteria met requirements. Therefore, all results for these samples are considered estimated and are flagged UJ-S.
- LCS: All acceptance criteria were met.
- MS/MSD: All acceptance criteria were met with the following exceptions:
 - Several compounds were outside laboratory acceptance limits for the MS/MSD associated with sample JE03ELM99TP4-02SO. However, the associated LCS met all acceptance criteria indicating that the laboratory systems were in control. Therefore, the results for sample JE03ELM99TP4-02SO associated with the out of compliance MS/MSD results are flagged “M”.
 - Several compounds were outside laboratory acceptance limits for the MS/MSD associated with sample SA99WL1WGN1. However, the associated LCS met all acceptance criteria indicating that the laboratory systems were in control. Therefore, the results for sample SA99WL1WGN1 associated with the out of compliance MS/MSD results are flagged “M”.
- Calibration: All acceptance criteria were met.

- Field duplicates: All acceptance criteria were met as detailed below.
 - JE03ELM99TP4-01SO/JE03ELM99TP4-02SO: All results are comparable for this sample location.
 - SA99WL1WGN1/SA99WL1WGN2: All results are comparable for this sample location.

Considering these noncompliance issues the data are still considered usable, with the exception of those reported as rejected.

APPENDIX B
Analytical Data

2003 Elmendorf SA99 Sample Summary

COC_ID	FIELD_ID	COMMENTS	METHOD	DATE_COLL	TIME_COLL	QC	DEPTH	SURVEY POINT	MATRIX	LAB	TAT	COOLER_I D	SHIPPED	SDG
JE03ELM99TB-01SO	TRIP BLANK		AK101	16-Jul-03	1500			NA	SO	CTE	30DAYS	0716	16-Jul-03	1034357
JE03ELM99TB-02SO	TRIP BLANK		SW8260B	16-Jul-03	1500			NA	SO	CTE	30DAYS	0716	16-Jul-03	1034357
JE03ELM99TP1-01SO	TEST PIT 1	4' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, SW9060, AK101	16-Jul-03	1548		10	sam1-1	SO	CTE	30DAYS	0716	16-Jul-03	1034357
JE03ELM99TP1-01SO	TEST PIT 1	4' NORTHWEST	SW8151A	16-Jul-03	1548		10	sam1-1	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP1-02SO	TEST PIT 1	14' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, SW8270C, SW6020/7471A, AK101	16-Jul-03	1601		4	sam1-2	SO	CTE	30DAYS	0716	16-Jul-03	1034357
JE03ELM99TP1-02SO	TEST PIT 1	14' NORTHWEST	SW8151A	16-Jul-03	1601		4	sam1-2	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP1-03SO	TEST PIT 1	14' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, AK101	16-Jul-03	1618		12	sam1-2	SO	CTE	30DAYS	0716	16-Jul-03	1034357
JE03ELM99TP1-03SO	TEST PIT 1	14' NORTHWEST	SW8151A	16-Jul-03	1618		12	sam1-2	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP1-04SO	TEST PIT 1	25' NORTHWEST	SW8151A	16-Jul-03	1628		9	sam1-3	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TB-03SO	TRIP BLANK		AK101	17-Jul-03	1200			NA	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TB-04SO	TRIP BLANK		SW8260B	17-Jul-03	1200			NA	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP2-01SO	TEST PIT 2	37' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, SW9060, AK101	17-Jul-03	1019		4	sam1-4	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP2-01SO	TEST PIT 2	37' NORTHWEST	SW8151A	17-Jul-03	1019		4	sam1-4	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP2-02SO	TEST PIT 2	37' NORTHWEST	SW8151A	17-Jul-03	1115		9	sam1-4	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP2-03SO	TEST PIT 2	70' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, SW8270C, SW6020/7471A, AK101	17-Jul-03	1200		9	sam1-5	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP2-03SO	TEST PIT 2	70' NORTHWEST	SW8151A	17-Jul-03	1200		9	sam1-5	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP2-04SO	TEST PIT 2	70' NORTHWEST - TAKEN OF ASPHALT LAYER	AK102/103, SW8270CSIM, SW6020/7471A	17-Jul-03	1210		7	sam1-5	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP3-01SO	TEST PIT 3	2.5' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, AK101	17-Jul-03	1608		10	sam3-1	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP3-01SO	TEST PIT 3	2.5' NORTHWEST	SW8151A	17-Jul-03	1608		10	sam3-1	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP3-02SO	TEST PIT 3	20' NORTHWEST	SW8260B, AK102/103, SW8270CSIM, SW8270C, SW6020/7471A, AK101	17-Jul-03	1623		3	drumsam3-2	SO	CTE	30DAYS	0717	17-Jul-03	1034398
JE03ELM99TP3-02SO	TEST PIT 3	20' NORTHWEST	SW8151A	17-Jul-03	1623		3	drumsam3-2	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP3-03SO	TEST PIT 3	29' NORTHWEST	SW8151A	17-Jul-03	1642		10	sam3-3	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TB-05SO	TRIP BLANK		AK101	18-Jul-03	0800			NA	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TB-06SO	TRIP BLANK		SW8260B	18-Jul-03	0800			NA	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TP4-01SO	TEST PIT 4	0' SOUTHEAST, 3' OFF CNTR	SW8260B, AK102/103, SW8270CSIM, SW8270C, SW6020/7471A, AK101	18-Jul-03	0907		2	sam4-1	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TP4-01SO	TEST PIT 4	0' SOUTHEAST, 3' OFF CNTR	SW8151A	18-Jul-03	0907		2	sam4-1	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP4-02SO	TEST PIT 4	TP4-01 DUP	SW8260B, AK102/103, SW8270CSIM, SW8270C, SW6020/7471A, AK101	18-Jul-03	0907		2	sam4-1	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TP4-02SO	TEST PIT 4	TP4-01 DUP	SW8151A	18-Jul-03	0907		2	sam4-1	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP4-03SO	TEST PIT 4	5' SOUTHEAST	SW8260B, AK102/103, SW8270CSIM, SW9060, AK101	18-Jul-03	0943		10	sam4-2	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TP4-03SO	TEST PIT 4	5' SOUTHEAST	SW8151A	18-Jul-03	0943		10	sam4-2	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP4-04SO	TEST PIT 4	25' SOUTHEAST	SW8260B, AK102/103, SW8270CSIM, AK101	18-Jul-03	1002		2.5	sam4-3	SO	CTE	30DAYS	0718	18-Jul-03	1034418
JE03ELM99TP4-04SO	TEST PIT 4	25' SOUTHEAST	SW8151A	18-Jul-03	1002		2.5	sam4-3	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99TP4-05SO	TEST PIT 4	25' SOUTHEAST	SW8151A	18-Jul-03	1022		10	sam4-3	SO	CAS	30DAYS	0721	21-Jul-03	K2305352
JE03ELM99BH1-01SO	BORING 1		SW8260B, AK102/103, SW8270CSIM, AK101	23-Jul-03	1655		15	mw1-1 through 1- 10	SO	CTE	30DAYS	0724	24-Jul-03	1034577
JE03ELM99BH1-01SO	BORING 1		SW8151A	23-Jul-03	1655		15	mw1-1 through 1- 10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99TB-07SO	TRIP BLANK		AK101	23-Jul-03	1200			mw1-1 through 1- 10	SO	CTE	30DAYS	0724	24-Jul-03	1034577

2003 Elmendorf SA99 Sample Summary

COC_ID	FIELD_ID	COMMENTS	METHOD	DATE_COLL	TIME_COLL	QC	DEPTH	SURVEY POINT	MATRIX	LAB	TAT	COOLER_I D	SHIPPED	SDG
JE03ELM99TB-08SO	TRIP BLANK		SW8260B	23-Jul-03	1200			mw1-1 through 1-10	SO	CTE	30DAYS	0724	24-Jul-03	1034577
JE03ELM99BH1-02SO	BORING 1		SW8260B, AK102/103, SW8270CSIM, AK101, SW9060	24-Jul-03	1105		45	mw1-1 through 1-10	SO	CTE	30DAYS	0724	24-Jul-03	1034577
JE03ELM99BH1-02SO	BORING 1		SW8151A	24-Jul-03	1105		45	mw1-1 through 1-10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99BH1-03SO	BORING 1		BULK DENSITY	24-Jul-03	1105		45	mw1-1 through 1-10	SO	ATL	7DAYS	HAND CRD	24-Jul-03	N/A
JE03ELM99BH2-02SO	BORING 2		SW8260B, AK102/103, SW8270CSIM, AK101, SW9060	25-Jul-03	1345		40	mw2-1 through 2-10	SO	CTE	30DAYS	0725	25-Jul-03	1034628
JE03ELM99BH2-01SO	BORING 2		SW8151A	25-Jul-03	1010		15	mw2-1 through 2-10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99BH2-02SO	BORING 2		SW8260B, AK102/103, SW8270CSIM, AK101	25-Jul-03	1010		15	mw2-1 through 2-10	SO	CTE	30DAYS	0725	25-Jul-03	1034628
JE03ELM99BH2-02SO	BORING 2		SW8151A	25-Jul-03	1345		40	mw2-1 through 2-10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99BH2-03SO	BORING 2		BULK DENSITY	25-Jul-03	1355		40	mw2-1 through 2-10	SO	ATL	7DAYS	HAND CRD	28-Jul-03	N/A
JE03ELM99TB-09SO	TRIP BLANK		AK101	25-Jul-03	1000			NA	SO	CTE	30DAYS	0725	25-Jul-03	1034628
JE03ELM99TB-10SO	TRIP BLANK		SW8260B	25-Jul-03	1000			NA	SO	CTE	30DAYS	0725	25-Jul-03	1034628
JE03ELM99BH3-01SO	BORING 3		SW8151A	28-Jul-03	1035		15	mw3-1 through 3-10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99BH3-01SO	BORING 3		SW8260B, AK102/103, SW8270CSIM, AK101, SW9060	28-Jul-03	1035		15	mw3-1 through 3-10	SO	CTE	30DAYS	0728A	28-Jul-03	1034673
JE03ELM99BH3-02SO	BORING 3		BULK DENSITY	28-Jul-03	1510		40	mw3-1 through 3-10	SO	ATL	7DAYS	HAND CRD	28-Jul-03	N/A
JE03ELM99BH3-02SO	BORING 3		SW8151A	28-Jul-03	1500		40	mw3-1 through 3-10	SO	CAS	30DAYS	0728B	28-Jul-03	K2305507
JE03ELM99BH3-02SO	BORING 3		SW8260B, AK102/103, SW8270CSIM, AK101	28-Jul-03	1500		40	mw3-1 through 3-10	SO	CTE	30DAYS	0728A	28-Jul-03	1034673
JE03ELM99TB-11SO	TRIP BLANK		AK101	28-Jul-03	1000			NA	SO	CTE	30DAYS	0728A	28-Jul-03	1034673
JE03ELM99TB-12SO	TRIP BLANK		SW8260B	28-Jul-03	1000			NA	SO	CTE	30DAYS	0728A	28-Jul-03	1034673
JE03ELM99BH4-01SO	BORING 4		SW8260B, AK102/103, SW8270CSIM, AK101	29-Jul-03	0956		15	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	1034690
JE03ELM99BH4-01SO	BORING 4		SW8151A	29-Jul-03	0956		15	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	K2305563
JE03ELM99BH4-02SO	BORING 4	DUP OF BH4-01SO	SW8260B, AK102/103, SW8270CSIM, AK101	29-Jul-03	0958		15	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	1034690
JE03ELM99BH4-02SO	BORING 4	DUP OF BH4-01SO	SW8151A	29-Jul-03	0958		15	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	K2305563
JE03ELM99BH4-03SO	BORING 4		SW8260B, AK102/103, SW8270CSIM, AK101, SW9060	29-Jul-03	1125		37.5	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	1034690
JE03ELM99BH4-03SO	BORING 4		SW8151A	29-Jul-03	1125		37.5	mw4-1 through 4-10	SO	CTE	30DAYS	0728A	29-Jul-03	K2305563
JE03ELM99BH4-04SO	BORING 4		BULK DENSITY	29-Jul-03	1330		40	mw4-1 through 4-10	SO	ATL	7DAYS	HAND CRD	29-Jul-03	N/A
JE03ELM99TB-13SO	TRIP BLANK		AK101	29-Jul-03	0800			NA	SO	CTE	30DAYS	0728A	29-Jul-03	1034690
JE03ELM99TB-14SO	TRIP BLANK		SW8260B	29-Jul-03	0800			NA	SO	CTE	30DAYS	0728A	29-Jul-03	1034690
SA99WL1WGN1	WELL 1		AK102/103, SW6020/7470A, SW8270C, SW8270CSIM	05-Aug-03	1800	MS/D		mw1-1 through 1-10	WG	CTE	30DAYS	0806C 0806D 0806V	06-Aug-03	1034904
SA99WL1WGN1	WELL 1		SW8151A	05-Aug-03	1800	MS/D		mw1-1 through 1-10	WG	CAS	30DAYS	0806F	06-Aug-03	K2305880
SA99WL1WGN2	WELL 1 DUP		AK102/103, SW6020/7470A, SW8270C, SW8270CSIM	05-Aug-03	1800			mw1-1 through 1-10	WG	CTE	30DAYS	0806G 0806V	06-Aug-03	1034904

2003 Elmendorf SA99 Sample Summary

COC_ID	FIELD_ID	COMMENTS	METHOD	DATE_COLL	TIME_COLL	QC	DEPTH	SURVEY POINT	MATRIX	LAB	TAT	COOLER_I D	SHIPPED	SDG
SA99WL1WGN2	WELL 1 DUP		SW8151A	05-Aug-03	1800			mw1-1 through 1-10	WG	CAS	30DAYS	0806E	06-Aug-03	K2305880
SA99WL2WGN1	WELL 2		SW8151A	05-Aug-03	1630			mw2-1 through 2-10	WG	CAS	30DAYS	0806E	06-Aug-03	K2305880
SA99WL3WGN1	WELL 3		AK102/103, SW6020/7470A, SW8270C, SW8270CSIM	05-Aug-03	1515			mw3-1 through 3-10	WG	CTE	30DAYS	0806A 0806V	06-Aug-03	1034904
SA99WL3WGN1	WELL 3		SW8151A	05-Aug-03	1515			mw3-1 through 3-10	WG	CAS	30DAYS	0806E	06-Aug-03	K2305880
SA99WL4WGN1	WELL 4		SW8151A	05-Aug-03	1350			mw4-1 through 4-10	WG	CAS	30DAYS	0806E	06-Aug-03	K2305880
SA99TB01WGN1	TRIP BLANK		AK101	13-Aug-03	0800			na	WG	CTE	30DAYS	0811V	11-Aug-03	1035071
SA99TB01WGN1	TRIP BLANK		SW8260B	13-Aug-03	0800			na	WG	CTE	30DAYS	0811V	11-Aug-03	1035071
SA99WL1WGN1	WELL 1		AK101, SW8260B	13-Aug-03	1400	MS/D		mw1-1 through 1-10	WG	CTE	30DAYS	0811V	11-Aug-03	1035071
SA99WL1WGN2	WELL 1 DUP		AK101, SW8260B	13-Aug-03	1400			mw1-1 through 1-10	WG	CTE	30DAYS	0811V	11-Aug-03	1035071
SA99WL2WGN1	WELL 2		AK101, AK102/103, SW6020/7470A, SW8260B, SW8270CSIM	13-Aug-03	1316			mw2-1 through 2-10	WG	CTE	30DAYS	0811A 0811V	11-Aug-03	1035071
SA99WL3WGN1	WELL 3		AK101, SW8260B	13-Aug-03	1105			mw3-1 through 3-10	WG	CTE	30DAYS	0811V	11-Aug-03	1035071
SA99WL4WGN1	WELL 4		AK101, AK102/103, SW6020/7470A, SW8260B, SW8270CSIM	13-Aug-03	1000			mw4-1 through 4-10	WG	CTE	30DAYS	0811A 0811V	11-Aug-03	1035071
SA99WL1WGN3D	WELL 1 (dissolved)		SW6020/SW7470A	23-Oct-03	1308	MS/D			WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL1WGN3D-D	WELL 1 (dissolved) DUP		SW6020/SW7470A	23-Oct-03	1308				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL1WGN3T	WELL 1 (Total)		SW6020/SW7470A	23-Oct-03	1308	MS/D			WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL1WGN3T-D	WELL 1 (Total) DUP		SW6020/SW7470A	23-Oct-03	1308				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL2WGN3D	WELL 2 (dissolved)		SW6020/SW7470A	23-Oct-03	1105				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL2WGN3T	WELL 2 (Total)		SW6020/SW7470A	23-Oct-03	1105				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL3WGN3D	WELL 3 (dissolved)		SW6020/SW7470A	22-Oct-03	1425				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL3WGN3T	WELL 3 (Total)		SW6020/SW7470A	22-Oct-03	1425				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL4WGN3D	WELL 4 (dissolved)		SW6020/SW7470A	22-Oct-03	1047				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL4WGN3T	WELL 4 (Total)		SW6020/SW7470A	22-Oct-03	1047				WG	SGS	14DAYS	EL-A5010	23-Oct-03	1036976
SA99WL1WGN3	WELL 1		SW8321A	28-Oct-03	1332	MS/D			WG	STL	21DAYS	EL-A5009	29-Oct-03	D3J310202
SA99WL1WGN3-D	WELL 1 DUP		SW8321A	28-Oct-03	1332				WG	STL	21DAYS	EL-A5009	29-Oct-03	D3J310202
SA99WL2WGN3	WELL 2		SW8321A	28-Oct-03	1216				WG	STL	21DAYS	EL-A5009	29-Oct-03	D3J310202
SA99WL3WGN3	WELL 3		SW8321A	28-Oct-03	1112				WG	STL	21DAYS	EL-A5009	29-Oct-03	D3J310202
SA99WL4WGN3	WELL 4		SW8321A	28-Oct-03	1000				WG	STL	21DAYS	EL-A5009	29-Oct-03	D3J310202

Elmendorf SA99
2003 Soil Analytical Data

		Sample ID: (JE03ELM99)	BH1-01SO	BH1-02SO	BH2-01SO	BH2-02SO		
		Depth						
		Laboratory	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK		
		Lab Sample ID	1034577001	1034577002	1034628001	1034628002		
		Collection Date	7/23/03	7/24/03	7/25/03	7/25/03		
		Matrix	Soil	Soil	Soil	Soil		
Screening Criteria								
Analyte	Method	Units	ADEC	EPA R9				
Total Solids	A2540G	PERCENT			95.9 [0]	89.7 [0]	96 [0]	91.5 [0]
Gasoline Range Organics	AK101	mg/kg	300		ND [2.08]	ND [1.94]	ND [1.76]	ND [1.67]
Diesel Range Organics	AK102	mg/kg	250		27.9 [21.8]	5.21 [23] J UBRL	4.87 [21.1] J UBRL	3.66 [25.9] J UBRL
Residual Range Organics	AK103	mg/kg	10000		135 [21.8]	17.1 [23] J UBRL	11.6 [21.1] J UBRL	8.86 [25.9] J UBRL
Total Solids	E160.3M	PERCENT			96.2 [0]	90.7 [0]	96.3 [0]	89.6 [0]
Total Organic Carbon (TOC)	E415.1	mg/kg			- -	- -	- -	1399 [523]
Acenaphthene	PAHSIM	µg/kg	210000	3700000	92.9 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]
Acenaphthylene	PAHSIM	µg/kg	210000		3.53 [52.5] J-M	ND [5.94]	ND [5.27] J	ND [5.97] J
Anthracene	PAHSIM	µg/kg	4300000	22000000	203 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Benzo(a)anthracene	PAHSIM	µg/kg	6000	620	305 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Benzo(a)pyrene	PAHSIM	µg/kg	1000	62	309 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Benzo(b)fluoranthene	PAHSIM	µg/kg	11000	620	347 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	1500000		121 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Benzo(k)fluoranthene	PAHSIM	µg/kg	110000	6200	73.1 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Chrysene	PAHSIM	µg/kg	620000	62000	253 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	1000	62	39.6 [5.25] M	ND [5.94]	ND [5.27]	ND [5.97]
Fluoranthene	PAHSIM	µg/kg	2100000	2300000	537 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Fluorene	PAHSIM	µg/kg	270000	2600000	108 [52.5]	ND [5.94]	ND [5.27]	ND [5.97]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	11000	620	131 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Naphthalene	PAHSIM	µg/kg	43000	56000	56 [52.5] B-M	ND [5.94]	2.43 [5.27] J,B UBRL	5.08 [5.97] J,B UBRL
Phenanthrene	PAHSIM	µg/kg	4300000		522 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Pyrene	PAHSIM	µg/kg	1500000	2300000	533 [52.5] M	ND [5.94]	ND [5.27]	ND [5.97]
Arsenic	SW6020	mg/kg	2	0.39	- -	- -	- -	- -
Barium	SW6020	mg/kg	1100	5400	- -	- -	- -	- -
Cadmium	SW6020	mg/kg	5	37	- -	- -	- -	- -
Chromium	SW6020	mg/kg	26	30	- -	- -	- -	- -
Lead	SW6020	mg/kg	400	400	- -	- -	- -	- -
Selenium	SW6020	mg/kg	3.5	390	- -	- -	- -	- -
Silver	SW6020	mg/kg	21	390	- -	- -	- -	- -
Mercury	SW7471A	mg/kg	1.4	23	- -	- -	- -	- -
2,4,5-T	SW8151A	µg/kg		610000	ND [49]	ND [49]	ND [50]	ND [49]
2,4,5-TP (Silvex)	SW8151A	µg/kg		490000	ND [49]	ND [49]	ND [50]	ND [49]
2,4-D	SW8151A	µg/kg		690000	ND [49]	ND [49]	ND [50]	ND [49]
2,4-DB	SW8151A	µg/kg		490000	ND [49]	ND [49]	ND [50]	ND [49]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

Sample ID: (JE03ELM99)	BH1-01SO	BH1-02SO	BH2-01SO	BH2-02SO
Depth				
Laboratory	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
Lab Sample ID	1034577001 K230550701	1034577002 K230550702	1034628001 K230550703	1034628002 K230550704
Collection Date	7/23/03	7/24/03	7/25/03	7/25/03
Matrix	Soil	Soil	Soil	Soil

