

**UST DECOMMISSIONING AND SITE
ASSESSMENT-STMP 476, BUILDING 52-651**

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

FINAL

FEBRUARY 1998

REPORT DOCUMENTATION PAGE

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LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AFB	Air Force Base
AFID	Air Force Identification Number
BTEX	benzene, toluene, ethylbenzene, and xylenes
bgs	below ground surface
cy	cubic yards
DO	Delivery Order
DOD	Department of Defense
DRO	diesel range organics
ft	feet
LEL	lower explosive limit
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
ND	non-detect
PID	photoionization detector
ppm	parts per million
QAPP	quality assurance program plan
RRO	residual range organics
STMP	Storage Tank Management Program
TSCA	Toxic Substances Control Act
UST	underground storage tank

1.0 INTRODUCTION

1.1 GENERAL DISCUSSION

The United States Air Force performed the removal and assessment of an unregulated underground storage tank (UST) at Building 52-651, located on Elmendorf Air Force Base (AFB), Alaska. The sectional description for the UST is the northwest 1/4 of the northwest 1/4 of Section 28 Township 14 North, Range 3 West, Anchorage. The Storage Tank Management Plan (STMP) number for this tank is 476.

The purposes of this project were to:

- Remove and decommission UST STMP 476
- Perform a site assessment for closure in accordance with Alaska's Underground Storage Tank Regulations (18 AAC 78)
- Document removal and decommissioning actions in a site summary and closure report.

The project location map is provided as Figure 1. The UST was located adjacent to the north side of Building 52-651 between the building and the access road, as shown on Figure 2. The tank was reported to contain heating oil and was connected to the heating system in Building 52-651.

On July 21, 1997, the unregulated UST referenced above was removed. The UST was a 1,000 gallon single-wall steel tank. The age and date of service for the tank are unknown.

UST STMP 476 removal activities included:

- Excavating and removing UST STMP 476
- Removing associated piping

- Screening soil with a photoionization detector (PID)
- Sampling soil for laboratory analysis.

Soil was field-screened and samples were collected and analyzed for the presence of diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Sample collecting, handling, and documenting were performed in accordance with an approved standard quality assurance program plan (QAPP) on file with Alaska Department Environmental Conservation (ADEC).

1.2 REPORT CONTENTS AND FORMAT

This report documents the decommissioning procedures performed for UST STMP 476, located at the Building 52-651 on Elmendorf AFB.

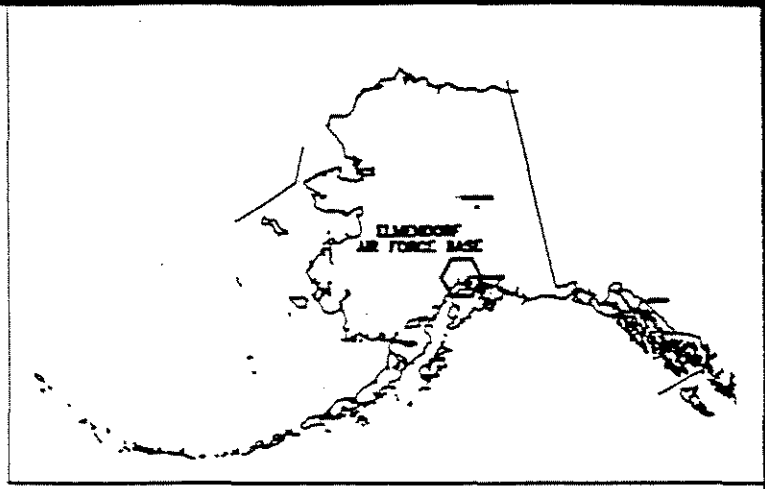
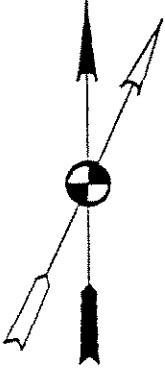
The report provides:

- Project scope and execution
- Field operations description
- Laboratory testing description
- Conclusions and recommendations
- Site location maps
- Laboratory analyses results
- Chain-of-custody documentation
- Field notes
- ADEC matrix score sheet, and
- Photographs.

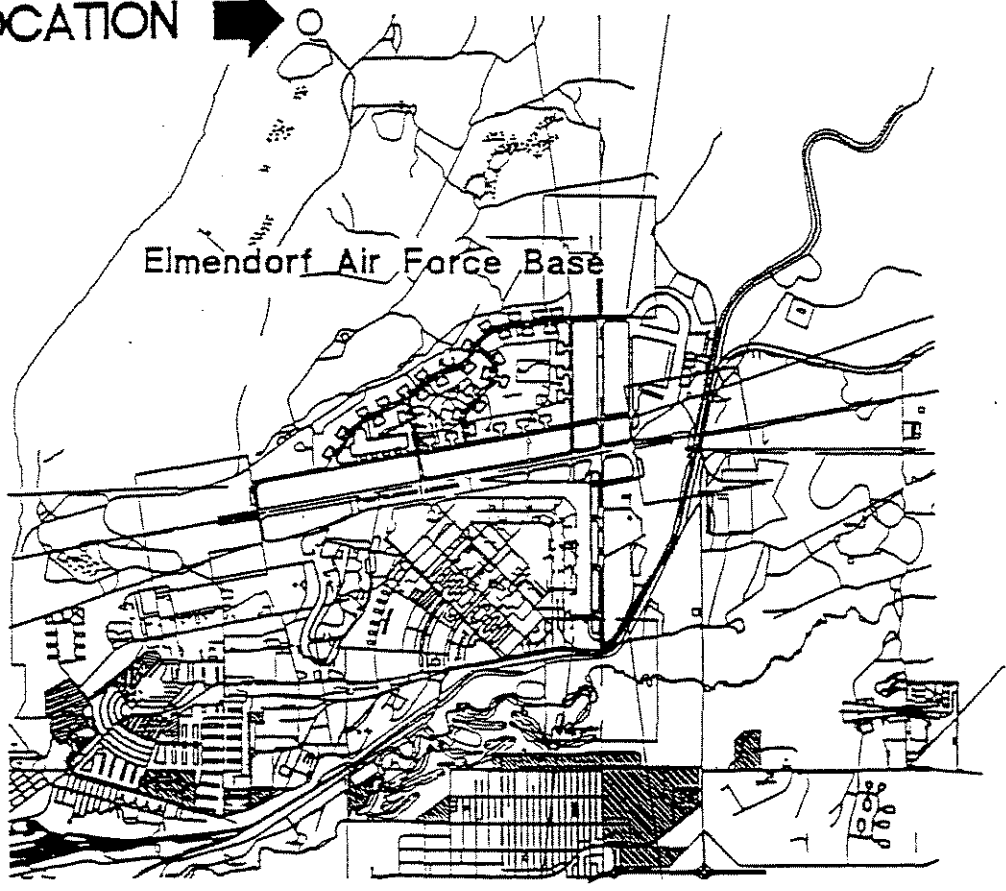
Table 1 summarizes field screening results, and a tabular summary of laboratory analytical results is provided in Table 2. The laboratory data report is provided in Appendix A, chain-of-custody documentation is found in Appendix B, and field notes are presented in Appendix C.

The ADEC Soil Cleanup Matrix Score Sheet is provided in Appendix D, with photographs in Appendix E.