Screening Criteria

Analyte	Method	Units	ADEC	EPA R9				
Dalapon	SW8151A	µg/kg		1800000	ND [49]	ND [49]	ND [50]	ND [49]
Dicamba	SW8151A	µg/kg		1800000	ND [49]	ND [49]	ND [50]	ND [49]
Dichlorprop	SW8151A	µg/kg			ND [49]	ND [49]	ND [50]	ND [49]
Dinoseb	SW8151A	µg/kg		61000	ND [49]	ND [49]	ND [50]	ND [49]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8151A	µg/kg		31000	ND [9800]	ND [9800]	ND [10000]	ND [9800]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg		61000	ND [9800]	ND [9800]	ND [10000]	ND [9800]
2,4,5-TP (Silvex)	SW1311/SW8151A	µg/L			--	--	--	--
2,4-D	SW1311/SW8151A	µg/L			--	--	--	--
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg		3	ND [0.0032] J-S	ND [0.003]	ND [0.0021]	ND [0.0014]
1,1,1-Trichloroethane	SW8260B	mg/kg		6300	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	0.017	0.38	ND [0.0011] J-S	ND [0.001]	ND [0.0007]	ND [0.0005]
1,1,2-Trichloroethane	SW8260B	mg/kg	0.017	0.84	ND [0.0016] J-S	ND [0.0015]	ND [0.001]	ND [0.0007]
1,1-Dichloroethane	SW8260B	mg/kg	12	5900	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,1-Dichloroethene	SW8260B	mg/kg	0.03	0.054	ND [0.0032] J-S	ND [0.003]	ND [0.0021]	ND [0.0014]
1,1-Dichloropropene	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2,3-Trichlorobenzene	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2,3-Trichloropropane	SW8260B	mg/kg	0.002	0.0014	ND [0.0016] J-S	ND [0.0015]	ND [0.001]	ND [0.0007]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	2	650	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2,4-Trimethylbenzene	SW8260B	mg/kg		52	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg		0.45	ND [0.0106] J-S	ND [0.01]	ND [0.0068]	ND [0.0048]
1,2-Dibromoethane	SW8260B	mg/kg	0.0002	0.0069	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2-Dichlorobenzene	SW8260B	mg/kg	7	370	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,2-Dichloroethane	SW8260B	mg/kg	0.015	0.035	ND [0.0011] J-S	ND [0.001]	ND [0.0007]	ND [0.0005]
1,2-Dichloropropane	SW8260B	mg/kg	0.017	0.035	ND [0.0016] J-S	ND [0.0015]	ND [0.001]	ND [0.0007]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	25	210	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,3-Dichlorobenzene	SW8260B	mg/kg	0.26	13	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
1,3-Dichloropropane	SW8260B	mg/kg	0.02		ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
1,4-Dichlorobenzene	SW8260B	mg/kg	0.8	3.4	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
1-Chlorohexane	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
2,2-Dichloropropane	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
2-Chlorotoluene	SW8260B	mg/kg		160	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
4-Chlorotoluene	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
4-Isopropyltoluene	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
4-Methyl-2-pentanone	SW8260B	mg/kg		790	ND [0.0213] J-S	ND [0.02]	ND [0.0137]	ND [0.0095]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

Sample ID: (JE03ELM99)	BH1-01SO	BH1-02SO	BH2-01SO	BH2-02SO
Depth				
Laboratory	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
Lab Sample ID	1034577001 K230550701	1034577002 K230550702	1034628001 K230550703	1034628002 K230550704
Collection Date	7/23/03	7/24/03	7/25/03	7/25/03
Matrix	Soil	Soil	Soil	Soil

Screening Criteria

Analyte	Method	Units	ADEC	EPA R9				
Acetone	SW8260B	mg/kg	10	1600	0.116 [0.0532] J-S	ND [0.0501]	ND [0.0342]	ND [0.0238]
Benzene	SW8260B	mg/kg	0.02	0.65	0.0016 [0.0021] J, J-ξ	ND [0.002]	ND [0.0014]	ND [0.001]
Bromobenzene	SW8260B	mg/kg		28	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Bromochloromethane	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Bromodichloromethane	SW8260B	mg/kg	0.35	1	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
Bromoform	SW8260B	mg/kg	0.38	62	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Bromomethane	SW8260B	mg/kg		3.9	ND [0.0106] J-S	ND [0.01]	ND [0.0068]	ND [0.0048]
Carbon disulfide	SW8260B	mg/kg			ND [0.0106] J-S	ND [0.01]	ND [0.0068]	ND [0.0048]
Carbon tetrachloride	SW8260B	mg/kg	0.03	0.24	ND [0.0032] J-S	ND [0.003]	ND [0.0021]	ND [0.0014]
Chlorobenzene	SW8260B	mg/kg	0.6	150	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
Chloroethane	SW8260B	mg/kg		3	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Chloroform	SW8260B	mg/kg	0.34	0.24	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
Chloromethane	SW8260B	mg/kg		1.2	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Dibromochloromethane	SW8260B	mg/kg	0.2	1.1	ND [0.0053] J-S	ND [0.003]	ND [0.0021]	ND [0.0014]
Dibromomethane	SW8260B	mg/kg	1.1		ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Dichlorodifluoromethane	SW8260B	mg/kg	60	94	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Ethylbenzene	SW8260B	mg/kg	5.5	230	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Hexachlorobutadiene	SW8260B	mg/kg	8	6.2	ND [0.0032] J-S	ND [0.003]	ND [0.0021]	ND [0.0014]
Isopropylbenzene	SW8260B	mg/kg	227	160	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg			ND [0.0213] J-S	ND [0.02]	ND [0.0137]	ND [0.0095]
Methylene chloride	SW8260B	mg/kg	0.015	8.9	ND [0.0053] J-S	ND [0.005]	0.0013 [0.0034] J UBRL	ND [0.0024]
Naphthalene	SW8260B	mg/kg	43		0.0152 [0.0053] J-S, ξ	ND [0.005] UBRL	ND [0.0034]	ND [0.0024] UBRL
Styrene	SW8260B	mg/kg	1.3	1700	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Tetrachloroethene (PCE)	SW8260B	mg/kg	0.03	5.7	ND [0.0027] J-S	ND [0.0025]	ND [0.0017]	ND [0.0012]
Toluene	SW8260B	mg/kg	5.4	520	0.0023 [0.0053] J, J-ξ	ND [0.005]	ND [0.0034]	ND [0.0024]
Trichloroethene (TCE)	SW8260B	mg/kg	0.027	2.8	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
Trichlorofluoromethane	SW8260B	mg/kg		390	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
Vinyl chloride	SW8260B	mg/kg	0.009	0.15	ND [0.0009] J-S	ND [0.0008]	ND [0.0005]	ND [0.0004]
Xylene, Isomers m & p	SW8260B	mg/kg	78	210	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
cis-1,2-Dichloroethene	SW8260B	mg/kg	0.2	43	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
cis-1,3-Dichloropropene	SW8260B	mg/kg		0.7	ND [0.0021] J-S	ND [0.002]	ND [0.0014]	ND [0.001]
n-Butylbenzene	SW8260B	mg/kg		140	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
n-Propylbenzene	SW8260B	mg/kg			ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
o-Xylene	SW8260B	mg/kg	78	210	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
sec-Butylbenzene	SW8260B	mg/kg		110	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
tert-Butylbenzene	SW8260B	mg/kg		130	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
trans-1,2-Dichloroethene	SW8260B	mg/kg	0.4	63	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]
trans-1,3-Dichloropropene	SW8260B	mg/kg		0.7	ND [0.0053] J-S	ND [0.005]	ND [0.0034]	ND [0.0024]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

Sample ID: (JE03ELM99)	BH1-01SO	BH1-02SO	BH2-01SO	BH2-02SO
Depth				
Laboratory	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
Lab Sample ID	1034577001 K230550701	1034577002 K230550702	1034628001 K230550703	1034628002 K230550704
Collection Date	7/23/03	7/24/03	7/25/03	7/25/03
Matrix	Soil	Soil	Soil	Soil

Analyte	Method	Units	Screening Criteria					
			ADEC	EPA R9				
1,2,4-Trichlorobenzene	SW8270C	mg/kg	2	650	--	--	--	--
1,2-Dichlorobenzene	SW8270C	mg/kg	7	370	--	--	--	--
1,3-Dichlorobenzene	SW8270C	mg/kg	0.26	13	--	--	--	--
1,4-Dichlorobenzene	SW8270C	mg/kg	0.8	3.4	--	--	--	--
2,4,5-Trichlorophenol	SW8270C	mg/kg	90	6100	--	--	--	--
2,4,6-Trichlorophenol	SW8270C	mg/kg	0.6	44	--	--	--	--
2,4-Dichlorophenol	SW8270C	mg/kg	0.45	180	--	--	--	--
2,4-Dimethylphenol	SW8270C	mg/kg	4	1200	--	--	--	--
2,4-Dinitrophenol	SW8270C	mg/kg	0.2	120	--	--	--	--
2,4-Dinitrotoluene	SW8270C	mg/kg	0.005	120	--	--	--	--
2,6-Dinitrotoluene	SW8270C	mg/kg	0.0044	61	--	--	--	--
2-Chloronaphthalene	SW8270C	mg/kg	43	27000	--	--	--	--
2-Chlorophenol	SW8270C	mg/kg	1.4	63	--	--	--	--
2-Methyl-4,6-dinitrophenol	SW8270C	mg/kg			--	--	--	--
2-Methylnaphthalene	SW8270C	mg/kg	43		--	--	--	--
2-Methylphenol (o-Cresol)	SW8270C	mg/kg	7	3100	--	--	--	--
2-Nitroaniline	SW8270C	mg/kg		3.5	--	--	--	--
2-Nitrophenol	SW8270C	mg/kg			--	--	--	--
3,3'-Dichlorobenzidine	SW8270C	mg/kg	0.02	1.1	--	--	--	--
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/kg			--	--	--	--
3-Nitroaniline	SW8270C	mg/kg			--	--	--	--
4-Bromophenyl phenyl ether	SW8270C	mg/kg			--	--	--	--
4-Chloro-3-methylphenol	SW8270C	mg/kg			--	--	--	--
4-Chloroaniline	SW8270C	mg/kg	0.5	240	--	--	--	--
4-Chlorophenyl phenyl ether	SW8270C	mg/kg			--	--	--	--
4-Nitroaniline	SW8270C	mg/kg			--	--	--	--
4-Nitrophenol	SW8270C	mg/kg		490	--	--	--	--
Acenaphthene	SW8270C	mg/kg		3700	--	--	--	--
Acenaphthylene	SW8270C	mg/kg	6100		--	--	--	--
Aniline	SW8270C	mg/kg			--	--	--	--
Anthracene	SW8270C	mg/kg	4300	22000	--	--	--	--
Azobenzene	SW8270C	mg/kg			--	--	--	--
Benzo(a)anthracene	SW8270C	mg/kg	6	0.62	--	--	--	--
Benzo(a)pyrene	SW8270C	mg/kg	1	0.062	--	--	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	11	0.62	--	--	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	1500		--	--	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	110	6.2	--	--	--	--
Benzoic acid	SW8270C	mg/kg	390	100000	--	--	--	--

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

" " - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

Sample ID: (JE03ELM99)	BH1-01SO	BH1-02SO	BH2-01SO	BH2-02SO
Depth				
Laboratory	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
Lab Sample ID	1034577001	1034577002	1034628001	1034628002
Collection Date	7/23/03	7/24/03	7/25/03	7/25/03
Matrix	Soil	Soil	Soil	Soil

Screening Criteria

Analyte	Method	Units	ADEC	EPA R9				
Benzyl alcohol	SW8270C	mg/kg		18000	--	--	--	--
Benzyl butyl phthalate	SW8270C	mg/kg	5600	12000	--	--	--	--
Chrysene	SW8270C	mg/kg	620	62	--	--	--	--
Di-n-butyl phthalate	SW8270C	mg/kg	1700		--	--	--	--
Di-n-octyl phthalate	SW8270C	mg/kg	2000	1200	--	--	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	1	0.062	--	--	--	--
Dibenzofuran	SW8270C	mg/kg	15.6	290	--	--	--	--
Diethyl phthalate	SW8270C	mg/kg	190	49000	--	--	--	--
Dimethyl phthalate	SW8270C	mg/kg	1400	100000	--	--	--	--
Fluoranthene	SW8270C	mg/kg	2100	2300	--	--	--	--
Fluorene	SW8270C	mg/kg	270	2600	--	--	--	--
Hexachlorobenzene	SW8270C	mg/kg	0.73	0.3	--	--	--	--
Hexachlorobutadiene	SW8270C	mg/kg	8	6.2	--	--	--	--
Hexachlorocyclopentadiene	SW8270C	mg/kg			--	--	--	--
Hexachloroethane	SW8270C	mg/kg	1.6	35	--	--	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	11	0.62	--	--	--	--
Isophorone	SW8270C	mg/kg	3	510	--	--	--	--
Naphthalene	SW8270C	mg/kg	43		--	--	--	--
Nitrobenzene	SW8270C	mg/kg	0.06	20	--	--	--	--
Pentachlorophenol	SW8270C	mg/kg	0.01	3	--	--	--	--
Phenanthrene	SW8270C	mg/kg	4300		--	--	--	--
Phenol	SW8270C	mg/kg	67	37000	--	--	--	--
Pyrene	SW8270C	mg/kg	1500	2300	--	--	--	--
bis(2-Chloroisopropyl)ether	SW8270C	mg/kg		2.9	--	--	--	--
bis-(2-Chloroethyl)ether	SW8270C	mg/kg	0.002	0.21	--	--	--	--
n-Nitrosodi-n-propylamine	SW8270C	mg/kg	0.00036	0.069	--	--	--	--
n-Nitrosodimethylamine	SW8270C	mg/kg			--	--	--	--
n-Nitrosodiphenylamine	SW8270C	mg/kg		99	--	--	--	--

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

M - a matrix effect was present, the data is usable

R-H - extracted outside of hold time, the sample result should be considered rejected

R-L - recovery for the LCS below laboratory acceptance limits, the sample result should be considered rejected

UBRL - cross contamination, the sample result should be considered nondetect

UJ-S - sample extracted outside of hold time, the sample result should be considered an estimate, but usable

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

." - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

			BH3-01SO	BH3-02SO	BH4-01SO	BH4-02SO	BH4-03SO
			CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
			1034673001	1034673002	1034690001	1034690004	1034690005
			K230550705	K230550706	K230556301	K230556302	K230556303
			7/28/03	7/28/03	7/29/03	7/29/03	7/29/03
			Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units					
Total Solids	A2540G	PERCENT	97.5 [0]	90.9 [0]	95.5 [0]	95.8 [0]	89.2 [0]
Gasoline Range Organics	AK101	mg/kg	ND [1.76]	ND [1.72]	ND [2.15]	ND [2.02]	ND [2.39]
Diesel Range Organics	AK102	mg/kg	9.53 [20.7] J UBRL	8.46 [21.7] J UBRL	5.76 [20.9] J UBRL	10.2 [20.7] J UBRL	6.17 [22.4] J UBRL
Residual Range Organics	AK103	mg/kg	9.16 [20.7] J UBRL	11 [21.7] J UBRL	8.08 [20.9] J UBRL	12.1 [20.7] J UBRL	20.6 [22.4] J UBRL
Total Solids	E160.3M	PERCENT	96.9 [0]	93.6 [0]	96.5 [0]	96 [0]	86.7 [0]
Total Organic Carbon (TOC)	E415.1	mg/kg	1666 [509]	- -	- -	- -	976.1 [550]
Acenaphthene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Acenaphthylene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Anthracene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(a)anthracene	PAHSIM	µg/kg	4.27 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(a)pyrene	PAHSIM	µg/kg	3.82 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(b)fluoranthene	PAHSIM	µg/kg	4.35 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	2.64 [5.42] J-M	ND [5.7]	ND [10.2] M	ND [9.56]	ND [5.88]
Benzo(k)fluoranthene	PAHSIM	µg/kg	2.3 [5.42] J	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Chrysene	PAHSIM	µg/kg	4.83 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Fluoranthene	PAHSIM	µg/kg	7.55 [5.42] M	ND [5.7]	ND [10.2]	3.91 [9.56] J	ND [5.88]
Fluorene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	2.05 [5.42] J-M	ND [5.7]	ND [10.2] M	ND [9.56]	ND [5.88]
Naphthalene	PAHSIM	µg/kg	ND [5.42]	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Phenanthrene	PAHSIM	µg/kg	4.38 [5.42] J-M	ND [5.7]	ND [10.2]	ND [9.56]	ND [5.88]
Pyrene	PAHSIM	µg/kg	8.24 [5.42] M	ND [5.7]	ND [10.2]	4.27 [9.56] J	ND [5.88]
Arsenic	SW6020	mg/kg	- -	- -	- -	- -	- -
Barium	SW6020	mg/kg	- -	- -	- -	- -	- -
Cadmium	SW6020	mg/kg	- -	- -	- -	- -	- -
Chromium	SW6020	mg/kg	- -	- -	- -	- -	- -
Lead	SW6020	mg/kg	- -	- -	- -	- -	- -
Selenium	SW6020	mg/kg	- -	- -	- -	- -	- -
Silver	SW6020	mg/kg	- -	- -	- -	- -	- -
Mercury	SW7471A	mg/kg	- -	- -	- -	- -	- -
2,4,5-T	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
2,4,5-TP (Silvex)	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
2,4-D	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
2,4-DB	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- " - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

			BH3-01SO	BH3-02SO	BH4-01SO	BH4-02SO	BH4-03SO
			CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
			1034673001	1034673002	1034690001	1034690004	1034690005
			K230550705	K230550706	K230556301	K230556302	K230556303
			7/28/03	7/28/03	7/29/03	7/29/03	7/29/03
			Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units					
Dalapon	SW8151A	µg/kg	ND [50]	13 [50]	18 [51]	ND [47]	ND [55]
Dicamba	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
Dichlorprop	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
Dinoseb	SW8151A	µg/kg	ND [50]	ND [50]	ND [51]	ND [47]	ND [55]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8151A	µg/kg	ND [9900]	ND [10000]	ND [11000]	ND [9400]	ND [11000]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	ND [9900]	ND [10000]	ND [11000]	ND [9400]	ND [11000]
2,4,5-TP (Silvex)	SW1311/SW8151A	µg/L	--	--	--	--	--
2,4-D	SW1311/SW8151A	µg/L	--	--	--	--	--
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.004]	ND [0.0012]	ND [0.0059]	ND [0.004]	ND [0.0032]
1,1,1-Trichloroethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.0013]	ND [0.0004]	ND [0.002]	ND [0.0013]	ND [0.0011]
1,1,2-Trichloroethane	SW8260B	mg/kg	ND [0.002]	ND [0.0006]	ND [0.003]	ND [0.002]	ND [0.0016]
1,1-Dichloroethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,1-Dichloroethene	SW8260B	mg/kg	ND [0.004]	ND [0.0012]	ND [0.0059]	ND [0.004]	ND [0.0032]
1,1-Dichloropropene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,2,3-Trichlorobenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,2,3-Trichloropropane	SW8260B	mg/kg	ND [0.002]	ND [0.0006]	ND [0.003]	ND [0.002]	ND [0.0016]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099] M	ND [0.0066]	ND [0.0053]
1,2,4-Trimethylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	ND [0.0132]	ND [0.004]	ND [0.0197]	ND [0.0132]	ND [0.0106]
1,2-Dibromoethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,2-Dichlorobenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,2-Dichloroethane	SW8260B	mg/kg	ND [0.0013]	ND [0.0004]	ND [0.002]	ND [0.0013]	ND [0.0011]
1,2-Dichloropropane	SW8260B	mg/kg	ND [0.002]	ND [0.0006]	ND [0.003]	ND [0.002]	ND [0.0016]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
1,3-Dichlorobenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099] M	ND [0.0066]	ND [0.0053]
1,3-Dichloropropane	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
1,4-Dichlorobenzene	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0099] M	ND [0.0026]	ND [0.0021]
1-Chlorohexane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
2,2-Dichloropropane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
2-Chlorotoluene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
4-Chlorotoluene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
4-Isopropyltoluene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
4-Methyl-2-pentanone	SW8260B	mg/kg	ND [0.0265]	ND [0.008]	ND [0.0394]	ND [0.0264]	ND [0.0212]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

	BH3-01SO	BH3-02SO	BH4-01SO	BH4-02SO	BH4-03SO		
	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK		
	1034673001	1034673002	1034690001	1034690004	1034690005		
	K230550705	K230550706	K230556301	K230556302	K230556303		
	7/28/03	7/28/03	7/29/03	7/29/03	7/29/03		
	Soil	Soil	Soil	Soil	Soil		
Analyte	Method	Units					
Acetone	SW8260B	mg/kg	ND [0.0662]	ND [0.02]	ND [0.0986]	ND [0.0659]	ND [0.053]
Benzene	SW8260B	mg/kg	ND [0.0027]	0.0101 [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Bromobenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Bromochloromethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Bromodichloromethane	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Bromoform	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Bromomethane	SW8260B	mg/kg	ND [0.0132]	ND [0.004]	ND [0.0197]	ND [0.0132]	ND [0.0106]
Carbon disulfide	SW8260B	mg/kg	ND [0.0132]	ND [0.004]	ND [0.0197]	ND [0.0132]	ND [0.0106]
Carbon tetrachloride	SW8260B	mg/kg	ND [0.004]	ND [0.0012]	ND [0.0059]	ND [0.004]	ND [0.0032]
Chlorobenzene	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Chloroethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Chloroform	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Chloromethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Dibromochloromethane	SW8260B	mg/kg	ND [0.004]	ND [0.0012]	ND [0.0059]	ND [0.004]	ND [0.0032]
Dibromomethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Dichlorodifluoromethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Ethylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Hexachlorobutadiene	SW8260B	mg/kg	ND [0.004]	ND [0.0012]	ND [0.0059]	ND [0.004]	ND [0.0032]
Isopropylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	ND [0.0265]	ND [0.008]	ND [0.0394]	ND [0.0264]	ND [0.0212]
Methylene chloride	SW8260B	mg/kg	0.002 [0.0066] J UBRL	ND [0.002]	0.0036 [0.0099] J UBRL	ND [0.0066]	ND [0.0053]
Naphthalene	SW8260B	mg/kg	ND [0.0066] UBRL	ND [0.002]	0.0042 [0.0099] J,B,M UB	0.0022 [0.0066] J,B UBRL	ND [0.0053]
Styrene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Tetrachloroethene (PCE)	SW8260B	mg/kg	ND [0.0033]	ND [0.001]	ND [0.0049]	ND [0.0033]	ND [0.0027]
Toluene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Trichloroethene (TCE)	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
Trichlorofluoromethane	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
Vinyl chloride	SW8260B	mg/kg	ND [0.0011]	ND [0.0003]	ND [0.0016]	ND [0.0011]	ND [0.0008]
Xylene, Isomers m & p	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
cis-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
cis-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0027]	ND [0.0008]	ND [0.0039]	ND [0.0026]	ND [0.0021]
n-Butylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
n-Propylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
o-Xylene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
sec-Butylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
tert-Butylbenzene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
trans-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]
trans-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0066]	ND [0.002]	ND [0.0099]	ND [0.0066]	ND [0.0053]

See text for validation qualification information

ND - not detected

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Elmendorf SA99
2003 Soil Analytical Data