NORTH



LOCATION



Elmendorf Air Force Base

Municipality of Anchorage

FIGURE 1

PROJECT LOCATION MAP
 STMP 476 - BUILDING 52-651
 ELMENDORF AIR FORCE BASE, ALASKA
 UNITED STATES AIR FORCE

BTJ	8-13-97	
TB	8-13-97	
NA		LOC-MAP

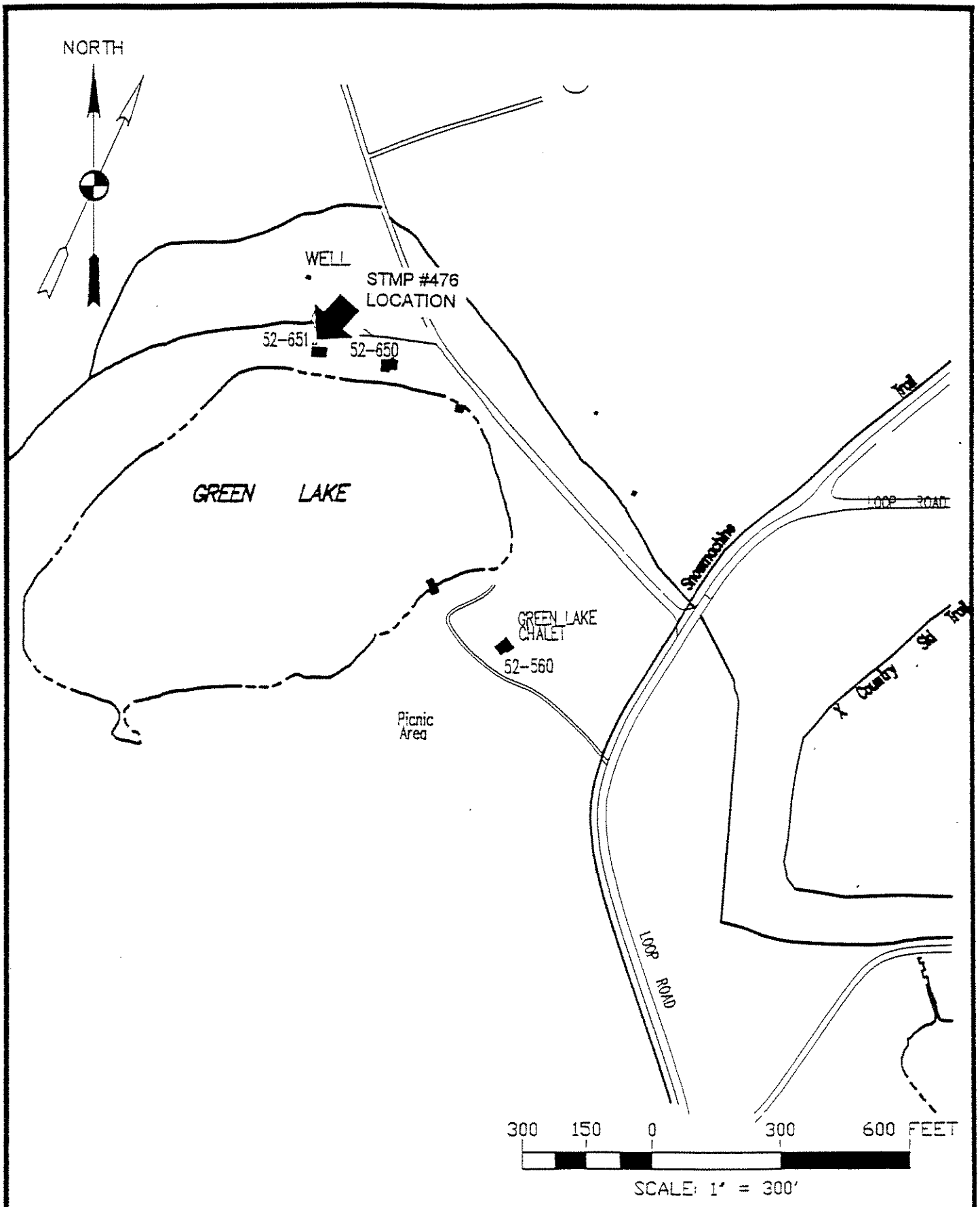


FIGURE 2

SITE VICINITY MAP
 STMP 476 - BUILDING 52-651
 ELMENDORF AIR FORCE BASE, ALASKA

UNITED STATES AIR FORCE

By	Date	Project No.
BTJ	8-6-97	BTJ
Checked	Date	File No.
TB	8-6-97	
Drawn		52-651
NA		

2.0 FIELD OPERATION

2.1 EXCAVATION

Prior to excavating UST STMP 476 utility locates were performed by Air Force personnel and a digging permit was acquired.

Excavation related activities consisted of:

- Excavating the tank using a backhoe
- Field screening and stockpiling excavated soils.

Excavated soil was stockpiled on a 10-mil Visqueen® liner placed on the ground away from the excavation. Stockpiled soil was field screened for possible contamination. Prior to removal, the atmosphere within the tank was tested using a Scientific Instruments LTX-310 Multigas Monitoring instrument to measure O₂ and LEL in the UST. The UST did not require inertion prior to removal.

2.2 TANK REMOVAL

The UST STMP 476 was removed from the excavation using a backhoe. The excavation measured approximately 15 ft. long by nine ft. wide by six ft. deep. The tank was in good condition, with slight rust but no obvious holes observed. Associated tank piping was unearthed to the foundation of building 52-651. Once to the building, the tank piping was cut, capped, removed, and grouted. Vent lines were also removed. After removal, UST STMP 476 was transferred to the project storage yard located on the intersection of Elm and Plum Streets on Elmendorf AFB where it was cleaned with degreaser, scrubbed, and rinsed. The tank was cut into pieces and delivered to Alaska Metals Recycling for disposal. Delivery of the tank pieces was documented using Department of Defense (DOD) form 1348-1.

2.3 SITE ASSESSMENT

The soil removed from the excavation was field screened for the presence of contaminants. Field screening involved headspace analysis using a Photovac MicroTIP HL 2000 PID with a 10.6 eV lamp, in accordance with Section 4.4 of the approved QAPP. Collection of samples for headspace analysis were based on potentially contaminated soils. The PID was calibrated in the field using isobutylene at 100 parts per million (ppm).

The soil surrounding the UST consisted of fine grained sand with gravel. Intermittent clay was encountered at a depth of 6 feet below ground surface (bgs). Field screening indicated that petroleum hydrocarbon contamination was present at the bottom of the excavation and along the east wall. The field technician used professional judgment and based sample locations on these field observations. Approximately 20 cubic yards of soil were excavated in an attempt to remove contaminated soil to acceptable limits. Table 1 below provides field screening results.

TABLE 1
RESULTS OF HEADSPACE ANALYSES

Sample Depth (ft bgs)	Location	Headspace Results (ppm)	Laboratory Sample ID
½ - 1	Near fill pipe	350	
3	North side of tank - east end	205	
6.0	Bottom Center		97ELMGL001SS
6.5	Fill End		97ELMGL002SS
4	North side of tank - east end	1.5	
5.5	East end - bottom of tank	552	
4	Piping Run		97ELMGL003SS
4	Piping Run		97ELMGL004SS*
4	East wall	324	
5-6	South wall - east end	97	
5	East wall	49	
5	South wall - west end	457	97ELMGL005SS
6	Bottom of tank - west end	44	
6	Bottom of tank - east end	215	
6.5	Bottom of tank - east end	16	97ELMGL6SS
NA	Stockpile		97ELMGL007SS

* Duplicate of 97ELMGL003SS.