	BH3-01SO	BH3-02SO	BH4-01SO	BH4-02SO	BH4-03SO
	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
	1034673001	1034673002	1034690001	1034690004	1034690005
	K230550705	K230550706	K230556301	K230556302	K230556303
	7/28/03	7/28/03	7/29/03	7/29/03	7/29/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
1,2,4-Trichlorobenzene	SW8270C	mg/kg	--	--	--	--	--
1,2-Dichlorobenzene	SW8270C	mg/kg	--	--	--	--	--
1,3-Dichlorobenzene	SW8270C	mg/kg	--	--	--	--	--
1,4-Dichlorobenzene	SW8270C	mg/kg	--	--	--	--	--
2,4,5-Trichlorophenol	SW8270C	mg/kg	--	--	--	--	--
2,4,6-Trichlorophenol	SW8270C	mg/kg	--	--	--	--	--
2,4-Dichlorophenol	SW8270C	mg/kg	--	--	--	--	--
2,4-Dimethylphenol	SW8270C	mg/kg	--	--	--	--	--
2,4-Dinitrophenol	SW8270C	mg/kg	--	--	--	--	--
2,4-Dinitrotoluene	SW8270C	mg/kg	--	--	--	--	--
2,6-Dinitrotoluene	SW8270C	mg/kg	--	--	--	--	--
2-Chloronaphthalene	SW8270C	mg/kg	--	--	--	--	--
2-Chlorophenol	SW8270C	mg/kg	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	SW8270C	mg/kg	--	--	--	--	--
2-Methylnaphthalene	SW8270C	mg/kg	--	--	--	--	--
2-Methylphenol (o-Cresol)	SW8270C	mg/kg	--	--	--	--	--
2-Nitroaniline	SW8270C	mg/kg	--	--	--	--	--
2-Nitrophenol	SW8270C	mg/kg	--	--	--	--	--
3,3'-Dichlorobenzidine	SW8270C	mg/kg	--	--	--	--	--
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/kg	--	--	--	--	--
3-Nitroaniline	SW8270C	mg/kg	--	--	--	--	--
4-Bromophenyl phenyl ether	SW8270C	mg/kg	--	--	--	--	--
4-Chloro-3-methylphenol	SW8270C	mg/kg	--	--	--	--	--
4-Chloroaniline	SW8270C	mg/kg	--	--	--	--	--
4-Chlorophenyl phenyl ether	SW8270C	mg/kg	--	--	--	--	--
4-Nitroaniline	SW8270C	mg/kg	--	--	--	--	--
4-Nitrophenol	SW8270C	mg/kg	--	--	--	--	--
Acenaphthene	SW8270C	mg/kg	--	--	--	--	--
Acenaphthylene	SW8270C	mg/kg	--	--	--	--	--
Aniline	SW8270C	mg/kg	--	--	--	--	--
Anthracene	SW8270C	mg/kg	--	--	--	--	--
Azobenzene	SW8270C	mg/kg	--	--	--	--	--
Benzo(a)anthracene	SW8270C	mg/kg	--	--	--	--	--
Benzo(a)pyrene	SW8270C	mg/kg	--	--	--	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	--	--	--	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	--	--	--	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	--	--	--	--	--
Benzoic acid	SW8270C	mg/kg	--	--	--	--	--

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

" " - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

	BH3-01SO	BH3-02SO	BH4-01SO	BH4-02SO	BH4-03SO
	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK
	1034673001	1034673002	1034690001	1034690004	1034690005
	K230550705	K230550706	K230556301	K230556302	K230556303
	7/28/03	7/28/03	7/29/03	7/29/03	7/29/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
Benzyl alcohol	SW8270C	mg/kg	--	--	--	--	--
Benzyl butyl phthalate	SW8270C	mg/kg	--	--	--	--	--
Chrysene	SW8270C	mg/kg	--	--	--	--	--
Di-n-butyl phthalate	SW8270C	mg/kg	--	--	--	--	--
Di-n-octyl phthalate	SW8270C	mg/kg	--	--	--	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	--	--	--	--	--
Dibenzofuran	SW8270C	mg/kg	--	--	--	--	--
Diethyl phthalate	SW8270C	mg/kg	--	--	--	--	--
Dimethyl phthalate	SW8270C	mg/kg	--	--	--	--	--
Fluoranthene	SW8270C	mg/kg	--	--	--	--	--
Fluorene	SW8270C	mg/kg	--	--	--	--	--
Hexachlorobenzene	SW8270C	mg/kg	--	--	--	--	--
Hexachlorobutadiene	SW8270C	mg/kg	--	--	--	--	--
Hexachlorocyclopentadiene	SW8270C	mg/kg	--	--	--	--	--
Hexachloroethane	SW8270C	mg/kg	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	--	--	--	--	--
Isophorone	SW8270C	mg/kg	--	--	--	--	--
Naphthalene	SW8270C	mg/kg	--	--	--	--	--
Nitrobenzene	SW8270C	mg/kg	--	--	--	--	--
Pentachlorophenol	SW8270C	mg/kg	--	--	--	--	--
Phenanthrene	SW8270C	mg/kg	--	--	--	--	--
Phenol	SW8270C	mg/kg	--	--	--	--	--
Pyrene	SW8270C	mg/kg	--	--	--	--	--
bis(2-Chloroisopropyl)ether	SW8270C	mg/kg	--	--	--	--	--
bis-(2-Chloroethyl)ether	SW8270C	mg/kg	--	--	--	--	--
n-Nitrosodi-n-propylamine	SW8270C	mg/kg	--	--	--	--	--
n-Nitrosodimethylamine	SW8270C	mg/kg	--	--	--	--	--
n-Nitrosodiphenylamine	SW8270C	mg/kg	--	--	--	--	--

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

M - a matrix effect was present, the data is usable

R-H - extracted outside of hold time, the sample result should be considere

R-L - recovery for the LCS below laboratory acceptance limits, the sample r

UBRL - cross contamination, the sample result should be considered nond

UJ-S - sample extracted outside of hold time, the sample result should be c

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

			TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO
			CTE/CASK	CTE/CASK	CTE/CASK	CASK	CTE/CASK
			1034357001	1034357002	1034357003	K230535204	1034398001
			K230535201	K230535202	K230535203		K230535205
			7/16/03	7/16/03	7/16/03	7/16/03	7/17/03
			Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units					
Total Solids	A2540G	PERCENT	95.9 [0]	96.6 [0]	95.9 [0]	--	96.5 [0]
Gasoline Range Organics	AK101	mg/kg	ND [2.05]	ND [2.46]	ND [1.68]	--	ND [2.55]
Diesel Range Organics	AK102	mg/kg	4.15 [21.3] J UBRL	7.19 [21.2] J UBRL	3.89 [21.1] J UBRL	--	4.89 [21.4] J UBRL
Residual Range Organics	AK103	mg/kg	10.7 [21.3] J UBRL	15.6 [21.2] J UBRL	7.59 [21.1] J UBRL	--	14 [21.4] J UBRL
Total Solids	E160.3M	PERCENT	--	--	--	96.8 [0]	--
Total Organic Carbon (TOC)	E415.1	mg/kg	724.7 [535]	--	--	--	907.3 [517]
Acenaphthene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Acenaphthylene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Anthracene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Benzo(a)anthracene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Benzo(a)pyrene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Benzo(b)fluoranthene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Benzo(k)fluoranthene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Chrysene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Fluoranthene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Fluorene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Naphthalene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Phenanthrene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Pyrene	PAHSIM	µg/kg	ND [5.02]	ND [5.16]	ND [4.99]	--	ND [5.15]
Arsenic	SW6020	mg/kg	--	6.26 [1.78]	--	--	--
Barium	SW6020	mg/kg	--	65.8 [0.297]	--	--	--
Cadmium	SW6020	mg/kg	--	0.0829 [0.198] J	--	--	--
Chromium	SW6020	mg/kg	--	24.8 [0.396] B	--	--	--
Lead	SW6020	mg/kg	--	5.43 [0.198]	--	--	--
Selenium	SW6020	mg/kg	--	ND [0.495]	--	--	--
Silver	SW6020	mg/kg	--	0.0588 [0.0989] J	--	--	--
Mercury	SW7471A	mg/kg	--	0.0552 [0.0387]	--	--	--
2,4,5-T	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
2,4,5-TP (Silvex)	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
2,4-D	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
2,4-DB	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]

See text for validation qualification information

ND - not detected

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Elmendorf SA99
2003 Soil Analytical Data

			TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO
			CTE/CASK 1034357001 K230535201 7/16/03 Soil	CTE/CASK 1034357002 K230535202 7/16/03 Soil	CTE/CASK 1034357003 K230535203 7/16/03 Soil	CASK K230535204 7/16/03 Soil	CTE/CASK 1034398001 K230535205 7/17/03 Soil
Analyte	Method	Units					
Dalapon	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
Dicamba	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
Dichlorprop	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
Dinoseb	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8151A	µg/kg	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	1100 [10000] J UBRL	ND [10000]	890 [10000] J UBRL	1100 [10000] J UBRL	1600 [10000] J UBRL
2,4,5-TP (Silvex)	SW1311/SW8151A	µg/L	ND [20] UJ-S, R-H	--	--	--	--
2,4-D	SW1311/SW8151A	µg/L	ND [100] UJ-S, R-H, R-I	--	--	--	--
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.002]	ND [0.0025]	ND [0.002]	--	ND [0.003]
1,1,1-Trichloroethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.0007]	ND [0.0008]	ND [0.0007]	--	ND [0.001]
1,1,2-Trichloroethane	SW8260B	mg/kg	ND [0.001]	ND [0.0013]	ND [0.001]	--	ND [0.0015]
1,1-Dichloroethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,1-Dichloroethene	SW8260B	mg/kg	ND [0.002]	ND [0.0025]	ND [0.002]	--	ND [0.003]
1,1-Dichloropropene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2,3-Trichlorobenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2,3-Trichloropropane	SW8260B	mg/kg	ND [0.001]	ND [0.0013]	ND [0.001]	--	ND [0.0015]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2,4-Trimethylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	ND [0.0068]	ND [0.0085]	ND [0.0065]	--	ND [0.0099]
1,2-Dibromoethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2-Dichlorobenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,2-Dichloroethane	SW8260B	mg/kg	ND [0.0007]	ND [0.0008]	ND [0.0007]	--	ND [0.001]
1,2-Dichloropropane	SW8260B	mg/kg	ND [0.001]	ND [0.0013]	ND [0.001]	--	ND [0.0015]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,3-Dichlorobenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
1,3-Dichloropropane	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
1,4-Dichlorobenzene	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
1-Chlorohexane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
2,2-Dichloropropane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
2-Chlorotoluene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
4-Chlorotoluene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
4-Isopropyltoluene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
4-Methyl-2-pentanone	SW8260B	mg/kg	ND [0.0136]	ND [0.0169]	ND [0.0131]	--	ND [0.0197]

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

			TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO
			CTE/CASK	CTE/CASK	CTE/CASK	CASK	CTE/CASK
			1034357001	1034357002	1034357003	K230535204	1034398001
			K230535201	K230535202	K230535203		K230535205
			7/16/03	7/16/03	7/16/03	7/16/03	7/17/03
			Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units					
Acetone	SW8260B	mg/kg	ND [0.034]	0.0172 [0.0422] J	ND [0.0327]	--	0.0253 [0.0493] J
Benzene	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
Bromobenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Bromochloromethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Bromodichloromethane	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
Bromoform	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Bromomethane	SW8260B	mg/kg	ND [0.0068]	ND [0.0085]	ND [0.0065]	--	ND [0.0099]
Carbon disulfide	SW8260B	mg/kg	ND [0.0068]	ND [0.0085]	ND [0.0065]	--	ND [0.0099]
Carbon tetrachloride	SW8260B	mg/kg	ND [0.002]	ND [0.0025]	ND [0.002]	--	ND [0.003]
Chlorobenzene	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
Chloroethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Chloroform	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
Chloromethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Dibromochloromethane	SW8260B	mg/kg	ND [0.002]	ND [0.0025]	ND [0.002]	--	ND [0.003]
Dibromomethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Dichlorodifluoromethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Ethylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Hexachlorobutadiene	SW8260B	mg/kg	ND [0.002]	ND [0.0025]	ND [0.002]	--	ND [0.003]
Isopropylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	ND [0.0136]	ND [0.0169]	ND [0.0131]	--	ND [0.0197]
Methylene chloride	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	0.0023 [0.0049] J
Naphthalene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049] UBRL
Styrene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Tetrachloroethene (PCE)	SW8260B	mg/kg	ND [0.0017]	ND [0.0021]	ND [0.0016]	--	ND [0.0025]
Toluene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Trichloroethene (TCE)	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
Trichlorofluoromethane	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
Vinyl chloride	SW8260B	mg/kg	ND [0.0005]	ND [0.0007]	ND [0.0005]	--	ND [0.0008]
Xylene, Isomers m & p	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
cis-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
cis-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0014]	ND [0.0017]	ND [0.0013]	--	ND [0.002]
n-Butylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
n-Propylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
o-Xylene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
sec-Butylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
tert-Butylbenzene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
trans-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]
trans-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0034]	ND [0.0042]	ND [0.0033]	--	ND [0.0049]

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Elmendorf SA99
2003 Soil Analytical Data

	TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO
	CTE/CASK	CTE/CASK	CTE/CASK	CASK	CTE/CASK
	1034357001	1034357002	1034357003	K230535204	1034398001
	K230535201	K230535202	K230535203		K230535205
	7/16/03	7/16/03	7/16/03	7/16/03	7/17/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
1,2,4-Trichlorobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
1,2-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
1,3-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
1,4-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,4,5-Trichlorophenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,4,6-Trichlorophenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,4-Dichlorophenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,4-Dimethylphenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,4-Dinitrophenol	SW8270C	mg/kg	--	ND [3.35]	--	--	--
2,4-Dinitrotoluene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2,6-Dinitrotoluene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Chloronaphthalene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Chlorophenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Methyl-4,6-dinitrophenol	SW8270C	mg/kg	--	ND [3.35]	--	--	--
2-Methylnaphthalene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Methylphenol (o-Cresol)	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Nitroaniline	SW8270C	mg/kg	--	ND [0.419]	--	--	--
2-Nitrophenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
3,3'-Dichlorobenzidine	SW8270C	mg/kg	--	ND [0.419]	--	--	--
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/kg	--	ND [0.503]	--	--	--
3-Nitroaniline	SW8270C	mg/kg	--	ND [0.419]	--	--	--
4-Bromophenyl phenyl ether	SW8270C	mg/kg	--	ND [0.419]	--	--	--
4-Chloro-3-methylphenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
4-Chloroaniline	SW8270C	mg/kg	--	ND [0.419]	--	--	--
4-Chlorophenyl phenyl ether	SW8270C	mg/kg	--	ND [0.419]	--	--	--
4-Nitroaniline	SW8270C	mg/kg	--	ND [0.839]	--	--	--
4-Nitrophenol	SW8270C	mg/kg	--	ND [1.68]	--	--	--
Acenaphthene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Acenaphthylene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Aniline	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Anthracene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Azobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzo(a)anthracene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzo(a)pyrene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzoic acid	SW8270C	mg/kg	--	ND [1.68]	--	--	--

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Elmendorf SA99
2003 Soil Analytical Data

	TP1-01SO	TP1-02SO	TP1-03SO	TP1-04SO	TP2-01SO
	CTE/CASK	CTE/CASK	CTE/CASK	CASK	CTE/CASK
	1034357001	1034357002	1034357003	K230535204	1034398001
	K230535201	K230535202	K230535203		K230535205
	7/16/03	7/16/03	7/16/03	7/16/03	7/17/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
Benzyl alcohol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Benzyl butyl phthalate	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Chrysene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Di-n-butyl phthalate	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Di-n-octyl phthalate	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Dibenzofuran	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Diethyl phthalate	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Dimethyl phthalate	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Fluoranthene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Fluorene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Hexachlorobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Hexachlorobutadiene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Hexachlorocyclopentadiene	SW8270C	mg/kg	--	ND [0.839]	--	--	--
Hexachloroethane	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Isophorone	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Naphthalene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Nitrobenzene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Pentachlorophenol	SW8270C	mg/kg	--	ND [1.68]	--	--	--
Phenanthrene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Phenol	SW8270C	mg/kg	--	ND [0.419]	--	--	--
Pyrene	SW8270C	mg/kg	--	ND [0.419]	--	--	--
bis(2-Chloroisopropyl)ether	SW8270C	mg/kg	--	ND [0.419]	--	--	--
bis-(2-Chloroethyl)ether	SW8270C	mg/kg	--	ND [0.419]	--	--	--
n-Nitrosodi-n-propylamine	SW8270C	mg/kg	--	ND [0.419]	--	--	--
n-Nitrosodimethylamine	SW8270C	mg/kg	--	ND [0.419]	--	--	--
n-Nitrosodiphenylamine	SW8270C	mg/kg	--	ND [0.419]	--	--	--

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

M - a matrix effect was present, the data is usable

R-H - extracted outside of hold time, the sample result should be considere

R-L - recovery for the LCS below laboratory acceptance limits, the sample r

UBRL - cross contamination, the sample result should be considered nond

UJ-S - sample extracted outside of hold time, the sample result should be c

See text for validation qualification information

ND - not detected

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Elmendorf SA99
2003 Soil Analytical Data

	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO	TP3-02SO		
	CASK	CTE/CASK	CTE	CTE/CASK	CTE/CASK		
	K230535206	1034398002 K230535207	1034398007	1034398003 K230535208	1034398004 K230535209		
	7/17/03	7/17/03	7/17/03	7/17/03	7/17/03		
	Soil	Soil	Soil	Soil	Soil		
Analyte	Method	Units					
Total Solids	A2540G	PERCENT	--	96.1 [0]	97.8 [0]	95.9 [0]	95.8 [0]
Gasoline Range Organics	AK101	mg/kg	--	ND [2.5]	--	ND [1.82]	ND [1.71]
Diesel Range Organics	AK102	mg/kg	--	4.24 [21.3] J UBRL	452 [1040] J	4.11 [20.6] J UBRL	4.5 [21.6] J UBRL
Residual Range Organics	AK103	mg/kg	--	11 [21.3] J UBRL	2560 [1040]	11 [20.6] J UBRL	11.7 [21.6] J UBRL
Total Solids	E160.3M	PERCENT	96.6 [0]	95.6 [0]	--	--	--
Total Organic Carbon (TOC)	E415.1	mg/kg	--	--	--	2264 [518]	--
Acenaphthene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	6.69 [4.72]
Acenaphthylene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	ND [4.72]
Anthracene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	35 [4.72]
Benzo(a)anthracene	PAHSIM	µg/kg	--	ND [5.07]	23.7 [65.8] J	ND [5.25]	115 [47.2]
Benzo(a)pyrene	PAHSIM	µg/kg	--	ND [5.07]	38 [65.8] J	ND [5.25]	121 [47.2]
Benzo(b)fluoranthene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	122 [47.2]
Benzo(g,h,i)perylene	PAHSIM	µg/kg	--	ND [5.07]	37.4 [65.8] J	ND [5.25]	52.7 [4.72]
Benzo(k)fluoranthene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	52.1 [47.2]
Chrysene	PAHSIM	µg/kg	--	ND [5.07]	30.5 [65.8] J	ND [5.25]	128 [47.2]
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	14.2 [4.72]
Fluoranthene	PAHSIM	µg/kg	--	ND [5.07]	26.2 [65.8] J	ND [5.25]	205 [47.2]
Fluorene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	4.3 [4.72] J
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	50.6 [4.72]
Naphthalene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	1.47 [4.72] J
Phenanthrene	PAHSIM	µg/kg	--	ND [5.07]	ND [65.8]	ND [5.25]	64.4 [4.72]
Pyrene	PAHSIM	µg/kg	--	ND [5.07]	30 [65.8] J	ND [5.25]	220 [47.2]
Arsenic	SW6020	mg/kg	--	6.51 [1.79]	5.91 [1.74]	--	5.92 [1.74]
Barium	SW6020	mg/kg	--	37.5 [0.298]	55.3 [0.29]	--	39.3 [0.29]
Cadmium	SW6020	mg/kg	--	0.105 [0.198] J	0.415 [0.193]	--	0.0774 [0.194] J
Chromium	SW6020	mg/kg	--	21.8 [0.397] B	27.9 [0.387] B	--	27.8 [0.387] B
Lead	SW6020	mg/kg	--	5.87 [0.198]	20.5 [0.193]	--	5.63 [0.194]
Selenium	SW6020	mg/kg	--	ND [0.496]	0.158 [0.484] J	--	ND [0.484]
Silver	SW6020	mg/kg	--	0.0603 [0.0992] J	0.0697 [0.0967] J	--	0.0642 [0.0968] J
Mercury	SW7471A	mg/kg	--	0.0503 [0.0381]	0.0479 [0.0398]	--	0.0917 [0.0411]
2,4,5-T	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
2,4,5-TP (Silvex)	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
2,4-D	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
2,4-DB	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"--" - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO	TP3-02SO
	CASK	CTE/CASK	CTE	CTE/CASK	CTE/CASK
	K230535206	1034398002 K230535207	1034398007	1034398003 K230535208	1034398004 K230535209
	7/17/03	7/17/03	7/17/03	7/17/03	7/17/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
Dalapon	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
Dicamba	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
Dichlorprop	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
Dinoseb	SW8151A	µg/kg	ND [50]	ND [50]	--	ND [50]	ND [50]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8151A	µg/kg	ND [10000]	ND [9900]	--	ND [9900]	ND [10000]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	750 [10000] J UBRL	ND [9900]	--	1100 [9900] J UBRL	ND [10000]
2,4,5-TP (Silvex)	SW1311/SW8151A	µg/L	ND [20] UJ-S, R-H	--	--	ND [20] UJ-S, R-H	--
2,4-D	SW1311/SW8151A	µg/L	ND [100] UJ-S, R-H, R-L	--	--	ND [100] UJ-S, R-H, R-	--
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	--	ND [0.0018]	--	ND [0.0024]	ND [0.0038]
1,1,1-Trichloroethane	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	--	ND [0.0006]	--	ND [0.0008]	ND [0.0013]
1,1,2-Trichloroethane	SW8260B	mg/kg	--	ND [0.0009]	--	ND [0.0012]	ND [0.0019]
1,1-Dichloroethane	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,1-Dichloroethene	SW8260B	mg/kg	--	ND [0.0018]	--	ND [0.0024]	ND [0.0038]
1,1-Dichloropropene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2,3-Trichlorobenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2,3-Trichloropropane	SW8260B	mg/kg	--	ND [0.0009]	--	ND [0.0012]	ND [0.0019]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2,4-Trimethylbenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	--	ND [0.006]	--	ND [0.0079]	ND [0.0127]
1,2-Dibromoethane	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,2-Dichloroethane	SW8260B	mg/kg	--	ND [0.0006]	--	ND [0.0008]	ND [0.0013]
1,2-Dichloropropane	SW8260B	mg/kg	--	ND [0.0009]	--	ND [0.0012]	ND [0.0019]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,3-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
1,3-Dichloropropane	SW8260B	mg/kg	--	ND [0.0012]	--	ND [0.0016]	ND [0.0026]
1,4-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.0012]	--	ND [0.0016]	ND [0.0026]
1-Chlorohexane	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
2,2-Dichloropropane	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
2-Chlorotoluene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
4-Chlorotoluene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
4-Isopropyltoluene	SW8260B	mg/kg	--	ND [0.003]	--	ND [0.004]	ND [0.0064]
4-Methyl-2-pentanone	SW8260B	mg/kg	--	ND [0.012]	--	ND [0.0158]	ND [0.0255]

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO	TP3-02SO
	CASK	CTE/CASK	CTE	CTE/CASK	CTE/CASK
	K230535206	1034398002 K230535207	1034398007	1034398003 K230535208	1034398004 K230535209
	7/17/03	7/17/03	7/17/03	7/17/03	7/17/03
	Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units			
Acetone	SW8260B	mg/kg	--	ND [0.0299]	--
Benzene	SW8260B	mg/kg	--	ND [0.0012]	ND [0.0395]
Bromobenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
Bromochloromethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
Bromodichloromethane	SW8260B	mg/kg	--	ND [0.0012]	ND [0.004]
Bromoform	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
Bromomethane	SW8260B	mg/kg	--	ND [0.006]	ND [0.004]
Carbon disulfide	SW8260B	mg/kg	--	ND [0.006]	ND [0.0079]
Carbon tetrachloride	SW8260B	mg/kg	--	ND [0.0018]	ND [0.0079]
Chlorobenzene	SW8260B	mg/kg	--	ND [0.0012]	ND [0.0024]
Chloroethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
Chloroform	SW8260B	mg/kg	--	ND [0.0012]	ND [0.004]
Chloromethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
Dibromochloromethane	SW8260B	mg/kg	--	ND [0.0018]	ND [0.004]
Dibromomethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.0024]
Dichlorodifluoromethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
Ethylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
Hexachlorobutadiene	SW8260B	mg/kg	--	ND [0.0018]	ND [0.004]
Isopropylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.0024]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	--	ND [0.012]	ND [0.004]
Methylene chloride	SW8260B	mg/kg	--	ND [0.003]	ND [0.0158]
Naphthalene	SW8260B	mg/kg	--	ND [0.003] UBRL	ND [0.004]
Styrene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
Tetrachloroethene (PCE)	SW8260B	mg/kg	--	ND [0.0015]	ND [0.004]
Toluene	SW8260B	mg/kg	--	ND [0.003]	ND [0.002]
Trichloroethene (TCE)	SW8260B	mg/kg	--	ND [0.0012]	ND [0.004]
Trichlorofluoromethane	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
Vinyl chloride	SW8260B	mg/kg	--	ND [0.0005]	ND [0.004]
Xylene, Isomers m & p	SW8260B	mg/kg	--	ND [0.003]	ND [0.0006]
cis-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
cis-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.0012]	ND [0.004]
n-Butylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.0016]
n-Propylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
o-Xylene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
sec-Butylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
tert-Butylbenzene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
trans-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]
trans-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.003]	ND [0.004]

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO	TP3-02SO
	CASK	CTE/CASK	CTE	CTE/CASK	CTE/CASK
	K230535206	1034398002 K230535207	1034398007	1034398003 K230535208	1034398004 K230535209
	7/17/03	7/17/03	7/17/03	7/17/03	7/17/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
1,2,4-Trichlorobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
1,2-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
1,3-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
1,4-Dichlorobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,4,5-Trichlorophenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,4,6-Trichlorophenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,4-Dichlorophenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,4-Dimethylphenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,4-Dinitrophenol	SW8270C	mg/kg	--	ND [3.04]	--	--	ND [3]
2,4-Dinitrotoluene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2,6-Dinitrotoluene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Chloronaphthalene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Chlorophenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Methyl-4,6-dinitrophenol	SW8270C	mg/kg	--	ND [3.04]	--	--	ND [3]
2-Methylnaphthalene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Methylphenol (o-Cresol)	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Nitroaniline	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
2-Nitrophenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
3,3'-Dichlorobenzidine	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/kg	--	ND [0.456]	--	--	ND [0.45]
3-Nitroaniline	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
4-Bromophenyl phenyl ether	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
4-Chloro-3-methylphenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
4-Chloroaniline	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
4-Chlorophenyl phenyl ether	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
4-Nitroaniline	SW8270C	mg/kg	--	ND [0.759]	--	--	ND [0.75]
4-Nitrophenol	SW8270C	mg/kg	--	ND [1.52]	--	--	ND [1.5]
Acenaphthene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Acenaphthylene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Aniline	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Anthracene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Azobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzo(a)anthracene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzo(a)pyrene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzo(b)fluoranthene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzo(g,h,i)perylene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzo(k)fluoranthene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzoic acid	SW8270C	mg/kg	--	ND [1.52]	--	--	ND [1.5]

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

	TP2-02SO	TP2-03SO	TP2-04SO	TP3-01SO	TP3-02SO
	CASK	CTE/CASK	CTE	CTE/CASK	CTE/CASK
	K230535206	1034398002 K230535207	1034398007	1034398003 K230535208	1034398004 K230535209
	7/17/03	7/17/03	7/17/03	7/17/03	7/17/03
	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
Benzyl alcohol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Benzyl butyl phthalate	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Chrysene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Di-n-butyl phthalate	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Di-n-octyl phthalate	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Dibenzo(a,h)anthracene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Dibenzofuran	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Diethyl phthalate	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Dimethyl phthalate	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Fluoranthene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Fluorene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Hexachlorobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Hexachlorobutadiene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Hexachlorocyclopentadiene	SW8270C	mg/kg	--	ND [0.759]	--	--	ND [0.75]
Hexachloroethane	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Isophorone	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Naphthalene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Nitrobenzene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Pentachlorophenol	SW8270C	mg/kg	--	ND [1.52]	--	--	ND [1.5]
Phenanthrene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Phenol	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
Pyrene	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
bis-(2-Chloroisopropyl)ether	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
bis-(2-Chloroethyl)ether	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
n-Nitrosodi-n-propylamine	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
n-Nitrosodimethylamine	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]
n-Nitrosodiphenylamine	SW8270C	mg/kg	--	ND [0.38]	--	--	ND [0.375]

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

M - a matrix effect was present, the data is usable

R-H - extracted outside of hold time, the sample result should be considere

R-L - recovery for the LCS below laboratory acceptance limits, the sample r

UBRL - cross contamination, the sample result should be considered nond

UJ-S - sample extracted outside of hold time, the sample result should be c

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

			TP3-03SO	TP4-01SO	TP4-02SO	TP4-03SO	TP4-04SO	TP4-05SO
			CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CASK
			K230535210	1034418001 K230535211	1034418002 K230535212	1034418003 K230535213	1034418004 K230535214	K230535215
			7/17/03	7/18/03	7/18/03	7/18/03	7/18/03	7/18/03
			Soil	Soil	Soil	Soil	Soil	Soil
Analyte	Method	Units						
Total Solids	A2540G	PERCENT	--	97.6 [0]	96.9 [0]	96.8 [0]	97.1 [0]	--
Gasoline Range Organics	AK101	mg/kg	--	ND [1.97]	ND [2.86]	ND [1.93]	ND [1.61]	--
Diesel Range Organics	AK102	mg/kg	--	476 [204]	750 [212]	2.6 [19.5] J UBRL	2.98 [20.8] J UBRL	--
Residual Range Organics	AK103	mg/kg	--	698 [204]	1130 [212]	9.35 [19.5] J UBRL	8.88 [20.8] J UBRL	--
Total Solids	E160.3M	PERCENT	95.9 [0]	--	--	--	--	96.2 [0]
Total Organic Carbon (TOC)	E415.1	mg/kg	--	--	--	507.3 [510] J	--	--
Acenaphthene	PAHSIM	µg/kg	--	2950 [523]	5630 [518]	ND [5.52]	ND [5.31]	--
Acenaphthylene	PAHSIM	µg/kg	--	240 [523] J	385 [518] J	ND [5.52]	ND [5.31]	--
Anthracene	PAHSIM	µg/kg	--	16300 [5230]	23300 [5180]	ND [5.52]	ND [5.31]	--
Benzo(a)anthracene	PAHSIM	µg/kg	--	20600 [5230]	33100 [5180]	ND [5.52]	ND [5.31]	--
Benzo(a)pyrene	PAHSIM	µg/kg	--	11600 [5230]	21100 [5180]	ND [5.52]	ND [5.31]	--
Benzo(b)fluoranthene	PAHSIM	µg/kg	--	16100 [5230]	25000 [5180]	ND [5.52]	ND [5.31]	--
Benzo(g,h,i)perylene	PAHSIM	µg/kg	--	5970 [523]	5860 [5180]	ND [5.52]	ND [5.31]	--
Benzo(k)fluoranthene	PAHSIM	µg/kg	--	6480 [523]	10200 [5180]	ND [5.52]	ND [5.31]	--
Chrysene	PAHSIM	µg/kg	--	20900 [5230]	35700 [5180]	ND [5.52]	ND [5.31]	--
Dibenzo(a,h)anthracene	PAHSIM	µg/kg	--	1920 [523]	4240 [518]	ND [5.52]	ND [5.31]	--
Fluoranthene	PAHSIM	µg/kg	--	52400 [5230]	79000 [5180]	ND [5.52]	ND [5.31]	--
Fluorene	PAHSIM	µg/kg	--	3430 [523]	5710 [518]	ND [5.52]	ND [5.31]	--
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/kg	--	6090 [523]	5680 [5180]	ND [5.52]	ND [5.31]	--
Naphthalene	PAHSIM	µg/kg	--	398 [523] J	748 [518]	ND [5.52]	ND [5.31]	--
Phenanthrene	PAHSIM	µg/kg	--	41600 [5230]	60700 [5180]	ND [5.52]	ND [5.31]	--
Pyrene	PAHSIM	µg/kg	--	44500 [5230]	73300 [5180]	ND [5.52]	ND [5.31]	--
Arsenic	SW6020	mg/kg	--	9.13 [1.8]	6.67 [1.82]	--	--	--
Barium	SW6020	mg/kg	--	130 [0.301]	132 [0.304]	--	--	--
Cadmium	SW6020	mg/kg	--	0.134 [0.201] J	0.107 [0.203] J	--	--	--
Chromium	SW6020	mg/kg	--	29.8 [0.401] , B	32.3 [0.405] , B	--	--	--
Lead	SW6020	mg/kg	--	6.38 [0.201]	7.31 [0.203]	--	--	--
Selenium	SW6020	mg/kg	--	0.158 [0.501] J	ND [0.507]	--	--	--
Silver	SW6020	mg/kg	--	0.077 [0.1] J	0.0671 [0.101] J	--	--	--
Mercury	SW7471A	mg/kg	--	0.062 [0.0395]	0.0662 [0.0395]	--	--	--
2,4,5-T	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
2,4,5-TP (Silvex)	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
2,4-D	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
2,4-DB	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- " - sample not analyzed by this method

Elmendorf SA99
2003 Soil Analytical Data

	TP3-03SO	TP4-01SO	TP4-02SO	TP4-03SO	TP4-04SO	TP4-05SO
	CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CASK
	K230535210	1034418001 K230535211	1034418002 K230535212	1034418003 K230535213	1034418004 K230535214	K230535215
	7/17/03	7/18/03	7/18/03	7/18/03	7/18/03	7/18/03
	Soil	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units						
Dalapon	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
Dicamba	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
Dichlorprop	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
Dinoseb	SW8151A	µg/kg	ND [50]	ND [50]	ND [50]	ND [50]	ND [50]	ND [49]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8151A	µg/kg	ND [9900]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [9800]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8151A	µg/kg	ND [9900]	ND [10000]	ND [10000]	730 [10000] J UBRL	ND [10000]	1200 [9800] J UBRL
2,4,5-TP (Silvex)	SW1311/SW8151A	µg/L	--	--	--	ND [20] UJ-S, R-H	--	--
2,4-D	SW1311/SW8151A	µg/L	--	--	--	ND [100] UJ-S, R-H, R-I	--	--
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	--	ND [0.0022]	ND [0.0027]	ND [0.0025]	ND [0.0031]	--
1,1,1-Trichloroethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	--	ND [0.0007]	ND [0.0009]	ND [0.0008]	ND [0.001]	--
1,1,2-Trichloroethane	SW8260B	mg/kg	--	ND [0.0011]	ND [0.0014]	ND [0.0013]	ND [0.0015]	--
1,1-Dichloroethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,1-Dichloroethene	SW8260B	mg/kg	--	ND [0.0022]	ND [0.0027]	ND [0.0025]	ND [0.0031]	--
1,1-Dichloropropene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2,3-Trichlorobenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2,3-Trichloropropane	SW8260B	mg/kg	--	ND [0.0011]	ND [0.0014]	ND [0.0013]	ND [0.0015]	--
1,2,4-Trichlorobenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2,4-Trimethylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	--	ND [0.0072]	ND [0.009]	ND [0.0085]	ND [0.0102]	--
1,2-Dibromoethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,2-Dichloroethane	SW8260B	mg/kg	--	ND [0.0007]	ND [0.0009]	ND [0.0008]	ND [0.001]	--
1,2-Dichloropropane	SW8260B	mg/kg	--	ND [0.0011]	ND [0.0014]	ND [0.0013]	ND [0.0015]	--
1,3,5-Trimethylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,3-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
1,3-Dichloropropane	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
1,4-Dichlorobenzene	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
1-Chlorohexane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
2,2-Dichloropropane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
2-Chlorotoluene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
4-Chlorotoluene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
4-Isopropyltoluene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
4-Methyl-2-pentanone	SW8260B	mg/kg	--	ND [0.0144]	ND [0.018]	ND [0.0169]	ND [0.0205]	--

See text for validation qualification information

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Elmendorf SA99
2003 Soil Analytical Data

	TP3-03SO	TP4-01SO	TP4-02SO	TP4-03SO	TP4-04SO	TP4-05SO		
	CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CASK		
	K230535210	1034418001 K230535211	1034418002 K230535212	1034418003 K230535213	1034418004 K230535214	K230535215		
	7/17/03	7/18/03	7/18/03	7/18/03	7/18/03	7/18/03		
	Soil	Soil	Soil	Soil	Soil	Soil		
Analyte	Method	Units						
Acetone	SW8260B	mg/kg	--	0.0458 [0.0359]	0.0365 [0.045] J	ND [0.0423]	0.0271 [0.0511] J	--
Benzene	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
Bromobenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Bromochloromethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Bromodichloromethane	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
Bromoform	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Bromomethane	SW8260B	mg/kg	--	ND [0.0072]	mg [0.009]	ND [0.0085]	ND [0.0102]	--
Carbon disulfide	SW8260B	mg/kg	--	ND [0.0072]	ND [0.009]	0.0027 [0.0085] J	ND [0.0102]	--
Carbon tetrachloride	SW8260B	mg/kg	--	ND [0.0022]	ND [0.0027]	ND [0.0025]	ND [0.0031]	--
Chlorobenzene	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
Chloroethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Chloroform	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
Chloromethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Dibromochloromethane	SW8260B	mg/kg	--	ND [0.0022]	ND [0.0027]	ND [0.0025]	ND [0.0031]	--
Dibromomethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Dichlorodifluoromethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Ethylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Hexachlorobutadiene	SW8260B	mg/kg	--	ND [0.0022]	ND [0.0027]	ND [0.0025]	ND [0.0031]	--
Isopropylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	--	ND [0.0144]	ND [0.018]	ND [0.0169]	ND [0.0205]	--
Methylene chloride	SW8260B	mg/kg	--	0.0013 [0.0036] J	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Naphthalene	SW8260B	mg/kg	--	0.0072 [0.0036] UBR	0.0042 [0.0045] J	ND [0.0042] UBRL	ND [0.0051]	--
Styrene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Tetrachloroethene (PCE)	SW8260B	mg/kg	--	ND [0.0018]	ND [0.0023]	ND [0.0021]	ND [0.0026]	--
Toluene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Trichloroethene (TCE)	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
Trichlorofluoromethane	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
Vinyl chloride	SW8260B	mg/kg	--	ND [0.0006]	ND [0.0007]	ND [0.0007]	ND [0.0008]	--
Xylene, Isomers m & p	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
cis-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
cis-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.0014]	ND [0.0018]	ND [0.0017]	ND [0.0021]	--
n-Butylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
n-Propylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
o-Xylene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
sec-Butylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
tert-Butylbenzene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
trans-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--
trans-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.0036]	ND [0.0045]	ND [0.0042]	ND [0.0051]	--

See text for validation qualification information

ND - not detected

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Elmendorf SA99
2003 Soil Analytical Data

	TP3-03SO	TP4-01SO	TP4-02SO	TP4-03SO	TP4-04SO	TP4-05SO
	CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CASK
	K230535210	1034418001 K230535211	1034418002 K230535212	1034418003 K230535213	1034418004 K230535214	K230535215
	7/17/03	7/18/03	7/18/03	7/18/03	7/18/03	7/18/03
	Soil	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
1,2,4-Trichlorobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
1,2-Dichlorobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
1,3-Dichlorobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
1,4-Dichlorobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,4,5-Trichlorophenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,4,6-Trichlorophenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,4-Dichlorophenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,4-Dimethylphenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,4-Dinitrophenol	SW8270C	mg/kg	--	ND [30.6] M	ND [31.3]	--	--
2,4-Dinitrotoluene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2,6-Dinitrotoluene	SW8270C	mg/kg	--	ND [3.83] M	ND [3.92]	--	--
2-Chloronaphthalene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2-Chlorophenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2-Methyl-4,6-dinitrophenol	SW8270C	mg/kg	--	ND [30.6]	ND [31.3]	--	--
2-Methylnaphthalene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2-Methylphenol (o-Cresol)	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2-Nitroaniline	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
2-Nitrophenol	SW8270C	mg/kg	--	ND [3.83] M	ND [3.92]	--	--
3,3'-Dichlorobenzidine	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/kg	--	ND [4.6]	ND [4.7]	--	--
3-Nitroaniline	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
4-Bromophenyl phenyl ether	SW8270C	mg/kg	--	ND [3.83] M	ND [3.92]	--	--
4-Chloro-3-methylphenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
4-Chloroaniline	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
4-Chlorophenyl phenyl ether	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
4-Nitroaniline	SW8270C	mg/kg	--	ND [7.66]	ND [7.83]	--	--
4-Nitrophenol	SW8270C	mg/kg	--	ND [15.3]	ND [15.7]	--	--
Acenaphthene	SW8270C	mg/kg	--	6.31 [3.83] M	5.17 [3.92]	--	--
Acenaphthylene	SW8270C	mg/kg	--	ND [3.83] M	ND [3.92]	--	--
Aniline	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Anthracene	SW8270C	mg/kg	--	23.9 [3.83] M	25.2 [3.92]	--	--
Azobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Benzo(a)anthracene	SW8270C	mg/kg	--	32.6 [3.83] M	41.6 [3.92]	--	--
Benzo(a)pyrene	SW8270C	mg/kg	--	26.9 [3.83] M	36.2 [3.92]	--	--
Benzo(b)fluoranthene	SW8270C	mg/kg	--	26.4 [3.83] M	30.3 [3.92]	--	--
Benzo(g,h,i)perylene	SW8270C	mg/kg	--	11 [3.83] M	13.8 [3.92]	--	--
Benzo(k)fluoranthene	SW8270C	mg/kg	--	14.6 [3.83] M	25.5 [3.92]	--	--
Benzoic acid	SW8270C	mg/kg	--	ND [15.3]	ND [15.7]	--	--

See text for validation qualification information

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**Elmendorf SA99
2003 Soil Analytical Data**

	TP3-03SO	TP4-01SO	TP4-02SO	TP4-03SO	TP4-04SO	TP4-05SO
	CASK	CTE/CASK	CTE/CASK	CTE/CASK	CTE/CASK	CASK
	K230535210	1034418001 K230535211	1034418002 K230535212	1034418003 K230535213	1034418004 K230535214	K230535215
	7/17/03	7/18/03	7/18/03	7/18/03	7/18/03	7/18/03
	Soil	Soil	Soil	Soil	Soil	Soil

Analyte	Method	Units					
Benzyl alcohol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Benzyl butyl phthalate	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Chrysene	SW8270C	mg/kg	--	35.2 [3.83] M	46 [3.92]	--	--
Di-n-butyl phthalate	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Di-n-octyl phthalate	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Dibenzo(a,h)anthracene	SW8270C	mg/kg	--	3.59 [3.83] J, M	4.86 [3.92]	--	--
Dibenzofuran	SW8270C	mg/kg	--	3.19 [3.83] J	2.34 [3.92] J	--	--
Diethyl phthalate	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Dimethyl phthalate	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Fluoranthene	SW8270C	mg/kg	--	85.9 [3.83] M	105 [3.92]	--	--
Fluorene	SW8270C	mg/kg	--	6.67 [3.83] M	5.58 [3.92]	--	--
Hexachlorobenzene	SW8270C	mg/kg	--	ND [3.83] M	ND [3.92]	--	--
Hexachlorobutadiene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Hexachlorocyclopentadiene	SW8270C	mg/kg	--	ND [7.66]	ND [7.83]	--	--
Hexachloroethane	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Indeno(1,2,3-cd)pyrene	SW8270C	mg/kg	--	10.8 [3.83] M	13.7 [3.92]	--	--
Isophorone	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Naphthalene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Nitrobenzene	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Pentachlorophenol	SW8270C	mg/kg	--	ND [15.3]	ND [15.7]	--	--
Phenanthrene	SW8270C	mg/kg	--	70.5 [3.83] M	66.9 [3.92]	--	--
Phenol	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
Pyrene	SW8270C	mg/kg	--	71.4 [3.83] M	88.7 [3.92]	--	--
bis(2-Chloroisopropyl)ether	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
bis-(2-Chloroethyl)ether	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
n-Nitrosodi-n-propylamine	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
n-Nitrosodimethylamine	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--
n-Nitrosodiphenylamine	SW8270C	mg/kg	--	ND [3.83]	ND [3.92]	--	--

Acronyms
 B - detected in associated blank as well as the sample
 J - estimated value
 M - a matrix effect was present, the data is usable
 R-H - extracted outside of hold time, the sample result should be considere
 R-L - recovery for the LCS below laboratory acceptance limits, the sample r
 UBRL - cross contamination, the sample result should be considered nond
 UJ-S - sample extracted outside of hold time, the sample result should be c

See text for validation qualification information
 ND - not detected
 [] - laboratory reporting limit
 "-" - sample not analyzed by this method