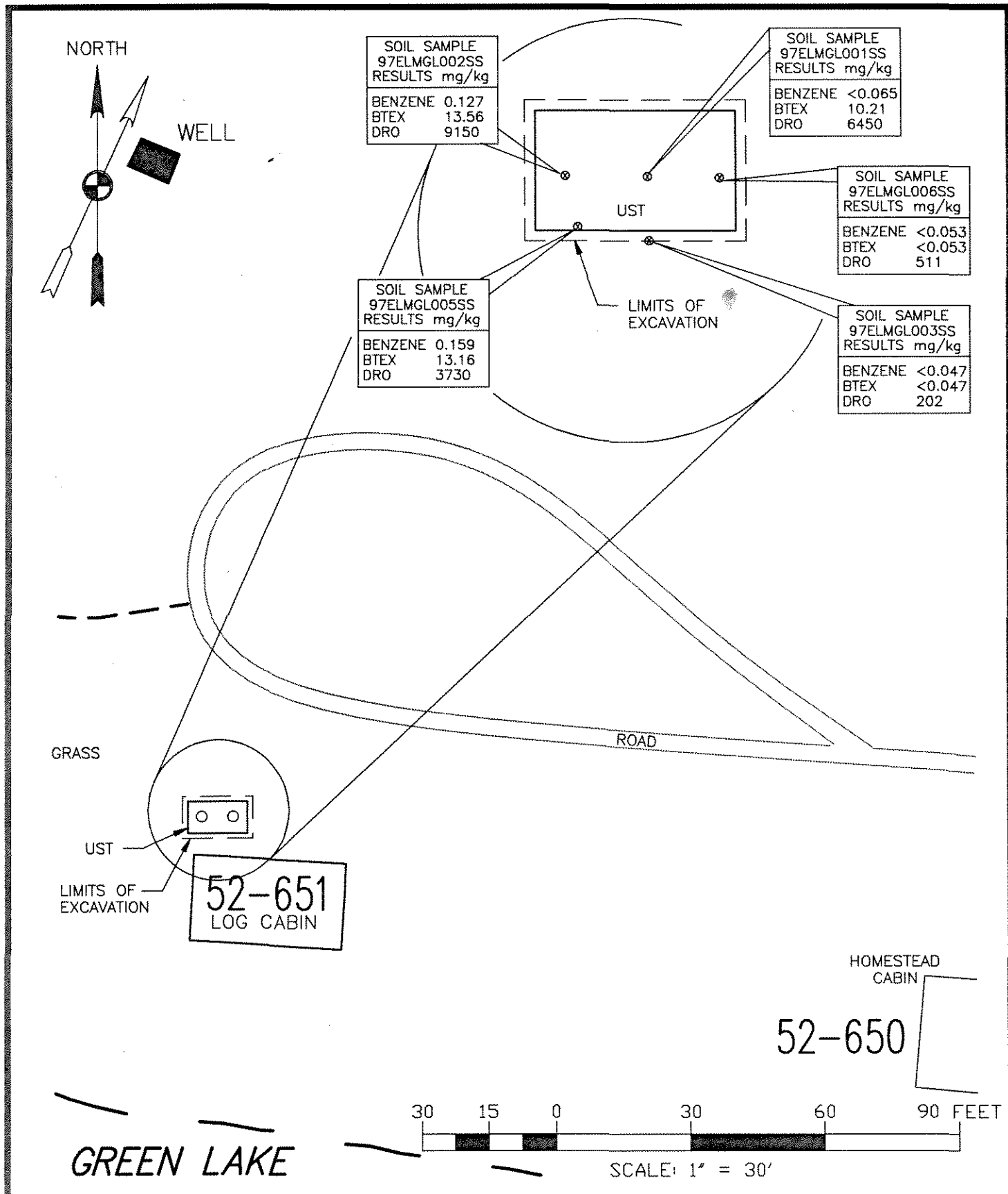


FIGURE 3

Project:	SAMPLE LOCATION MAP		By:	Date:	Project No.
	STMP 476 - BUILDING 52-651		BTJ	8-6-97	
	ELMENDORF AIR FORCE BASE, ALASKA		Check:	Date:	File Path
Client:	UNITED STATES AIR FORCE		TB	8-6-97	52-651a
			Scale:	NA	

3.0 LABORATORY ANALYSIS AND RESULT

Soil samples collected during this site assessment were analyzed for DRO, using ADEC Method AK102 and BTEX using EPA Method 8020. Seven soil samples were collected, including two soil samples from below the tank bottom, two confirmation samples from the limits of the excavation, one soil sample and one duplicate sample from the piping trench and one soil sample from the contaminated soil stockpile. A trip blank was also analyzed. Figure 3 provides the locations of the soil samples. Analytical results of the soil samples are presented in Table 2.

**TABLE 2
RESULTS OF LABORATORY ANALYSES**

Sample ID	Location	Depth (ft)	DRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)
97ELMGL001SS	Bottom Center	6.0	6450	ND (<0.065)	0.176	1.16	8.87	10.21
97ELMGL002SS	Fill End	6.5	9150	0.127	0.422	2.00	11.01	13.60
97ELMGL003SS	Piping Run	4.0	202	ND (<0.047)	ND (<0.047)	ND (<0.047)	ND (<0.047)	ND (<0.047)
97ELMGL004SS	Piping Run (duplicate)	4.0	193	ND (<0.047)	ND (<0.047)	ND (<0.047)	ND (<0.047)	ND (<0.047)
97ELMGL005SS	South Wall, West (Confirmation)	5.0	3730	0.159	0.421	2.75	9.83	13.16
97ELMGL006SS	Bottom, East (Confirmation)	6.5	511	ND (<0.053)	ND (<0.053)	ND (<0.053)	ND (<0.053)	ND (<0.053)
97ELMGL007SS	Stockpile	NA	6730	0.0863	0.266	1.15	6.37	7.87
Trip Blank	NA	NA	NA	ND (<0.0010)	ND (<0.0010)	ND (<0.0010)	ND (<0.0010)	ND (<0.0010)

Notes: ND (xx) = not detected above method detection limits shown in parentheses.
NA = not applicable

Laboratory analyses indicated that total BTEX compounds were detected in three of the four soil samples collected from the tank excavation, in one sample collected from the piping run, and in one sample collected from the stockpile. Total BTEX values for samples from the tank excavation range from not detected to 13.60 mg/kg. Benzene was detected in soil samples at a maximum concentration of 0.159 mg/kg. DRO was detected in all soil samples collected from the tank excavation, with laboratory analytical results ranging from 511 to 9,150 mg/kg. The soil sample with the highest DRO concentration was collected from the fill end of the tank excavation. Laboratory analytical results indicate that the sample collected from the piping run contained no BTEX compounds and 202 mg/kg DRO

Analytical results of the stockpile sample are also shown in Table 2.

The laboratory data received a thorough quality assurance review. All laboratory results met the established quality control criteria. An ADEC matrix score sheet for petroleum cleanup levels at the site was determined and is described in the following section.

3.1 ADEC MATRIX SCORE

An ADEC matrix score was completed for UST STMP 476 to determine the required cleanup levels for petroleum contamination at the site. The matrix cleanup levels are determined based on depth to groundwater, mean annual precipitation, soil type, potential receptors, and estimated volume of contaminated soil.

An ADEC matrix score range of 29 to 37 was computed for UST STMP 476 (Appendix D).

The score is based on the following information:

- Depth to subsurface water is estimated to be between 16 and 50 feet bgs
- Mean annual precipitation data prepared by the National Weather Service report the mean annual precipitation for Anchorage to be 15.1 inches
- Soil type was identified from the excavation as fine grained sand, with gravel from 0-6 ft. bgs. In addition, intermittent clay was encountered at six ft. bgs.