Elmendorf SA99

2003 Groundwater Analytical Data

Sample ID: (JE03ELM99)	PRIMARY		DUPLICATE		
	SA99WL1WGN1	SA99WL1WGN2	SA99WL2WGN1	SA99WL3WGN1	SA99WL4WGN1
Laboratory	CTE/STL	CTE	CTE	CTE	CTE
Lab Sample ID	1034904002	1034904005	1035071006	1034904007	1035071008
	1035071002	1035071005	1036976010	1035071007	1036976014
	1036976005	1036976006	D3J310202-003	1036976012	D3J310202-005
	D3J310202-001	D3J310202-002		D3J310202-004	
Collection Date	8/5/2003	8/5/2003	8/13/2003	8/5/2003	8/13/2003
	8/13/2003	8/13/2003	10/22/2003	8/13/2003	10/22/2003
	10/22/2003	10/22/2003	10/28/2003	10/22/2003	10/28/2003
	10/28/2003	10/28/2003		10/28/2003	
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater

Analyte	Method	Units	Screening Criteria					
			18 AAC 75 Table C					
Gasoline Range Organics	AK101	mg/L	1.3	ND [0.09]	ND [0.09]	ND [0.09]	ND [0.09]	ND [0.09]
Diesel Range Organics	AK102	mg/L	1.5	0.222 [0.323] J-TE	0.268 [0.3] J	0.312 [0.326] J UB	0.36 [0.31]	0.587 [0.357]
Residual Range Organics	AK103	mg/L	1.1	0.623 [0.538]	0.645 [0.5]	1.02 [0.543] UBF	0.67 [0.52]	0.698 [0.595]
Acenaphthene	PAHSIM	µg/L	2200	ND [0.0515]	ND [0.05]	0.0485 [0.0532] J	ND [0.05]	ND [0.05]
Acenaphthylene	PAHSIM	µg/L	2200	ND [0.0515]	ND [0.05]	ND [0.0532]	ND [0.05]	ND [0.05]
Anthracene	PAHSIM	µg/L	11000	ND [0.0515]	ND [0.05]	0.0371 [0.0532] J	ND [0.05]	ND [0.05]
Benzo(a)anthracene	PAHSIM	µg/L	5	0.0219 [0.0515] J	0.0258 [0.05] J	0.087 [0.0532]	0.0255 [0.05] J	ND [0.05]
Benzo(a)pyrene	PAHSIM	µg/L	1	0.0263 [0.0515] J	0.0341 [0.05] J	0.069 [0.0532]	0.0283 [0.05] J	0.147 [0.05]
Benzo(b)fluoranthene	PAHSIM	µg/L	0.2	ND [0.0515]	ND [0.05]	0.103 [0.0532]	ND [0.05]	ND [0.05]
Benzo(g,h,i)perylene	PAHSIM	µg/L	1	0.0184 [0.0515] J	0.0237 [0.05] J	0.053 [0.0532] J	0.018 [0.05] J	ND [0.05]
Benzo(k)fluoranthene	PAHSIM	µg/L	1	ND [0.0515]	ND [0.05]	0.0392 [0.0532] J	ND [0.05]	ND [0.05]
Chrysene	PAHSIM	µg/L	100	0.0274 [0.0515] J	0.034 [0.05] J	0.0957 [0.0532]	0.0276 [0.05] J	0.0254 [0.05] J, B
Dibenzo(a,h)anthracene	PAHSIM	µg/L	0.1	ND [0.0515]	ND [0.05]	0.0192 [0.0532] J	ND [0.05]	ND [0.05]
Fluoranthene	PAHSIM	µg/L	1460	0.0373 [0.0515] J	0.0469 [0.05] J	0.19 [0.0532]	0.0542 [0.05]	ND [0.05]
Fluorene	PAHSIM	µg/L	1460	ND [0.0515]	ND [0.05]	0.124 [0.0532]	ND [0.05]	ND [0.05]
Indeno(1,2,3-cd)pyrene	PAHSIM	µg/L	1	0.0159 [0.0515] J	0.0189 [0.05] J	0.0443 [0.0532] J	0.0152 [0.05] J	ND [0.05]
Naphthalene	PAHSIM	µg/L	700	0.0425 [0.0515] J,B UBRL	0.0596 [0.05] B UBRL	0.261 [0.0532] B	0.0395 [0.05] J,B UBRL	0.025 [0.05] J,B UBRL
Phenanthrene	PAHSIM	µg/L	0	0.0353 [0.0515] J	0.0429 [0.05] J	0.288 [0.0532]	0.0411 [0.05] J	0.0174 [0.05] J
Pyrene	PAHSIM	µg/L	1100	0.0422 [0.0515] J	0.0534 [0.05]	0.188 [0.0532]	0.0588 [0.05]	0.0175 [0.05] J
Arsenic	SW6020	µg/L	50	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]
Barium	SW6020	µg/L	2000	27.8 [3] M	31.8 [3]	46.9 [3]	37.1 [3]	23.5 [3]
Cadmium	SW6020	µg/L	5	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Chromium	SW6020	µg/L	100	ND [7]	ND [7]	ND [7]	2.26 [7] J	ND [7]
Lead	SW6020	µg/L	15	ND [2]	ND [2]	0.712 [2] J	0.898 [2] J	0.659 [2] J
Selenium	SW6020	µg/L	50	3.89 [10] J UBRL	ND [10]	6.39 [10] J	7.67 [10] J	7.42 [10] J
Silver	SW6020	µg/L	180	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Mercury	SW7470A	mg/L	0.002	ND [0.0002]	0.0001 [0.0002] J	0.0001 [0.0002] J	ND [0.0002]	0.0001 [0.0002] J
2,4,5-T	SW8321A	µg/L	75	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
2,4,5-TP (Silvex)	SW8321A	µg/L	75	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
2,4-D	SW8321A	µg/L	77	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
2,4-DB	SW8321A	µg/L	77	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
Dalapon	SW8321A	µg/L	200	ND [5] UJ-M	ND [5] UJ-M	ND [5] UJ-M	ND [5] UJ-M	ND [5] UJ-M
Dicamba	SW8321A	µg/L	0.1	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
Dichlorprop	SW8321A	µg/L	0.1	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- sample not analyzed by this method

Elmendorf SA99
2003 Groundwater Analytical Data

	PRIMARY	DUPLICATE			
Sample ID: (JE03ELM99)	SA99WL1WGN1	SA99WL1WGN2	SA99WL2WGN1	SA99WL3WGN1	SA99WL4WGN1
Laboratory	CTE/STL	CTE	CTE	CTE	CTE
	1034904002	1034904005	1035071006	1034904007	1035071008
Lab Sample ID	1035071002	1035071005	1036976010	1035071007	1036976014
	1036976005	1036976006	D3J310202-003	1036976012	D3J310202-005
	D3J310202-001	D3J310202-002		D3J310202-004	
Collection Date	8/5/2003	8/5/2003	8/13/2003	8/5/2003	8/13/2003
	8/13/2003	8/13/2003	10/22/2003	8/13/2003	10/22/2003
	10/22/2003	10/22/2003	10/28/2003	10/22/2003	10/28/2003
	10/28/2003	10/28/2003		10/28/2003	
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater

Screening Criteria								
Analyte	Method	Units	18 AAC 75 Table C					
Dinoseb	SW8321A	µg/L	700	ND [3]	ND [3]	ND [3]	ND [3]	ND [3]
MCPA (2-Methyl-4-chlorophenoxy acetic acid)	SW8321A	µg/L	15	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
MCPP (2-(2-methyl-4-chlorophenoxy) propanoic acid)	SW8321A	µg/L	15	ND [5]	ND [5]	ND [5]	ND [5]	ND [5]
			#N/A					
1,1,1,2-Tetrachloroethane	SW8260B	mg/L	#N/A	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
1,1,1-Trichloroethane	SW8260B	mg/L	0.2	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,1,2,2-Tetrachloroethane	SW8260B	mg/L	0.004	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,1,2-Trichloroethane	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,1-Dichloroethane	SW8260B	mg/L	3.65	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,1-Dichloroethene	SW8260B	mg/L	3.65	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,1-Dichloropropene	SW8260B	mg/L	0.007	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2,3-Trichlorobenzene	SW8260B	mg/L	0.007	ND [0.001] M	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2,3-Trichloropropane	SW8260B	mg/L	0.007	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2,4-Trichlorobenzene	SW8260B	mg/L	0.07	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2,4-Trimethylbenzene	SW8260B	mg/L	0.07	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2-Dibromo-3-chloropropane	SW8260B	mg/L	0.07	ND [0.002]	--	ND [0.002]	ND [0.002]	ND [0.002] J-S
1,2-Dibromoethane	SW8260B	mg/L	0.07	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2-Dichlorobenzene	SW8260B	mg/L	0.6	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2-Dichloroethane	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2-Dichloropropane	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,3,5-Trimethylbenzene	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,3-Dichlorobenzene	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,3-Dichloropropane	SW8260B	mg/L	0.005	ND [0.0004]	--	ND [0.0004]	ND [0.0004]	ND [0.0004] J-S
1,4-Dichlorobenzene	SW8260B	mg/L	0.075	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
1-Chlorohexane	SW8260B	mg/L	0.075	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
2,2-Dichloropropane	SW8260B	mg/L	0.075	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
2-Butanone	SW8260B	mg/L	0.00125	ND [0.01]	--	ND [0.01]	ND [0.01]	ND [0.01] J-S
2-Chlorotoluene	SW8260B	mg/L	0.2	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
4-Chlorotoluene	SW8260B	mg/L	0.002	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
4-Isopropyltoluene	SW8260B	mg/L	0.002	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
4-Methyl-2-pentanone	SW8260B	mg/L	0.002	ND [0.01]	--	ND [0.01]	ND [0.01]	ND [0.01] J-S
Acetone	SW8260B	mg/L	3.65	ND [0.01]	--	ND [0.01]	ND [0.01]	ND [0.01] J-S
Benzene	SW8260B	mg/L	0.005	ND [0.0004]	--	ND [0.0004]	ND [0.0004]	ND [0.0004] J-S
Bromobenzene	SW8260B	mg/L	0.006	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Bromochloromethane	SW8260B	mg/L	0.006	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S

See text for validation qualification information
 ND - not detected
 [] - laboratory reporting limit
 "-" - sample not analyzed by this method

Elmendorf SA99
2003 Groundwater Analytical Data

	PRIMARY	DUPLICATE			
Sample ID: (JE03ELM99)	SA99WL1WGN1	SA99WL1WGN2	SA99WL2WGN1	SA99WL3WGN1	SA99WL4WGN1
Laboratory	CTE/STL	CTE	CTE	CTE	CTE
	1034904002	1034904005	1035071006	1034904007	1035071008
Lab Sample ID	1035071002	1035071005	1036976010	1035071007	1036976014
	1036976005	1036976006	D3J310202-003	1036976012	D3J310202-005
	D3J310202-001	D3J310202-002		D3J310202-004	
Collection Date	8/5/2003	8/5/2003	8/13/2003	8/5/2003	8/13/2003
	8/13/2003	8/13/2003	10/22/2003	8/13/2003	10/22/2003
	10/22/2003	10/22/2003	10/28/2003	10/22/2003	10/28/2003
	10/28/2003	10/28/2003		10/28/2003	
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater

Screening Criteria								
Analyte	Method	Units	18 AAC 75 Table C					
Bromodichloromethane	SW8260B	mg/L	0.1	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
Bromoform	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Bromomethane	SW8260B	mg/L	0.1	ND [0.003]	--	ND [0.003]	ND [0.003]	ND [0.003] J-S
Carbon tetrachloride	SW8260B	mg/L	0.005	ND [0.001]	--	0.0003 [0.001] J	ND [0.001]	ND [0.001] J-S
Chlorobenzene	SW8260B	mg/L	0.1	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
Chloroethane	SW8260B	mg/L	0.06	ND [0.001] M	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Chloroform	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Chloromethane	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Dibromochloromethane	SW8260B	mg/L	0.0001	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
Dibromomethane	SW8260B	mg/L	0.0001	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Dichlorodifluoromethane	SW8260B	mg/L	0.0001	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Ethylbenzene	SW8260B	mg/L	0.7	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Hexachlorobutadiene	SW8260B	mg/L	0.001	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Isopropylbenzene	SW8260B	mg/L	0.9	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/L	0.005	ND [0.005]	--	ND [0.005]	ND [0.005]	ND [0.005] J-S
Methylene chloride	SW8260B	mg/L	0.005	ND [0.005]	--	ND [0.005]	ND [0.005]	0.0014 [0.005] J, B, J-S UBRL
Naphthalene	SW8260B	mg/L	0.7	ND [0.002] UBRL	--	ND [0.002]	ND [0.002]	ND [0.002] UBRL
Styrene	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Tetrachloroethene (PCE)	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Toluene	SW8260B	mg/L	1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Trichloroethene (TCE)	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Trichlorofluoromethane	SW8260B	mg/L	0.005	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Vinyl chloride	SW8260B	mg/L	36.5	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
Xylene, Isomers m & p	SW8260B	mg/L	0.002	ND [0.002]	--	ND [0.002]	ND [0.002]	ND [0.002] J-S
cis-1,2-Dichloroethene	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
cis-1,3-Dichloropropene	SW8260B	mg/L	0.07	ND [0.0005]	--	ND [0.0005]	ND [0.0005]	ND [0.0005] J-S
n-Butylbenzene	SW8260B	mg/L	0.7	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
n-Propylbenzene	SW8260B	mg/L	0.17	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
o-Xylene	SW8260B	mg/L	0.17	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
sec-Butylbenzene	SW8260B	mg/L	1.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
tert-Butylbenzene	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
trans-1,2-Dichloroethene	SW8260B	mg/L	0.003	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
trans-1,3-Dichloropropene	SW8260B	mg/L	0.1	ND [0.001]	--	ND [0.001]	ND [0.001]	ND [0.001] J-S
1,2,4-Trichlorobenzene	SW8270C	mg/L	0.07	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
1,2-Dichlorobenzene	SW8270C	mg/L	0.6	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
1,3-Dichlorobenzene	SW8270C	mg/L	0.005	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--

See text for validation qualification information
 ND - not detected
 [] - laboratory reporting limit
 "-" - sample not analyzed by this method

Elmendorf SA99

2003 Groundwater Analytical Data

Sample ID: (JE03ELM99) Laboratory	PRIMARY	DUPLICATE			
	SA99WL1WGN1 CTE/STL	SA99WL1WGN2 CTE	SA99WL2WGN1 CTE	SA99WL3WGN1 CTE	SA99WL4WGN1 CTE
Lab Sample ID	1034904002 1035071002 1036976005	1034904005 1035071005 1036976006	1035071006 1036976010 D3J310202-003	1034904007 1035071007 1036976012 D3J310202-004	1035071008 1036976014 D3J310202-005
Collection Date	8/5/2003 8/13/2003 10/22/2003 10/28/2003	8/5/2003 8/13/2003 10/22/2003 10/28/2003	8/13/2003 10/22/2003 10/28/2003	8/5/2003 8/13/2003 10/22/2003 10/28/2003	8/13/2003 10/22/2003 10/28/2003
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater

Screening Criteria

Analyte	Method	Units	18 AAC 75 Table C					
1,4-Dichlorobenzene	SW8270C	mg/L	0.075	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,4,5-Trichlorophenol	SW8270C	mg/L	3.65	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,4,6-Trichlorophenol	SW8270C	mg/L	3.65	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,4-Dichlorophenol	SW8270C	mg/L	0.1	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,4-Dimethylphenol	SW8270C	mg/L	0.7	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,4-Dinitrophenol	SW8270C	mg/L	0.07	ND [0.11] UJ-S, M	ND [0.11] UJ-S	--	ND [0.11] UJ-S	--
2,4-Dinitrotoluene	SW8270C	mg/L	0.00125	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2,6-Dinitrotoluene	SW8270C	mg/L	0.00125	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Chloronaphthalene	SW8270C	mg/L	0.00125	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Chlorophenol	SW8270C	mg/L	0.2	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Methyl-4,6-dinitrophenol	SW8270C	mg/L	0.2	ND [0.082] UJ-S, M	ND [0.079] UJ-S	--	ND [0.077] UJ-S	--
2-Methylnaphthalene	SW8270C	mg/L	0.2	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Methylphenol (o-Cresol)	SW8270C	mg/L	1.8	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Nitroaniline	SW8270C	mg/L	1.8	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
2-Nitrophenol	SW8270C	mg/L	1.8	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
3,3'-Dichlorobenzidine	SW8270C	mg/L	1.8	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
3-Methylphenol/4-Methylphenol Coelution	SW8270C	mg/L	0.002	ND [0.033] UJ-S, M	ND [0.032] UJ-S	--	ND [0.031] UJ-S	--
3-Nitroaniline	SW8270C	mg/L	0.002	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Bromophenyl phenyl ether	SW8270C	mg/L	0.002	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Chloro-3-methylphenol	SW8270C	mg/L	0.002	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Chloroaniline	SW8270C	mg/L	0.002	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Chlorophenyl phenyl ether	SW8270C	mg/L	0.002	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Nitroaniline	SW8270C	mg/L	0.002	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
4-Nitrophenol	SW8270C	mg/L	0.002	ND [0.082] UJ-S, M	ND [0.079] UJ-S	--	ND [0.077] UJ-S	--
Acenaphthene	SW8270C	mg/L	2.2	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Acenaphthylene	SW8270C	mg/L	2.2	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Aniline	SW8270C	mg/L	0.0001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Anthracene	SW8270C	mg/L	11	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Azobenzene	SW8270C	mg/L	0.05	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzo(a)anthracene	SW8270C	mg/L	0.005	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzo(a)pyrene	SW8270C	mg/L	0.001	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzo(b)fluoranthene	SW8270C	mg/L	0.0002	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzo(g,h,i)perylene	SW8270C	mg/L	0.001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzo(k)fluoranthene	SW8270C	mg/L	0.001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--
Benzoic acid	SW8270C	mg/L	146	ND [0.082] UJ-S	ND [0.079] UJ-S	--	ND [0.077] UJ-S	--
Benzyl alcohol	SW8270C	mg/L	146	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- " - sample not analyzed by this method

Elmendorf SA99

2003 Groundwater Analytical Data

	PRIMARY	DUPLICATE			
Sample ID: (JE03ELM99)	SA99WL1WGN1	SA99WL1WGN2	SA99WL2WGN1	SA99WL3WGN1	SA99WL4WGN1
Laboratory	CTE/STL	CTE	CTE	CTE	CTE
	1034904002	1034904005	1035071006	1034904007	1035071008
Lab Sample ID	1035071002	1035071005	1036976010	1035071007	1036976014
	1036976005	1036976006	D3J310202-003	1036976012	D3J310202-005
	D3J310202-001	D3J310202-002		D3J310202-004	
Collection Date	8/5/2003	8/5/2003	8/13/2003	8/5/2003	8/13/2003
	8/13/2003	8/13/2003	10/22/2003	8/13/2003	10/22/2003
	10/22/2003	10/22/2003	10/28/2003	10/22/2003	10/28/2003
	10/28/2003	10/28/2003		10/28/2003	
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater

Screening Criteria									
Analyte	Method	Units	18 AAC 75 Table C						
Benzyl butyl phthalate	SW8270C	mg/L	146	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Chrysene	SW8270C	mg/L	0.1	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Di-n-butyl phthalate	SW8270C	mg/L	3.65	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Di-n-octyl phthalate	SW8270C	mg/L	0.7	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Dibenzo(a,h)anthracene	SW8270C	mg/L	0.0001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Dibenzofuran	SW8270C	mg/L	0.0001	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Diethyl phthalate	SW8270C	mg/L	29	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Dimethyl phthalate	SW8270C	mg/L	29	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Fluoranthene	SW8270C	mg/L	1.46	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Fluorene	SW8270C	mg/L	1.46	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Hexachlorobenzene	SW8270C	mg/L	0.001	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Hexachlorobutadiene	SW8270C	mg/L	0.001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Hexachlorocyclopentadiene	SW8270C	mg/L	0.05	ND [0.049] UJ-S	ND [0.047] UJ-S	--	ND [0.046] UJ-S	--	
Hexachloroethane	SW8270C	mg/L	0.06	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Indeno(1,2,3-cd)pyrene	SW8270C	mg/L	0.001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Isophorone	SW8270C	mg/L	0.9	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Naphthalene	SW8270C	mg/L	0.7	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Nitrobenzene	SW8270C	mg/L	0.018	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Pentachlorophenol	SW8270C	mg/L	0.001	ND [0.082] UJ-S, M	ND [0.079] UJ-S	--	ND [0.077] UJ-S	--	
Phenanthrene	SW8270C	mg/L	0	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Phenol	SW8270C	mg/L	22	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
Pyrene	SW8270C	mg/L	1.1	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
bis-(2-Chloroisopropyl)ether	SW8270C	mg/L	0.00077	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
bis-(2-Chloroethyl)ether	SW8270C	mg/L	0.00047	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
n-Nitrosodi-n-propylamine	SW8270C	mg/L	0.0001	ND [0.016] UJ-S	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
n-Nitrosodimethylamine	SW8270C	mg/L	0.018	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	
n-Nitrosodiphenylamine	SW8270C	mg/L	0.17	ND [0.016] UJ-S, M	ND [0.016] UJ-S	--	ND [0.015] UJ-S	--	

Acronyms

B - detected in associated blank as well as the sample

J - estimated value

J-S - surrogate recovery, the sample result should be considered an estimate

J-TE - temperature outside EPA guidelines, the sample result should be considered an estimate

M - a matrix effect was present, the data is usable

UBRL - cross contamination, the sample result should be considered nondetect

UJ-M - a matrix effect was present, the sample result should be considered an estimate

UJ-S - sample extracted outside of hold time, the sample result should be considered an estimate, but usable

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

." - sample not analyzed by this method

**Elmendorf SA99
2003 Analytical Data
Totals and Dissolved**

	DISSOLVED - PRIMARY	DISSOLVED - DUPLICATE	TOTAL - PRIMARY	TOTAL - DUPLICATE	DISSOLVED
Sample ID	SA99WL1WGN3D	SA99WL1WGN3D-D	SA99WL1WGN3T	SA99WL1WGN3T-D	SA99WL2WGN3D
Laboratory	CTE	CTE	CTE	CTE	CTE
Lab Sample ID	1036976001	1036976002	1036976005	1036976006	1036976009
Collection Date	10/23/03	10/23/03	10/23/03	10/23/03	10/23/03
Matrix	WG	WG	WG	WG	WG

Analyte	Method	Units					
Arsenic	SW6020	µg/L	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]
Barium	SW6020	µg/L	28.1 [3]	28.5 [3]	27.8 [3]	31.8 [3]	34.7 [3]
Cadmium	SW6020	µg/L	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Chromium	SW6020	µg/L	ND [7]	ND [7]	ND [7]	ND [7]	ND [7]
Lead	SW6020	µg/L	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Selenium	SW6020	µg/L	ND [10]	ND [10]	3.89 [10] J	ND [10] UBRL	ND [10]
Silver	SW6020	µg/L	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Mercury	SW7470A	mg/L	ND [0.0002]	ND [0.0002]	ND [0.0002]	0.0001 [0.0002] J	ND [0.0002]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Note: Totals from the resample are reported in the text tables.

**Elmendorf SA99
2003 Analytical Data
Totals and Dissolved**

	TOTAL	DISSOLVED	TOTAL	DISSOLVED	TOTAL
Sample ID	SA99WL2WGN3T	SA99WL3WGN3D	SA99WL3WGN3T	SA99WL4WGN3D	SA99WL4WGN3T
Laboratory	CTE	CTE	CTE	CTE	CTE
Lab Sample ID	1036976010	1036976011	1036976012	1036976013	1036976014
Collection Date	10/23/03	10/22/03	10/22/03	10/22/03	10/22/03
Matrix	WG	WG	WG	WG	WG

Analyte	Method	Units					
Arsenic	SW6020	µg/L	ND [20]	ND [20]	ND [20]	ND [20]	ND [20]
Barium	SW6020	µg/L	46.9 [3]	23.2 [3]	37.1 [3]	20.3 [3]	23.5 [3]
Cadmium	SW6020	µg/L	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Chromium	SW6020	µg/L	ND [7]	ND [7]	2.26 [7] J	ND [7]	ND [7]
Lead	SW6020	µg/L	0.712 [2] J	ND [2]	0.898 [2] J	ND [2]	0.659 [2] J
Selenium	SW6020	µg/L	6.39 [10] J UBRL	ND [10]	7.67 [10] J UBRL	ND [10]	7.42 [10] J UBRL
Silver	SW6020	µg/L	ND [2]	ND [2]	ND [2]	ND [2]	ND [2]
Mercury	SW7470A	mg/L	0.0001 [0.0002] J	ND [0.0002]	ND [0.0002]	ND [0.0002]	0.0001 [0.0002] J

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Note: Totals from the resample are reported in the text tables.

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-01SO	TB-02SO	TB-03SO	TB-04SO	TB-05SO
	Laboratory	CTE	CTE	CTE	CTE	CTE
	Lab Sample ID	1034357004	1034357005	1034398005	1034398006	1034418005
	Collection Date	7/16/03	7/16/03	7/17/03	7/17/03	7/18/03
	Matrix	SO	SO	SO	SO	SO
Analyte	Method	Units				
Total Solids	A2540G	PERCENT	100 [0]	100 [0]	100 [0]	100 [0]
Gasoline Range Organics	AK101	mg/kg	ND [2.52]	- -	- -	ND [2.53] ND [2.52]
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	- -	ND [0.0028]	ND [0.0028]	- - - -
1,1,1-Trichloroethane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	- -	ND [0.0009]	ND [0.0009]	- - - -
1,1,2-Trichloroethane	SW8260B	mg/kg	- -	ND [0.0014]	ND [0.0014]	- - - -
1,1-Dichloroethane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,1-Dichloroethene	SW8260B	mg/kg	- -	ND [0.0028]	ND [0.0028]	- - - -
1,1-Dichloropropene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2,3-Trichlorobenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2,3-Trichloropropane	SW8260B	mg/kg	- -	ND [0.0014]	ND [0.0014]	- - - -
1,2,4-Trichlorobenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2,4-Trimethylbenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	- -	ND [0.0092]	ND [0.0092]	- - - -
1,2-Dibromoethane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2-Dichlorobenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,2-Dichloroethane	SW8260B	mg/kg	- -	ND [0.0009]	ND [0.0009]	- - - -
1,2-Dichloropropane	SW8260B	mg/kg	- -	ND [0.0014]	ND [0.0014]	- - - -
1,3,5-Trimethylbenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,3-Dichlorobenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
1,3-Dichloropropane	SW8260B	mg/kg	- -	ND [0.0019]	ND [0.0018]	- - - -
1,4-Dichlorobenzene	SW8260B	mg/kg	- -	ND [0.0019]	ND [0.0018]	- - - -
1-Chlorohexane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
2,2-Dichloropropane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
2-Chlorotoluene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
4-Chlorotoluene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
4-Isopropyltoluene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
4-Methyl-2-pentanone	SW8260B	mg/kg	- -	ND [0.0185]	ND [0.0184]	- - - -
Acetone	SW8260B	mg/kg	- -	ND [0.0462]	ND [0.046]	- - - -
Benzene	SW8260B	mg/kg	- -	ND [0.0019]	ND [0.0018]	- - - -
Bromobenzene	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
Bromochloromethane	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
Bromodichloromethane	SW8260B	mg/kg	- -	ND [0.0019]	ND [0.0018]	- - - -
Bromoform	SW8260B	mg/kg	- -	ND [0.0046]	ND [0.0046]	- - - -
Bromomethane	SW8260B	mg/kg	- -	ND [0.0092]	ND [0.0092]	- - - -
Carbon disulfide	SW8260B	mg/kg	- -	ND [0.0092]	ND [0.0092]	- - - -
Carbon tetrachloride	SW8260B	mg/kg	- -	ND [0.0028]	ND [0.0028]	- - - -
Chlorobenzene	SW8260B	mg/kg	- -	ND [0.0019]	ND [0.0018]	- - - -

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-06SO	TB-07SO	TB-08SO	TB-09SO	TB-10SO	TB-11SO
	Laboratory	CTE	CTE	CTE	CTE	CTE	CTE
	Lab Sample ID	1034418006	1034577003	1034577004	1034628003	1034628004	1.035E+09
	Collection Date	7/18/03	7/24/03	7/24/03	7/25/03	7/25/03	7/28/03
	Matrix	SO	SO	SO	SO	SO	SO
Analyte	Method	Units					
Total Solids	A2540G	PERCENT	100 [0]	100 [0]	100 [0]	100 [0]	100 [0]
Gasoline Range Organics	AK101	mg/kg	- -	ND [2.52]	- -	ND [2.54]	- -
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.0028]	- -	ND [0.0028]	- -	ND [0.0028]
1,1,1-Trichloroethane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.0009]	- -	ND [0.0009]	- -	ND [0.0009]
1,1,2-Trichloroethane	SW8260B	mg/kg	ND [0.0014]	- -	ND [0.0014]	- -	ND [0.0014]
1,1-Dichloroethane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,1-Dichloroethene	SW8260B	mg/kg	ND [0.0028]	- -	ND [0.0028]	- -	ND [0.0028]
1,1-Dichloropropene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2,3-Trichlorobenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2,3-Trichloropropane	SW8260B	mg/kg	ND [0.0014]	- -	ND [0.0014]	- -	ND [0.0014]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2,4-Trimethylbenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	ND [0.0092]	- -	ND [0.0092]	- -	ND [0.0092]
1,2-Dibromoethane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2-Dichlorobenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,2-Dichloroethane	SW8260B	mg/kg	ND [0.0009]	- -	ND [0.0009]	- -	ND [0.0009]
1,2-Dichloropropane	SW8260B	mg/kg	ND [0.0014]	- -	ND [0.0014]	- -	ND [0.0014]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,3-Dichlorobenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
1,3-Dichloropropane	SW8260B	mg/kg	ND [0.0019]	- -	ND [0.0018]	- -	ND [0.0018]
1,4-Dichlorobenzene	SW8260B	mg/kg	ND [0.0019]	- -	ND [0.0018]	- -	ND [0.0018]
1-Chlorohexane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
2,2-Dichloropropane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
2-Chlorotoluene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
4-Chlorotoluene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
4-Isopropyltoluene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
4-Methyl-2-pentanone	SW8260B	mg/kg	ND [0.0185]	- -	ND [0.0183]	- -	ND [0.0184]
Acetone	SW8260B	mg/kg	ND [0.0461]	- -	ND [0.0458]	- -	ND [0.0461]
Benzene	SW8260B	mg/kg	ND [0.0019]	- -	ND [0.0018]	- -	ND [0.0018]
Bromobenzene	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
Bromochloromethane	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
Bromodichloromethane	SW8260B	mg/kg	ND [0.0019]	- -	ND [0.0018]	- -	ND [0.0018]
Bromoform	SW8260B	mg/kg	ND [0.0046]	- -	ND [0.0046]	- -	ND [0.0046]
Bromomethane	SW8260B	mg/kg	ND [0.0092]	- -	ND [0.0092]	- -	ND [0.0092]
Carbon disulfide	SW8260B	mg/kg	ND [0.0092]	- -	ND [0.0092]	- -	ND [0.0092]
Carbon tetrachloride	SW8260B	mg/kg	ND [0.0028]	- -	ND [0.0028]	- -	ND [0.0028]
Chlorobenzene	SW8260B	mg/kg	ND [0.0019]	- -	ND [0.0018]	- -	ND [0.0018]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-12SO	TB-13SO	TB-14SO	
	Laboratory	CTE	CTE	CTE	
	Lab Sample ID	1034673004	1034690006	1034690007	
	Collection Date	7/28/03	7/29/03	7/29/03	
	Matrix	SO	SO	SO	
Analyte	Method	Units			
Total Solids	A2540G	PERCENT	100 [0]	100 [0]	100 [0]
Gasoline Range Organics	AK101	mg/kg	- -	ND [2.55]	- -
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.003]	- -	ND [0.003]
1,1,1-Trichloroethane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	ND [0.001]	- -	ND [0.001]
1,1,2-Trichloroethane	SW8260B	mg/kg	ND [0.0015]	- -	ND [0.0015]
1,1-Dichloroethane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,1-Dichloroethene	SW8260B	mg/kg	ND [0.003]	- -	ND [0.003]
1,1-Dichloropropene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2,3-Trichlorobenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2,3-Trichloropropane	SW8260B	mg/kg	ND [0.0015]	- -	ND [0.0015]
1,2,4-Trichlorobenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2,4-Trimethylbenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	ND [0.01]	- -	ND [0.01]
1,2-Dibromoethane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2-Dichlorobenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,2-Dichloroethane	SW8260B	mg/kg	ND [0.001]	- -	ND [0.001]
1,2-Dichloropropane	SW8260B	mg/kg	ND [0.0015]	- -	ND [0.0015]
1,3,5-Trimethylbenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,3-Dichlorobenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
1,3-Dichloropropane	SW8260B	mg/kg	ND [0.002]	- -	ND [0.002]
1,4-Dichlorobenzene	SW8260B	mg/kg	ND [0.002]	- -	ND [0.002]
1-Chlorohexane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
2,2-Dichloropropane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
2-Chlorotoluene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
4-Chlorotoluene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
4-Isopropyltoluene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
4-Methyl-2-pentanone	SW8260B	mg/kg	ND [0.02]	- -	ND [0.02]
Acetone	SW8260B	mg/kg	ND [0.05]	- -	ND [0.05]
Benzene	SW8260B	mg/kg	ND [0.002]	- -	ND [0.002]
Bromobenzene	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
Bromochloromethane	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
Bromodichloromethane	SW8260B	mg/kg	ND [0.002]	- -	ND [0.002]
Bromoform	SW8260B	mg/kg	ND [0.005]	- -	ND [0.005]
Bromomethane	SW8260B	mg/kg	ND [0.01]	- -	ND [0.01]
Carbon disulfide	SW8260B	mg/kg	ND [0.01]	- -	ND [0.01]
Carbon tetrachloride	SW8260B	mg/kg	ND [0.003]	- -	ND [0.003]
Chlorobenzene	SW8260B	mg/kg	ND [0.002]	- -	ND [0.002]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- " - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-01SO	TB-02SO	TB-03SO	TB-04SO	TB-05SO
	Laboratory	CTE	CTE	CTE	CTE	CTE
	Lab Sample ID	1034357004	1034357005	1034398005	1034398006	1034418005
	Collection Date	7/16/03	7/16/03	7/17/03	7/17/03	7/18/03
	Matrix	SO	SO	SO	SO	SO
Analyte	Method	Units				
Chloroethane	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Chloroform	SW8260B	mg/kg	--	ND [0.0019]	ND [0.0018]	--
Chloromethane	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Dibromochloromethane	SW8260B	mg/kg	--	ND [0.0028]	ND [0.0028]	--
Dibromomethane	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Dichlorodifluoromethane	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Ethylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Hexachlorobutadiene	SW8260B	mg/kg	--	ND [0.0028]	ND [0.0028]	--
Isopropylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	--	ND [0.0185]	ND [0.0184]	--
Methylene chloride	SW8260B	mg/kg	--	0.0015 [0.0046] J UBRL	0.003 [0.0046] J	--
Naphthalene	SW8260B	mg/kg	--	ND [0.0046]	0.0017 [0.0046] J	--
Styrene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Tetrachloroethene (PCE)	SW8260B	mg/kg	--	ND [0.0023]	ND [0.0023]	--
Toluene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Trichloroethene (TCE)	SW8260B	mg/kg	--	ND [0.0019]	ND [0.0018]	--
Trichlorofluoromethane	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
Vinyl chloride	SW8260B	mg/kg	--	ND [0.0007]	ND [0.0007]	--
Xylene, Isomers m & p	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
cis-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
cis-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.0019]	ND [0.0018]	--
n-Butylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
n-Propylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
o-Xylene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
sec-Butylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
tert-Butylbenzene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
trans-1,2-Dichloroethene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--
trans-1,3-Dichloropropene	SW8260B	mg/kg	--	ND [0.0046]	ND [0.0046]	--

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-06SO	TB-07SO	TB-08SO	TB-09SO	TB-10SO	TB-11SO
	Laboratory	CTE	CTE	CTE	CTE	CTE	CTE
	Lab Sample ID	1034418006	1034577003	1034577004	1034628003	1034628004	1.035E+09
	Collection Date	7/18/03	7/24/03	7/24/03	7/25/03	7/25/03	7/28/03
	Matrix	SO	SO	SO	SO	SO	SO
Analyte	Method	Units					
Chloroethane	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Chloroform	SW8260B	mg/kg	ND [0.0019]	--	ND [0.0018]	--	ND [0.0018]
Chloromethane	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Dibromochloromethane	SW8260B	mg/kg	ND [0.0028]	--	ND [0.0028]	--	ND [0.0028]
Dibromomethane	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Dichlorodifluoromethane	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Ethylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Hexachlorobutadiene	SW8260B	mg/kg	ND [0.0028]	--	ND [0.0028]	--	ND [0.0028]
Isopropylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	ND [0.0185]	--	ND [0.0183]	--	ND [0.0184]
Methylene chloride	SW8260B	mg/kg	0.0053 [0.0046]	--	0.0025 [0.0046] J	--	0.0038 [0.0046] J UBRL
Naphthalene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Styrene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Tetrachloroethene (PCE)	SW8260B	mg/kg	ND [0.0023]	--	ND [0.0023]	--	ND [0.0023]
Toluene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Trichloroethene (TCE)	SW8260B	mg/kg	ND [0.0019]	--	ND [0.0018]	--	ND [0.0018]
Trichlorofluoromethane	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
Vinyl chloride	SW8260B	mg/kg	ND [0.0007]	--	ND [0.0007]	--	ND [0.0007]
Xylene, Isomers m & p	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
cis-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
cis-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0019]	--	ND [0.0018]	--	ND [0.0018]
n-Butylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
n-Propylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
o-Xylene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
sec-Butylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
tert-Butylbenzene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
trans-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]
trans-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.0046]	--	ND [0.0046]	--	ND [0.0046]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Soil Trip Blank Results

	Sample ID: (JE03ELM99)	TB-12SO	TB-13SO	TB-14SO	
	Laboratory	CTE	CTE	CTE	
	Lab Sample ID	1034673004	1034690006	1034690007	
	Collection Date	7/28/03	7/29/03	7/29/03	
	Matrix	SO	SO	SO	
Analyte	Method	Units			
Chloroethane	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Chloroform	SW8260B	mg/kg	ND [0.002]	--	ND [0.002]
Chloromethane	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Dibromochloromethane	SW8260B	mg/kg	ND [0.003]	--	ND [0.003]
Dibromomethane	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Dichlorodifluoromethane	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Ethylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Hexachlorobutadiene	SW8260B	mg/kg	ND [0.003]	--	ND [0.003]
Isopropylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/kg	ND [0.02]	--	ND [0.02]
Methylene chloride	SW8260B	mg/kg	0.0033 [0.005] J UBRL	--	0.0038 [0.005] J UBRL
Naphthalene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Styrene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Tetrachloroethene (PCE)	SW8260B	mg/kg	ND [0.0025]	--	ND [0.0025]
Toluene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Trichloroethene (TCE)	SW8260B	mg/kg	ND [0.002]	--	ND [0.002]
Trichlorofluoromethane	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
Vinyl chloride	SW8260B	mg/kg	ND [0.0008]	--	ND [0.0008]
Xylene, Isomers m & p	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
cis-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
cis-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.002]	--	ND [0.002]
n-Butylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
n-Propylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
o-Xylene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
sec-Butylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
tert-Butylbenzene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
trans-1,2-Dichloroethene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]
trans-1,3-Dichloropropene	SW8260B	mg/kg	ND [0.005]	--	ND [0.005]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"- " - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Water Trip Blank Results

Sample ID: (JE03ELM99)	SA99TB01WGN1
Laboratory	CTE
Lab Sample ID	1035071001
Collection Date	8/13/03
Matrix	WG

Analyte	Method	Units	
Gasoline Range Organics	AK101	mg/L	ND [0.09]
1,1,1,2-Tetrachloroethane	SW8260B	mg/L	ND [0.0005]
1,1,1-Trichloroethane	SW8260B	mg/L	ND [0.001]
1,1,2,2-Tetrachloroethane	SW8260B	mg/L	ND [0.001]
1,1,2-Trichloroethane	SW8260B	mg/L	ND [0.001]
1,1-Dichloroethane	SW8260B	mg/L	ND [0.001]
1,1-Dichloroethene	SW8260B	mg/L	ND [0.001]
1,1-Dichloropropene	SW8260B	mg/L	ND [0.001]
1,2,3-Trichlorobenzene	SW8260B	mg/L	ND [0.001]
1,2,3-Trichloropropane	SW8260B	mg/L	ND [0.001]
1,2,4-Trichlorobenzene	SW8260B	mg/L	ND [0.001]
1,2,4-Trimethylbenzene	SW8260B	mg/L	ND [0.001]
1,2-Dibromo-3-chloropropane	SW8260B	mg/L	ND [0.002]
1,2-Dibromoethane	SW8260B	mg/L	ND [0.001]
1,2-Dichlorobenzene	SW8260B	mg/L	ND [0.001]
1,2-Dichloroethane	SW8260B	mg/L	ND [0.001]
1,2-Dichloropropane	SW8260B	mg/L	ND [0.001]
1,3,5-Trimethylbenzene	SW8260B	mg/L	ND [0.001]
1,3-Dichlorobenzene	SW8260B	mg/L	ND [0.001]
1,3-Dichloropropane	SW8260B	mg/L	ND [0.0004]
1,4-Dichlorobenzene	SW8260B	mg/L	ND [0.0005]
1-Chlorohexane	SW8260B	mg/L	ND [0.001]
2,2-Dichloropropane	SW8260B	mg/L	ND [0.001]
2-Butanone	SW8260B	mg/L	ND [0.01]
2-Chlorotoluene	SW8260B	mg/L	ND [0.001]
4-Chlorotoluene	SW8260B	mg/L	ND [0.001]
4-Isopropyltoluene	SW8260B	mg/L	ND [0.001]
4-Methyl-2-pentanone	SW8260B	mg/L	ND [0.01]
Acetone	SW8260B	mg/L	ND [0.01]
Benzene	SW8260B	mg/L	ND [0.0004]
Bromobenzene	SW8260B	mg/L	ND [0.001]
Bromochloromethane	SW8260B	mg/L	ND [0.001]
Bromodichloromethane	SW8260B	mg/L	ND [0.0005]
Bromoform	SW8260B	mg/L	ND [0.001]
Bromomethane	SW8260B	mg/L	ND [0.003]
Carbon tetrachloride	SW8260B	mg/L	ND [0.001]
Chlorobenzene	SW8260B	mg/L	ND [0.0005]
Chloroethane	SW8260B	mg/L	ND [0.001]
Chloroform	SW8260B	mg/L	ND [0.001]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

-" - sample not analyzed by this method

Elmendorf SA99
2003 Analytical Data
Water Trip Blank Results

Sample ID: (JE03ELM99)	SA99TB01WGN1
Laboratory	CTE
Lab Sample ID	1035071001
Collection Date	8/13/03
Matrix	WG

Analyte	Method	Units	
Chloromethane	SW8260B	mg/L	ND [0.001]
Dibromochloromethane	SW8260B	mg/L	ND [0.0005]
Dibromomethane	SW8260B	mg/L	ND [0.001]
Dichlorodifluoromethane	SW8260B	mg/L	ND [0.001]
Ethylbenzene	SW8260B	mg/L	ND [0.001]
Hexachlorobutadiene	SW8260B	mg/L	ND [0.001]
Isopropylbenzene	SW8260B	mg/L	ND [0.001]
Methyl-tert-butyl ether (MTBE)	SW8260B	mg/L	ND [0.005]
Methylene chloride	SW8260B	mg/L	0.001 [0.005] J, B UBRL
Naphthalene	SW8260B	mg/L	ND [0.002]
Styrene	SW8260B	mg/L	ND [0.001]
Tetrachloroethene (PCE)	SW8260B	mg/L	ND [0.001]
Toluene	SW8260B	mg/L	ND [0.001]
Trichloroethene (TCE)	SW8260B	mg/L	ND [0.001]
Trichlorofluoromethane	SW8260B	mg/L	ND [0.001]
Vinyl chloride	SW8260B	mg/L	ND [0.001]
Xylene, Isomers m & p	SW8260B	mg/L	ND [0.002]
cis-1,2-Dichloroethene	SW8260B	mg/L	ND [0.001]
cis-1,3-Dichloropropene	SW8260B	mg/L	ND [0.0005]
n-Butylbenzene	SW8260B	mg/L	ND [0.001]
n-Propylbenzene	SW8260B	mg/L	ND [0.001]
o-Xylene	SW8260B	mg/L	ND [0.001]
sec-Butylbenzene	SW8260B	mg/L	ND [0.001]
tert-Butylbenzene	SW8260B	mg/L	ND [0.001]
trans-1,2-Dichloroethene	SW8260B	mg/L	ND [0.001]
trans-1,3-Dichloropropene	SW8260B	mg/L	ND [0.001]