- The closest water well is located approximately 125 feet (ft) from the UST location
- Volume of contaminated soil is estimated to be 20 cubic yards.

Based on an ADEC soil matrix score ranging from 29 to 37, a soil cleanup at Level B is anticipated for this site.

Under Level B, soil contamination cleanup levels are:

- GRO - 100 mg/kg
- DRO - 200 mg/kg
- RRO - 2,000 mg/kg
- Benzene - 0.5 mg/kg
- Total BTEX - 15 mg/kg.

The concentrations of DRO detected in confirmation sample 97ELMDT006SS, collected from the limit of the excavation, and pipeline sample 97ELMDT004SS, exceeded the Level B cleanup concentrations.

4.0 CONCLUSIONS AND RECOMMENDATION

On July 21, 1997, UST STMP 476, adjacent to Building 52-651 on Elmendorf AFB, was decommissioned, removed, and transported to the project storage yard on Elmendorf AFB for temporary storage in a bermed and lined area. Following cleaning and tank destruction the UST was delivered to Alaska Metals Recycling. The excavation was backfilled using excavated soils that were shown to be clean during field screening tests and other clean borrow material from off-site. The contaminated soil excavated during UST removal activities was transferred to a fully permitted thermal treatment facility in Anchorage. Headspace analysis performed in the field using a PID indicated that elevated hydrocarbon concentrations were likely present in excavation samples and the contaminated soil stockpile. Laboratory results from the analyses of seven soil samples collected from the excavation and soil stockpile indicate that BTEX compound are present in the subsurface soils. Based on site parameters a soil cleanup level of Level B was calculated for the site using the ADEC soil cleanup matrix. DRO was detected in the soil samples above the allowable concentration of 200 mg/kg. Based on the assessment results, additional assessment and remediation are required to attain ADEC Level B cleanup goals.

UST STMP 476
BUILDING 52-651

**APPENDIX A
LABORATORY REPORT
WITH ADEC DELIVERABLES**



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

July 29, 1997

Cindy Hale
ACCI
912 E. 15th Suite 200
Anchorage, AK 99501

Client Name	ACCI
Project ID	Elmendorf UST Removal(DO 12) [973977]
Printed	July 29, 1997

Enclosed are the analytical results associated with the above project.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by CT&E. A copy of our Quality Control Manual that outlines this program is available at your request.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth in our Quality Assurance Program Plan.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value that falls below PQL, but is greater than the MDL.
- B - Indicates the analyte is found in the blank associated with the sample.
- * - The analyte has exceeded allowable limits.
- GT - Greater Than
- D - Secondary Dilution
- LT - Less Than
- ! - Surrogate out of range



CT&E Ref.# 973977001
 Client Name ACCI
 Project Name/# Elmendorf UST Removal(DO 12)
 Client Sample ID 97ELMGL001SS
 Matrix Soil
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 07/29/97 13:17
 Collected Date/Time 07/21/97 16:28
 Received Date/Time 07/22/97 13:50
 Technical Director: Stephen C. Ede

Released By *Sharon Patten*

Sample Remarks:
 DRO - Pattern consistent with weathered middle distillate.

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Total Solids	74.3		%	SM18 2540G			07/28/97	DAV
BTEX 8020								
Benzene	0.065 U	0.065	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Toluene	0.176	0.065	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Ethylbenzene	1.16	0.065	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
P & M -Xylene	4.66	0.065	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
o-Xylene	4.21	0.065	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Surrogates								
1,4-Difluorobenzene <Surr>	99.4		%	BTEX SW846-8020 (50-150)		07/23/97	07/23/97	
AK102								
Diesel Range Organics	6450	52.9	mg/Kg	AK102 DRO		07/26/97	07/28/97	WAA
Surrogates								
5a Androstane <surr>	91.9		%	AK102 DRO (50-150)		07/26/97	07/28/97	



CT&E Ref.# 973977002
Client Name ACCI
Project Name/# Elmendorf UST Removal(DO 12)
Client Sample ID 97ELMGL002SS
Matrix Soil
Ordered By PWSID

Client PO#
Printed Date/Time 07/29/97 13:17
Collected Date/Time 07/21/97 16:36
Received Date/Time 07/22/97 13:50
Technical Director: Stephen C. Ede

Released By [Signature]

Sample Remarks:
DRO - Pattern consistent with weathered middle distillate.