See text for validation qualification information

ND - not detected

[] - laboratory reporting limit

"-" - sample not analyzed by this method

APPENDIX C
Method One Calculations

SA99 ADEC Method One Score Sheet

**TABLE A1. METHOD ONE – PETROLEUM HYDROCARBON SOIL
CLEANUP LEVELS IN NONARCTIC ZONES**

Part A: Determine score for each item

<p>1. Depth to Groundwater</p> <p>Less than 5 feet (10)</p> <p>5 feet to 15 feet (8)</p> <p>More than 15 feet to 25 feet (6)</p> <p>More than 25 feet to 50 feet (4)</p> <p>More than 50 feet (1)</p>	4
<p>2. Mean Annual Precipitation</p> <p>More than 40 inches (10)</p> <p>More than 25 inches to 40 inches (5)</p> <p>15 inches to 25 inches (3)</p> <p>Less than 15 inches (1)</p>	3
<p>3. Soil Type (Unified Soil Classification)</p> <p>Clean, coarse-grained soils (10)</p> <p>Coarse-grained soils with fines (8)</p> <p>Fine-grained soils (low organic carbon) (3)</p> <p>Fine-grained soils (high organic carbon) (1)</p>	10
<p>4. Potential Receptors (Select the most applicable category)</p> <p>a. Public water system within 1000 feet, or private water system within 500 feet (15)</p> <p>b. Public/private water system within 1/2 mile (12)</p> <p>c. Public/private water system within one mile (8)</p> <p>d. No water system within one mile (4)</p> <p>e. Nonpotable groundwater (1)</p>	4
<p>5. Volume of Contaminated Soil</p> <p>More than 500 cubic yards (10)</p> <p>More than 100 cubic yards to 500 cubic yards (8)</p> <p>More than 25 cubic yards to 100 cubic yards (5)</p> <p>10 cubic yards to 25 cubic yards (2)</p> <p>Less than 10 cubic yards (0)</p>	2

Total: 23

Part B: Add scores from Part A to determine matrix score and cleanup level

Matrix Score for Each Category	Cleanup Level in mg/kg		
	Gasoline Range Organics	Diesel Range Organics	Residual Range Organics
Category A: More than 40	50	100	2000
Category B: More than 26 to 40	100	200	2000
Category C: 21-26	500	1000	2000
Category D: Less than 21	1000	2000	2000

APPENDIX D
Waste Management

Appendix D

Waste Tracking, 2003 Site Investigation, SA 99, Elmendorf Air Force Base

Container ID	Contents	Start Date	Issue Date	Treatment/ Disposal Date	Disposal Method	Confirmation of treatment/disposal received?
SA99 Decon Water #1	decon water	7/24/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 Decon Water #2	decon water	7/30/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 MW-1 Purge Water	purge water	7/30/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 MW-2 Purge Water	purge water	7/30/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 MW-3 Purge Water	purge water	7/30/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 MW-4 Purge Water	purge water	7/30/03	N/A	10/15/03	Treated at ESF, discharged	N/A
SA99 MW-1 Drill Cuttings	35-41 feet, soil	7/23/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-2 Drill Cuttings	0-35 feet, soil	7/24/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-2 Drill Cuttings	30-45 feet, soil	7/24/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-1 Drill Cuttings	0-35 feet, soil	7/23/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-3 Drill Cuttings	25-45 feet, soil	7/28/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-4 Drill Cuttings	0-20 feet, soil	7/29/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-3 Drill Cuttings	0-25 feet, soil	7/28/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
SA99 MW-4 Drill Cuttings	20-45 feet, soil	7/29/03	9/10/03	9/11/03	Thermal treatment, ASR	Yes, 9/29/03
Muck #1, ESF	sump sludge from decon pad	7/25/03		10/16/03		Yes, 11/1/03
SA99 Purge Water 1	purge water	10/23/03 – 10/28/03	N/A		Discharged, OWS	
SA99 Purge Water 2	purge water		N/A		Discharged, OWS	
SA99 Purge Water 3	purge water		N/A		Discharged, OWS	
SA99 Purge Water 4	purge water		N/A		Discharged, OWS	
SA99 Purge Water 5	purge water		N/A		Discharged, OWS	

Notes:

ASR – Alaska Soil Recycling
 ESF – environmental staging facility
 N/A – not applicable
 OWS - oil water separator

APPENDIX E
Photo Log

Appendix E
Photo Log



Photo 1: Trenching excavation #1 located between two buried high voltage electrical trunk lines.



Photo 2: Drums recovered from excavation # 1

Appendix E
Photo Log



Photo 3: Subsurface soils stratification characteristic of the SA99 site excavations.



Photo 4: Drums recovered from excavation # 2

Appendix E
Photo Log



Photo 5: Visible signs of asphalt like material on crushed drum.



Photo 6: Trenching excavation #3 outside of fence at SA99.

Appendix E
Photo Log



Photo 7: Near surface drums recovered from excavation #4.



Photo 8: Sample collection in excavation #4

Appendix E
Photo Log



Photo 9: Drilling equipment at decontamination yard.



Photo 10: IDW wastewater stored at decontamination yard

APPENDIX F
Well and Boring Logs

JE JACOBS

EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring: **SA99-MW1**

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum: MSL other

Location: Northing: _____ Easting: _____

Top of Hole Elevation: _____

Date Boring Completed: **23 Jul 2003**

Boring Field Number: _____

Driller: **Tom Campbell**

Inspector: **Catherine Roso**

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater: **41.00 ft WD**

Depth Drilled: **48.00 ft**

Total Depth: **48.00 ft**

Hammer Weight: **300 lbs**

Split Spoon I.D.: **2.5 in**

Drill Type and Size: **8.0 in**

Type of Equipment: **Mobile B61 HD**

Type of Samples: _____

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size				PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines	Max Size (in)			
2					50/5"		GRAVEL (GW) trace silt, some fine to medium sand, red brown, dry, dense, rounded and angular clasts 1-3" dia. (FILL)					75.0	Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B One cobble recovered	
4					50/1"									
6					50/3"									4.3
8					50/0.5"									6.3
10					50/1"									25.8
12					50/1"									113.0
14					50/0"									
16					50/1"									5.6
18					6									0.0
20					18									
22	28													
24	34													
26	26													
28	30													
30	30													
32														

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS EXPLORATION LOG

Project: SA 99 Elmendorf Air Force Base		Soil Boring: SA99-MW1
Drilling Agency: <input type="checkbox"/> Alaska District <input checked="" type="checkbox"/> Other Ambler Exploration		Elevation Datum: <input checked="" type="checkbox"/> MSL <input type="checkbox"/> other
Location: Northing: Easting:		Top of Hole Elevation:

Date Boring Completed: 23 Jul 2003	Driller: Tom Campbell	Inspector: Catherine Roso
Boring Field Number:		

Type of Hole: <input type="checkbox"/> other _____	Depth to Groundwater: 41.00 ft WD	Depth Drilled: 48.00 ft	Total Depth: 48.00 ft
<input type="checkbox"/> Test Pit <input checked="" type="checkbox"/> Auger Hole <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer			

Hammer Weight: 300 lbs	Split Spoon I.D.: 2.5 in	Drill Type and Size: 8.0 in	Type of Equipment: Mobile B61 HD	Type of Samples:
----------------------------------	------------------------------------	---------------------------------------	--	------------------

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
34					50/5.5"		drill action and cuttings							
36							- slough retained, cobbles and gravel with sand, moist, dense							
40							- groundwater encountered during drilling at 41' from drill action, smooth easy drilling SAND (SW) dark gray, wet, medium dense, trace dark red brown silt, fine to medium grained, no odors							
42					1 4 7 13								Poor recovery - slough Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B and Bulk density	
44														
48							Bottom of boring at 48' at 12:55 on 7/24/03, monitoring well SA99-MW1 installed.							
50														
52														
54														
56														
58														
60														
62														
64														
66														

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS

EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring:
SA99-MW2

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum:
 MSL other

Location: Northing:
Easting:

Top of Hole
Elevation:

Date Boring Completed: **24 Jul 2003**

Driller:
Tom Campbell

Inspector:
Catherine Roso

Boring Field Number:

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater:
40.30 ft WD

Depth Drilled:
45.00 ft

Total Depth:
46.50 ft

Hammer Weight:
300 lbs

Split Spoon I.D.:
2.5 in

Drill Type and Size
8.0 in

Type of Equipment:
Mobile B61 HD

Type of Samples:

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
2							No samples obtained until 5' Auger cuttings show GRAVEL with sand (GP) brown, moist, dense, (ROAD BASE FILL)							
4							GRAVEL with SAND (GW) brown to light gray, moist to dry, medium dense, angular and rounded clasts, (ROAD BASE FILL)							
6					12									
					15									
					15									
8					13		GRAVEL with SAND (GW) red brown and light gray, dry, loose to medium dense, rounded clasts, multilithic (probable NATIVE)							
					13									
					12									
10					7		GRAVEL with SILT and SAND (GW) light gray, dry to moist, medium dense to dense							
					20									
					25									
12					15									
					18									
					15									
14					15									
					17									
					22									
16					16									
					17									
					22									
18					16		SAND with GRAVEL (SP) dark gray, moist, medium dense, multi lithic, well rounded clast, medium to coarse sand, fine to medium gravel							
					17									
					18									
20					12		SILT (ML) blue gray, moist, 1/4" interbed							
					18									
					16									
22					12		GRAVELLY SAND (SP) light gray, moist, medium dense, coarse sand, fine gravel, well rounded, no odors							
					18									
					16									
24					24									
					28									
					27									
26					12		GRAVEL with COBBLES AND SAND (GW) gray brown, moist, dense, rounded multilithic gravel, granite cobbles >3" dia.							
					38									
					45									
30					12									
					38									
					45									
32														

JE JACOBS EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring:
SA99-MW2

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum:
 MSL other

Location: Northing:
Easting:

Top of Hole
Elevation:

Date Boring Completed: **24 Jul 2003**

Boring Field Number:

Driller:
Tom Campbell

Inspector:
Catherine Roso

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater:
40.30 ft WD

Depth Drilled:
45.00 ft

Total Depth:
46.50 ft

Hammer Weight:
300 lbs

Split Spoon I.D.:
2.5 in

Drill Type and Size
8.0 in

Type of Equipment:
Mobile B61 HD

Type of Samples:

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
34					50/4"		COBBLES with SAND (GP) dark gray, moist, very dense, multilithic							
36														
38														
40		JE03ELM99-BH02-0250			8 13 14		GRAVEL with SAND (GW) dark gray, wet, medium dense, coarse well rounded sand				1.7		Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B, Groundwater first encountered at 40'	
42													Very hard drilling	
44							SAND with GRAVEL (SW) dark gray, wet, dense, trace silt, material heaved into auger						Sample analyzed for Bulk density	
46		JE03ELM99-BH02-03			5 17 20									
46.5							Bottom of boring at 46.5' at 2:20pm on 7/25/03, monitoring well SA99-MW2 installed.							
48														
50														
52														
54														
56														
58														
60														
62														
64														
66														

EXLOGNUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS

EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring: **SA99-MW3**

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum:
 MSL other

Location: Northing:
 Easting:

Top of Hole
 Elevation:

Date Boring Completed: **28 Jul 2003**

Boring Field Number:

Driller: **Tom Campbell**

Inspector: **Catherine Roso**

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater: **40.50 ft WD**

Depth Drilled: **45.00 ft**

Total Depth: **46.50 ft**

Hammer Weight: **300 lbs**

Split Spoon I.D.: **2.5 in**

Drill Type and Size: **8.0 in**

Type of Equipment: **Mobile B61 HD**

Type of Samples:

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
2							GRAVEL (GW) dark brown, moist, very dense (ROAD BASE FILL)							
6					11 6 8							0.0		
8					14 20 12		GRAVEL with COBBLES and coarse SAND (GW) brown, moist, medium dense, cobbles >3" dia.							
10					20 21 28		COBBLES with GRAVEL and SAND (GP) brown, moist, dense, well rounded cobbles					0.5		
14					14 20 25							0.0		
16					28 50/4"							0.8	Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B	
18					50/5.5"		COBBLES with CLAY (GC) light gray, moist, very dense, poor recovery COBBLES with GRAVEL (GP) brown, moist, dense to very dense, well rounded gravel					0.0		
20					20 39 40							0.6		
24					30 46 44		SANDY GRAVEL (GW) dark gray, moist, very dense, medium to coarse gravel, well rounded multilithic multicolored clasts.					0.2		
30					18 40 45		SAND with GRAVEL/GRAVELLY SAND (SW) dark gray, moist, very dense, medium to coarse sand, fine to medium gravel, multilithic					0.6		
32							COBBLE with GRAVEL some							

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring:
SA99-MW3

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum:
 MSL other

Location: Northing:
Easting:

Top of Hole
Elevation:

Date Boring Completed: **28 Jul 2003**

Driller:
Tom Campbell

Inspector:
Catherine Roso

Boring Field Number:

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater:
40.50 ft WD

Depth Drilled:
45.00 ft

Total Depth:
46.50 ft

Hammer Weight:
300 lbs

Split Spoon I.D.:
2.5 in

Drill Type and Size
8.0 in

Type of Equipment:
Mobile B61 HD

Type of Samples:

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
34					50/0"		fine sand and silt (GP) dark gray, moist, very dense cobble >3" dia hard drilling SANDY GRAVEL very slow drilling poor recovery					1.4	slough recovered	
36					50/3"						1.6			
38												1.2		
40		JE03ELM99-BH3-020 JE03ELM99-BH3-03			20 18 15		GRAVEL with SAND (GW) dark gray, wet, dense, well rounded, multilithic clasts						▼ Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B and Bulk Density	
42														
44														
46					14 33 35		SAND with GRAVEL (SP) dark gray, wet, dense, multilithic, rounded to subangular							
48							Bottom of Boring at 46.5' at 3:45pm on 7/28/03 Monitoring well SA99-MW3 installed							
50														
52														
54														
56														
58														
60														
62														
64														
66														

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS

EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring:
SA99-MW4

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum:
 MSL other

Location: Northing:
Easting:

Top of Hole
Elevation:

Date Boring Completed: **29 Jul 2003**

Driller:
Tom Campbell

Inspector:
Catherine Roso

Boring Field Number:

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater:
39.00 ft WD

Depth Drilled:
45.00 ft

Total Depth:
45.00 ft

Hammer Weight:
300 lbs

Split Spoon I.D.:
2.5 in

Drill Type and Size
8.0 in

Type of Equipment:
Mobile B61 HD

Type of Samples:

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
2					13		Asphalt blocks and gravel with broken tiles and concrete (FILL)							
4					4		SILT with GRAVEL (ML) brown, moist, soft							
6					5		SILTY GRAVEL (GM) brown, moist, medium stiff/medium dense, low to medium plasticity silt grades 20-30% low plasticity silt at 7.5 ft							
8					9									
10					10		SAND with SILT and GRAVEL (SP) dark gray, moist, dense, coarse sand 1/4"-3/8" dia. well rounded							
12					20									
14					27		SANDY GRAVEL /GRAVELLY SAND (SW/GW) gray brown, moist, medium dense, coarse sand, fine gravel, occasional cobble and fine sand, well rounded							
16					24									
18					50/3"		GRAVEL with SAND (GP) light gray, moist, very dense						Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B	
20							- grades finer from drill action, easy drilling							
22					16		SAND with GRAVEL (SW) olive gray, moist, medium dense to dense, gap graded sand fine and coarse,							
24					26									
26					30		SANDY GRAVEL (GW) dark gray brown, moist, dense, well rounded, multilithic							
28					34									
30					22									
32					29									
					27									

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03

JE JACOBS EXPLORATION LOG

Project: **SA 99**
Elmendorf Air Force Base

Soil Boring: **SA99-MW4**

Drilling Agency: Alaska District
 Other **Ambler Exploration**

Elevation Datum: MSL other

Location: Northing: _____
Easting: _____

Top of Hole Elevation: _____

Date Boring Completed: **29 Jul 2003**

Boring Field Number: _____

Driller: **Tom Campbell**

Inspector: **Catherine Roso**

Type of Hole: other _____
 Test Pit Auger Hole Monitoring Well Piezometer

Depth to Groundwater: **39.00 ft WD**

Depth Drilled: **45.00 ft**

Total Depth: **45.00 ft**

Hammer Weight: **300 lbs**

Split Spoon I.D.: **2.5 in**

Drill Type and Size: **8.0 in**

Type of Equipment: **Mobile B61 HD**

Type of Samples: _____

Depth (ft)	Lithology	Sample	Frozen ASTM D 4083	Frost Class. TM 5-822-5	Blow Count	USCS Symbol	Soil Description	Grain Size			Max Size (in)	PID (ppm)	% Water	Sample Data
								%Gravel	%Sand	%Fines				
34					14		SAND (SP) dark purple brown, moist, medium dense, very fine sand						Sample analyzed for SW8151A, AK102/103, SW8270C-SIM, AK101, SW8260B	
36				25										
38					12		SAND (SP) light gray, moist to wet, loose to medium dense, interbeds of fine and medium sand 8-10" thick						Heave into auger Bulk Density Sample	
40				12										
42					9									
44		JE03ELM99-BH4-0450			4									
46					10		Bottom of Boring at 45' at 1:30pm on 7/29/03. Monitoring well SA99-MW4 installed							
48					18									
50														
52														
54														
56														
58														
60														
62														
64														
66														

EXLOG2NUMBERS EAFBSA99.GPJ CHINIAK.GDT 9/4/03



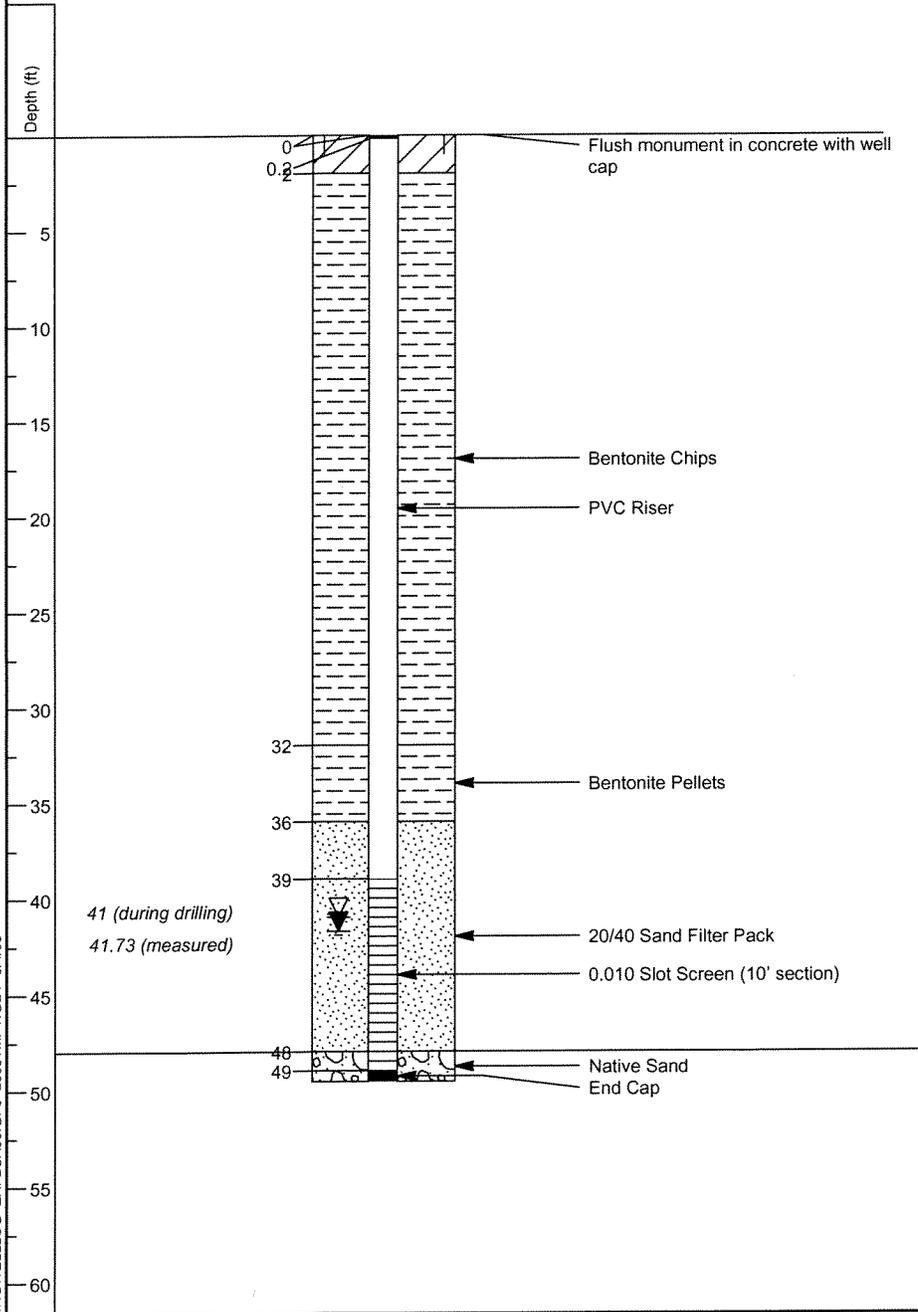
MONITORING WELL LOG

Project: SA 99		Monitoring Well: SA99-MW1	
Site:		Elevation Datum: <input checked="" type="checkbox"/> MSL <input type="checkbox"/> other	
Drilling Agency: <input type="checkbox"/> Alaska District <input checked="" type="checkbox"/> Other Ambler Exploration		Top of Casing Elevation (ft):	
Location: Northing: Easting:		Date Well Completed: 23 Jul 2003	
Driller: Tom Campbell		Inspector: Catherine Roso	
Type of Hole: <input type="checkbox"/> other _____ <input type="checkbox"/> Test Pit <input checked="" type="checkbox"/> Auger Hole <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer	Depth to Groundwater (bgs): 41.73, 8/5/03 1705	Depth Drilled (ft): 48	Total Well Depth from Top of Casing (ft): 49.57
Hammer Weight: 300 lbs	Split Spoon I.D.: 2.5 in	Drill Type and Size: 8,	Type of Equipment: Mobile B61 HD
		Type of Samples:	

NOTE:
Western most well on Airlifter Drive

SUMMARY OF MATERIALS USED

- 8" dia. Flush Monument
- Concrete (Alaska Sand and Gravel)
- 2" dia. Schedule 40 PVC threaded riser
- 2" dia. Schedule 40 PVC threaded 0.01" Slot Screen
- 3/8 Bentonite Pellets
- 3/8 Bentonite Chips (CETCO Puregold Medium)
- 20/40 Silica Sand (Olge Bay Norton Colorado Springs Plant)
- Well Cap "J Plug" Locking Cap
- End Cap 2" dia. PVC Pointed Cap 0.25' long



Installed monitoring well SA99-MW1

MONITORINGWELLOG EAFBSA99.GPJ 2003TMTPT.GDT 9/4/03



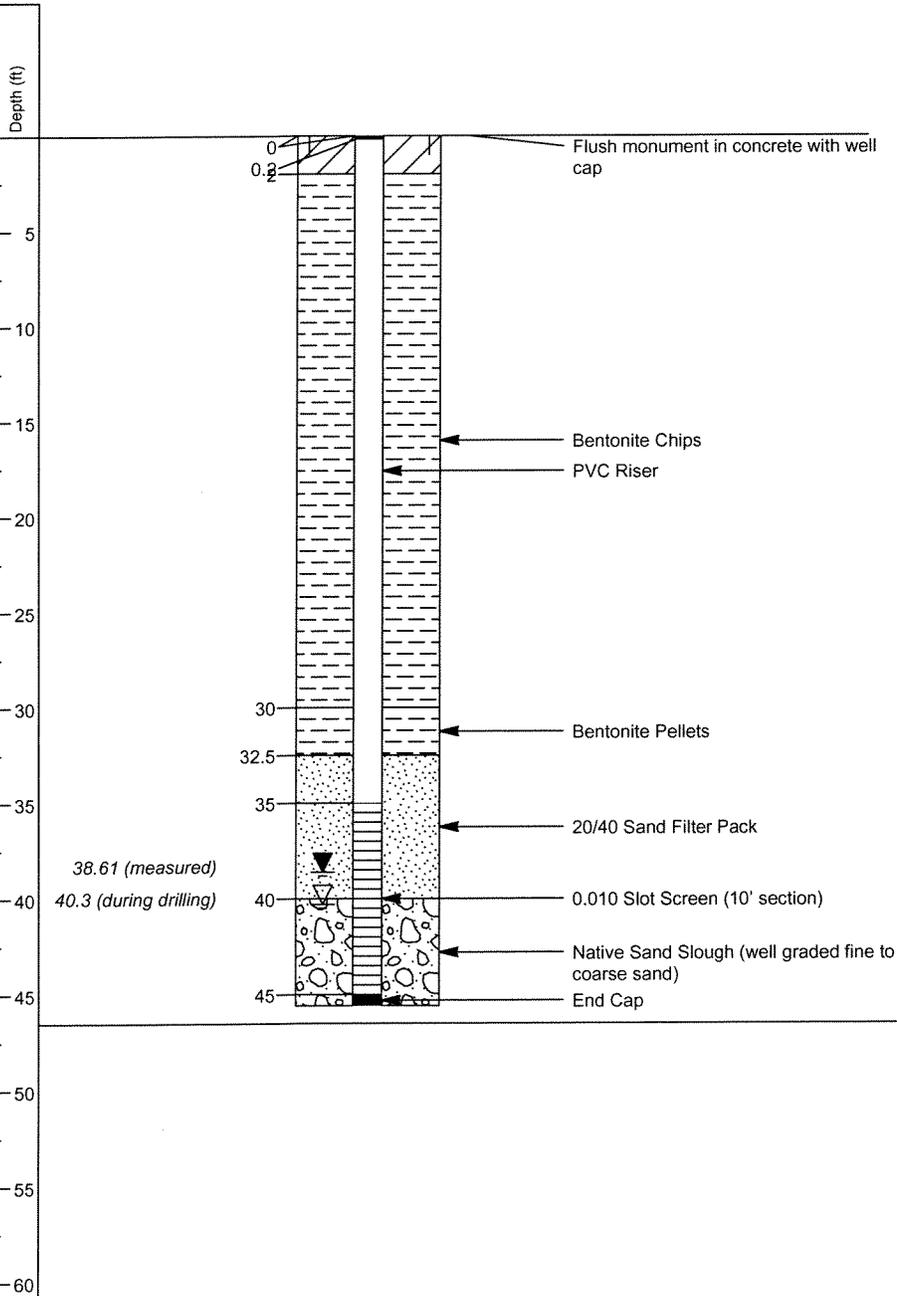
MONITORING WELL LOG

Project: SA 99		Monitoring Well: SA99-MW2	
Site:		Elevation Datum: <input checked="" type="checkbox"/> MSL <input type="checkbox"/> other	
Drilling Agency: <input type="checkbox"/> Alaska District <input checked="" type="checkbox"/> Other Ambler Exploration		Top of Casing Elevation (ft):	
Location: Northing: Easting:			
Date Well Completed: 24 Jul 2003		Driller: Tom Campbell	Inspector: Catherine Roso
Type of Hole: <input type="checkbox"/> other <input type="checkbox"/> Test Pit <input checked="" type="checkbox"/> Auger Hole <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer		Depth to Groundwater (bgs): 38.61, 8/5/03 1540	Depth Drilled (ft): 45
Total Well Depth from Top of Casing (ft): 45.58	Hammer Weight: 300 lbs	Split Spoon I.D.: 2.5 in	Drill Type and Size: 8,
Type of Equipment: Mobile B61 HD	Type of Samples:		

NOTE:
Center well on Airlifter Drive

SUMMARY OF MATERIALS USED

- 8" dia. Flush Monument
- Concrete (Alaska Sand and Gravel)
- 2" dia. Schedule 40 PVC threaded riser
- 2" dia. Schedule 40 PVC threaded 0.01" Slot Screen
- 3/8 Bentonite Pellets
- 3/8 Bentonite Chips (CETCO Puregold Medium)
- 20/40 Silica Sand (Olge Bay Norton Colorado Springs Plant)
- Well Cap "J Plug" Locking Cap
- End Cap 2" dia. PVC Pointed Cap 0.25' long



Installed monitoring well SA99-MW2

MONITORINGWELLLOG EAFBSA99.GPJ 2003TMTPT.GDT 9/4/03



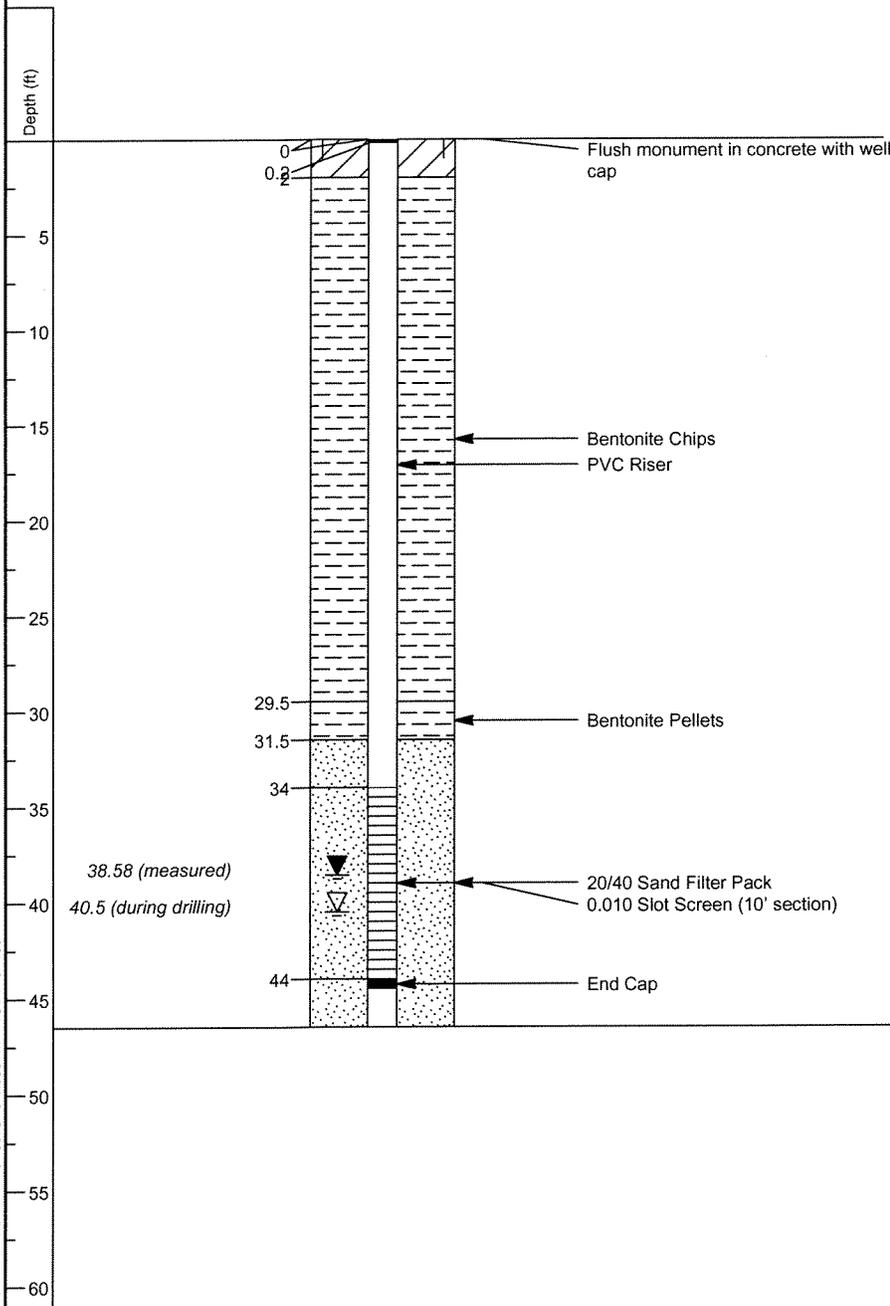
MONITORING WELL LOG

Project: SA 99		Monitoring Well: SA99-MW3	
Site:		Elevation Datum: <input checked="" type="checkbox"/> MSL <input type="checkbox"/> other	
Drilling Agency: <input type="checkbox"/> Alaska District <input checked="" type="checkbox"/> Other Ambler Exploration		Top of Casing Elevation (ft):	
Location: Northing: Easting:			
Date Well Completed: 28 Jul 2003		Driller: Tom Campbell	Inspector: Catherine Roso
Type of Hole: <input type="checkbox"/> other _____ <input type="checkbox"/> Test Pit <input checked="" type="checkbox"/> Auger Hole <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer		Depth to Groundwater (bgs): 38.58, 8/5/03 1440	Depth Drilled (ft): 45
Hammer Weight: 300 lbs		Split Spoon I.D.: 2.5 in	Drill Type and Size: 8,
		Type of Equipment: Mobile B61 HD	Type of Samples:

NOTE:
Eastern most well on Airlifter Drive

SUMMARY OF MATERIALS USED

- 8" dia. Flush Monument
- Concrete (Alaska Sand and Gravel)
- 2" dia. Schedule 40 PVC threaded riser
- 2" dia. Schedule 40 PVC threaded 0.01" Slot Screen
- 3/8 Bentonite Pellets
- 3/8 Bentonite Chips (CETCO Puregold Medium)
- 20/40 Silica Sand (Olge Bay Norton Colorado Springs Plant)
- Well Cap "J Plug" Locking Cap
- End Cap 2" dia. PVC Pointed Cap 0.25' long



Installed monitoring well SA99-MW3

MONITORINGWELLLOG EAFBSA99.GPJ 2003TMPT.GDT 9/4/03



MONITORING WELL LOG

Project: SA 99	Monitoring Well: SA99-MW4
Site:	
Drilling Agency: <input type="checkbox"/> Alaska District <input checked="" type="checkbox"/> Other Ambler Exploration	Elevation Datum: <input checked="" type="checkbox"/> MSL <input type="checkbox"/> other
Location: Northing: Easting:	Top of Casing Elevation (ft):

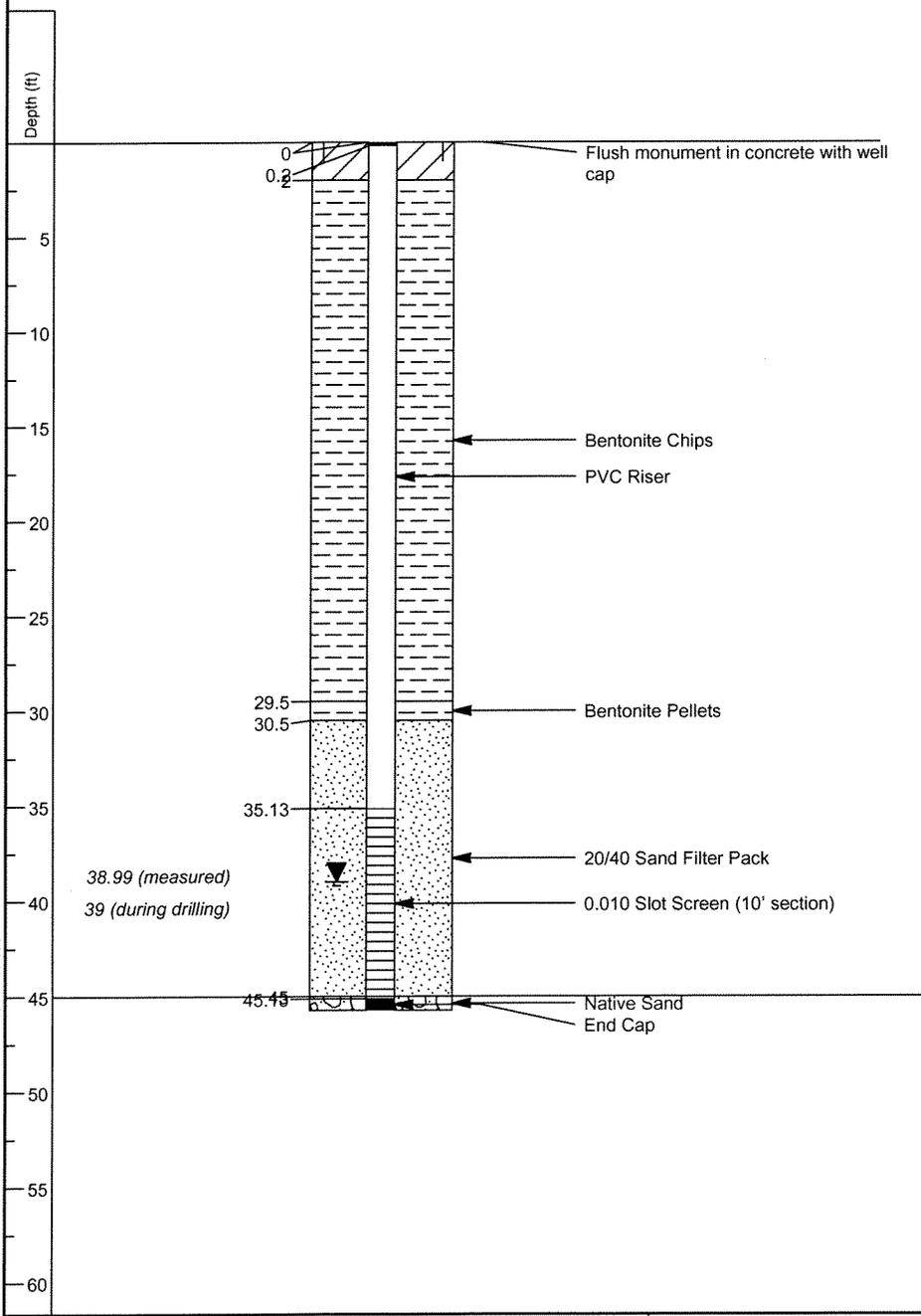
Date Well Completed: 29 Jul 2003	Driller: Tom Campbell	Inspector: Catherine Roso
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Type of Hole: <input type="checkbox"/> other _____ <input type="checkbox"/> Test Pit <input checked="" type="checkbox"/> Auger Hole <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer	Depth to Groundwater (bgs): 38.99, 8/5/03 1250	Depth Drilled (ft): 45	Total Well Depth from Top of Casing (ft): 45.73
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Hammer Weight: 300 lbs	Split Spoon I.D.: 2.5 in	Drill Type and Size: 8,	Type of Equipment: Mobile B61 HD	Type of Samples:
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NOTE:
North most well behind fuel storage tanks, outside fence.

- SUMMARY OF MATERIALS USED**
- 8" dia. Flush Monument
 - Concrete (Alaska Sand and Gravel)
 - 2" dia. Schedule 40 PVC threaded riser
 - 2" dia. Schedule 40 PVC threaded 0.01" Slot Screen
 - 3/8 Bentonite Pellets
 - 3/8 Bentonite Chips (CETCO Puregold Medium)
 - 20/40 Silica Sand (Olge Bay Norton Colorado Springs Plant)
 - Well Cap "J Plug" Locking Cap
 - End Cap 2" dia. PVC Pointed Cap 0.25' long



Installed monitoring well SA99-MW4

MONITORINGWELLLOG EAFBSA99.GPJ 2003TMPT.GDT 9/4/03

APPENDIX G
Response to Comments

**REVIEW
COMMENTS**

**PROJECT: SA99 SI/Closure
DOCUMENT: SA99 Site Investigation Report**

LOCATION: Elmendorf AFB

U.S. ARMY CORPS OF ENGINEERS	DATE: August 18, 2004 REVIEWER: Kevin Oates, Ellen Godden, Louis Howard, Joe Williamson PHONE:	Action taken on comment by: Sara Hadden
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Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	JACOBS RESPONSE	USAED RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
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1	Whole document	Remove "landfill" from page heading and throughout document		"Landfill" will be removed from all headings as well as throughout the document when referring to Site SA99.	
2	Fig 1-1 Pg 1-2	Replace map with new one that shows correct railroad alignment		The figure will be revised to show the correct railroad alignment.	
3	1.2.1 pg1-5	The discussion on soils and crushed drums that were excavated as part of the 1998 MILCON Replace Tankage Project indicates that the concentrations of some contaminants exceeded regulatory levels. The text does not state what was the disposition of these materials. Recommend adding a statement on the final disposition of the excavated materials.		The following text will be appended to this section: "The Air Force subsequently transported the approximately 2,400 cy of stockpiled soil to Alaska Soil Recycling for thermal treatment and disposal."	
4	Fig 1-4 Pg 1-6	Old map. Groundwater flow direction around Tally Ave and North/South runway is not correct. Gary has better information		The figure will be revised to reflect groundwater flow as is currently understood.	
5	1.2.4.1 pg 1-8	Reference to Table 1-4 in paragraph 2 states that statistical summary of 8 RCRA metals follow but only arsenic and chromium are included in the table.		This will be changed to read: "Table 1-4 provides a statistical summary for <i>arsenic and chromium</i> from the basewide background sampling program (USAF 1993). <i>The other six RCRA metals were found in concentrations below the action criteria.</i> "	

**REVIEW
COMMENTS**

**PROJECT: SA99 SI/Closure
DOCUMENT: SA99 Site Investigation Report**

LOCATION: Elmendorf AFB

U.S. ARMY CORPS OF ENGINEERS	DATE: August 18, 2004 REVIEWER: Kevin Oates, Ellen Godden, Louis Howard, Joe Williamson PHONE:	Action taken on comment by: Sara Hadden
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Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	JACOBS RESPONSE	USAED RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
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6	1.2.2 pg 1-7	The text here discusses the results of the 1999 Utility Line Excavation project. It indicates that an asphalt layer and crushed drums were found during the excavation. Furthermore, that a soil sample was taken and analyzed for a variety of constituents. Table 1-2 indicates there were no regulatory exceedances, other than the Region 9 chromium, which is primarily an advisory number for screening purposes. The text should describe the final disposition of the excavated materials.		The last sentence of the first paragraph on pg 1-7 will be changed to read "The utility line was installed in the trench, <i>and the trench was backfilled with the excavated soil.</i> "	
7	Tbl 1-3 pg 1-8	The table indicates a slight exceedence of Slivex (490 mg/kg) of the Region 9 criteria of 520 mg/kg for the residential soil screening level. As noted above, these were developed for screening purposes. They are typically associated with 1E x 10 ⁻⁶ or 1E x10 ⁻⁷ incremental cancer risk levels. Also, please note that for industrial soil exposure scenario (current and anticipated future use), the criteria is 4900 mg/kg. No response is needed for this comment. It is intended for informational purposes.		Comment noted.	
8	1.2.9 pg 1-11	Need to review the Base General Plan and use it as a reference. It is currently under revision; however, Marvin Thomasson (CEC) should have current and future land use designations for this site.		Spoke with Marvin Thomasson and reviewed the Base General Plan. Future land use of this area remains that same as stated. Will change reference to read " <i>USAF, conversation with Marvin Thomasson, August 2004.</i> "	

**REVIEW
COMMENTS**

**PROJECT: SA99 SI/Closure
DOCUMENT: SA99 Site Investigation Report**

LOCATION: Elmendorf AFB

U.S. ARMY CORPS OF ENGINEERS	DATE: August 18, 2004 REVIEWER: Kevin Oates, Ellen Godden, Louis Howard, Joe Williamson PHONE:	Action taken on comment by: Sara Hadden
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Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	JACOBS RESPONSE	USAED RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
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9	1.2.10 pg 1-12	The last two sentences of the last paragraph are fairly broad. There needs to be more substance to state that contaminant migration from SA99 potentially impacts two sensitive ecosystems. Difficult to make the case that contaminates would get to either Ship Creek or Knik Arm in concentrations that would be of concern, especially considering on-site concentrations. Suggest deleting or rewriting these sentences.		The last two sentences of the last paragraph will be deleted from the document.	
10	2.1 pg 2-1	First Bullet. The text states that an EM-61 electromagnetometer was used in the geophysical investigation to detect ferrous and non-ferrous metallic objects to depths of approximately 9 feet. This is theoretically possible for a fairly large EM-61 platform to detect a very large item at 9 ft. Also, it does seem like overkill to have deployed EM-61, G-858, EM-31, and ground penetrating radar units for geophysical investigations in a small area (0.5 acres).		Jacobs and their subcontractor believed it was necessary to use all instruments discussed in order to get an accurate location and depth of buried debris as discussed in SA99 Engineering Evaluation/Cost Analysis Work Plan (June 2003).	
11	2.2 pg 2-2	It would be really helpful to state how thick the layers of drums or asphalt were at each test pit.		The drums were scattered throughout the excavations, and thus no continuous drum/asphalt layer was observed in the trenches. The text will be revised to describe the random scattering of drums and asphalt within the excavations.	

**REVIEW
COMMENTS**

**PROJECT: SA99 SI/Closure
DOCUMENT: SA99 Site Investigation Report**

LOCATION: Elmendorf AFB

<p>U.S. ARMY CORPS OF ENGINEERS</p>	<p>DATE: August 18, 2004 REVIEWER: Kevin Oates, Ellen Godden, Louis Howard, Joe Williamson PHONE:</p>	<p>Action taken on comment by: Sara Hadden</p>
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<p>Item No.</p>	<p>Drawing Sht. No., Spec. Para.</p>	<p>COMMENTS</p>	<p>REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)</p>	<p>JACOBS RESPONSE</p>	<p>USAED RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)</p>
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12	4.0 pg 4-1	Agree with conclusions stated in this section concerning arsenic and chromium levels. The detected concentrations are within established background values.		Comment noted.	
13	5.0 pg 5-1	Agree with overall conclusions in this section.		Comment noted.	
14		<p>The Alaska Department of Environmental Conservation (the Department) received the above document on June 9, 2004. The Department has reviewed the document associated with SA99 and concurs the site will not require any further remediation or site investigation for either soil or groundwater.</p> <p>The Department is basing its decision on the most current and complete data provided by the Air Force. The Department reserves its rights, under: 18 AAC 75 Oil and Other Hazardous Substances, Pollution Control regulations and Alaska Statute 46.03 to require additional investigation, cleanup, or containment if subsequent information indicates that: 1) additional contamination remains at the site which was previously undiscovered and presents an unacceptable risk to human, health, safety, or welfare, or the environment; or 2) the information provided was invalid, incomplete, or fraudulent.</p>		Comment noted.	