Table with 9 columns: Parameter, Results, PQL, Units, Method, Allowable Limits, Prep Date, Analysis Date, Init. Rows include Total Solids, BTEX 8020 (Benzene, Toluene, Ethylbenzene, P & M -Xylene, o-Xylene), Surrogates (1,4-Difluorobenzene), AK102 (Diesel Range Organics), and Surrogates (5a Androstane).



CT&E Ref.# 973977003
 Client Name ACCI
 Project Name/# Elmendorf UST Removal(DO 12)
 Client Sample ID 97ELMGL003SS
 Matrix Soil
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 07/29/97 10:45
 Collected Date/Time 07/21/97 16:53
 Received Date/Time 07/22/97 13:50
 Technical Director: Stephen C. Ede

Released By *Sharon Patton*

Sample Remarks:
 DRO - Pattern consistent with weathered middle distillate.

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Total Solids	98.7		%	SM18 2540G			07/28/97	DAV
BTEX 8020								
Benzene	0.047 U	0.047	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Toluene	0.047 U	0.047	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Ethylbenzene	0.047 U	0.047	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
P & M -Xylene	0.047 U	0.047	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
o-Xylene	0.047 U	0.047	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Surrogates								
1,4-Difluorobenzene <Surr>	96.6		%	BTEX SW846-8020 (50-150)		07/23/97	07/23/97	
AK102								
Diesel Range Organics	202	3.98	mg/Kg	AK102 DRO		07/26/97	07/27/97	WAA
Surrogates								
5a Androstane <surr>	94.1		%	AK102 DRO (50-150)		07/26/97	07/27/97	



CT&E Ref.# 973977004
Client Name ACCI
Project Name/# Elmendorf UST Removal(DO 12)
Client Sample ID 97ELMGL004SS
Matrix Soil
Ordered By PWSID

Client PO#
Printed Date/Time 07/29/97 10:45
Collected Date/Time 07/21/97 16:53
Received Date/Time 07/22/97 13:50
Technical Director: Stephen C. Ede

Released By [Signature]

Sample Remarks:
DRO - Pattern consistent with weathered middle distillate.

Table with columns: Parameter, Results, PQL, Units, Method, Allowable Limits, Prep Date, Analysis Date, Init. Rows include Total Solids, BTEX 8020 (Benzene, Toluene, Ethylbenzene, P & M -Xylene, o-Xylene), Surrogates (1,4-Difluorobenzene), AK102 (Diesel Range Organics), and Surrogates (5a Androstane).



CT&E Ref.# 973977005
 Client Name ACCI
 Project Name/# Elmendorf UST Removal(DO 12)
 Client Sample ID 97ELMGL005SS
 Matrix Soil
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 07/29/97 13:17
 Collected Date/Time 07/21/97 17:38
 Received Date/Time 07/22/97 13:50
 Technical Director: Stephen C. Ede

Released By *Sharon Patton*

Sample Remarks:
 DRO - Pattern consistent with weathered middle distillate.

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Total Solids	84.8		%	SM18 2540G			07/28/97	DAV
BTEX 8020								
Benzene	0.159	0.058	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Toluene	0.421	0.058	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Ethylbenzene	2.75	0.058	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
P & M -Xylene	6.12	0.058	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
o-Xylene	3.71	0.058	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Surrogates								
1,4-Difluorobenzene <Surr>	102		%	BTEX SW846-8020 (50-150)		07/23/97	07/23/97	
AK102								
Diesel Range Organics	3730	46.1	mg/Kg	AK102 DRO		07/26/97	07/27/97	WAA
Surrogates								
5a Androstane <surr>	93		%	AK102 DRO (50-150)		07/26/97	07/27/97	



CT&E Ref.# 973977006
 Client Name ACCI
 Project Name/# Elmendorf UST Removal(DO 12)
 Client Sample ID 97ELMGL006SS
 Matrix Soil
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 07/29/97 10:45
 Collected Date/Time 07/21/97 17:54
 Received Date/Time 07/22/97 13:50
 Technical Director: Stephen C. Ede

Released By *Sharon Paton*

Sample Remarks:
 DRO - Pattern consistent with weathered middle distillate.

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Total Solids	89.2		%	SM18 2540G			07/28/97	DAV
BTEX 8020								
Benzene	0.053 U	0.053	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Toluene	0.053 U	0.053	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Ethylbenzene	0.053 U	0.053	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
P & M -Xylene	0.053 U	0.053	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
o-Xylene	0.053 U	0.053	mg/Kg	BTEX SW846-8020		07/23/97	07/23/97	GSM
Surrogates								
1,4-Difluorobenzene <Surr>	83		%	BTEX SW846-8020 (50-150)		07/23/97	07/23/97	
AK102								
Diesel Range Organics	511	4.45	mg/Kg	AK102 DRO		07/26/97	07/28/97	WAA
Surrogates								
5a Androstane <surr>	88.1		%	AK102 DRO (50-150)		07/26/97	07/28/97	



CT&E Ref.# 973977007
Client Name ACCI
Project Name/# Elmendorf UST Removal(DO 12)
Client Sample ID 97ELMGL007SS
Matrix Soil
Ordered By
PWSID

Client PO#
Printed Date/Time 07/29/97 13:18
Collected Date/Time 07/21/97 18:05
Received Date/Time 07/22/97 13:50
Technical Director: Stephen C. Ede

Released By [Signature]

Sample Remarks:
DRO - Pattern consistent with weathered middle distillate.

Table with 10 columns: Parameter, Results, PQL, Units, Method, Allowable Limits, Prep Date, Analysis Date, and Init. Rows include Total Solids, BTEX 8020 (Benzene, Toluene, Ethylbenzene, P & M -Xylene, o-Xylene), Surrogates (1,4-Difluorobenzene), AK102 (Diesel Range Organics), and Surrogates (5a Androstane).



CT&E Ref.# 973977008
 Client Name ACCI
 Project Name/# Elmendorf UST Removal(DO 12)
 Client Sample ID Trip Blank
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 07/29/97 10:45
 Collected Date/Time
 Received Date/Time 07/22/97 13:50
 Technical Director: Stephen C. Ede

Released By *Shane Patton*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
BTEX 8020								
Benzene	0.0010 U	0.0010	mg/L	BTEX SW846-8020		07/24/97	07/24/97	GSM
Toluene	0.0010 U	0.0010	mg/L	BTEX SW846-8020		07/24/97	07/24/97	GSM
Ethylbenzene	0.0010 U	0.0010	mg/L	BTEX SW846-8020		07/24/97	07/24/97	GSM
P & M -Xylene	0.0010 U	0.0010	mg/L	BTEX SW846-8020		07/24/97	07/24/97	GSM
o-Xylene	0.0010 U	0.0010	mg/L	BTEX SW846-8020		07/24/97	07/24/97	GSM
Surrogates								
1,4-Difluorobenzene <Surr>	93.5		%	BTEX SW846-8020 (50-150)		07/24/97	07/24/97	

APPENDIX B
CHAIN-OF-CUSTODY DOCUMENTATION



CT&E Environmental Services Inc.

Laboratory Division

CHAIN OF CUSTODY

97.3977

POH: _____

Reports to:

BRET BERGLUND
ACCI
912 E. 15th AVENUE
ANCHORAGE AK 99501
Phone: (907) 278-7818 Fax: (907) 278-7815

Invoice to:

SAME

QUOTE # 3038

Laboratory:

Page 1 of 1
CT&E Environmental Services Inc.
200 W Potter Dr.
Anchorage, AK 99518-1605
Phone (907) 562-2343 Fax: (907) 561-5301

Contact person for questions concerning these samples: CINDY HALE / BRET BERGLUND Phone: 278-7818 Fax: 278-7815

Special Instructions: AFCEE PROJECT

Project Name/Number		ELMENDORF UST REMOVAL (0012)												
Sampled By:		LUCINDA HALE												
Lab #	Sample #	Date/Time Sampled	# of Containers	Sample Matrix	DRO	AL102	EPA 8020	BTEL						Comments
①	97ELMGL001SS	7/21/97 1628	2	SOIL	X	X								
②	97ELMGL002SS	7/21/97 1636	2	SOIL	X	X								
③	97ELMGL003SS	7-21-97 1653	2	SOIL	X	X								
④	97ELMGL004SS	7-21-97 1653	2	SOIL	X	X								
⑤	97ELMGL005SS	7-21-97 1788	2	SOIL	X	X								
⑥	97ELMGL006SS	7-21-97 1754	2	SOIL	X	X								
⑦	97ELMGL007SS	7-21-97 1805	2	SOIL	X	X								
⑧	TRIP BLANK			WATER		X								

Sample Receipt:		Relinquished By:		Relinquished By:		Relinquished By:	
Number of Containers	Signature: <u>Lucinda L. Hale</u>	Time: <u>1:50</u>	Signature:	Time:	Signature:	Time:	Signature:
COC Seals/Intact Y/N/NA	Printed Name: <u>LUCINDA L. HALE</u>	Date: <u>7/22/97</u>	Printed Name:	Date:	Printed Name:	Date:	Printed Name:
Temperature <u>3.6 C</u>	Received By:		Received By:		Received at Laboratory By:		
Turnaround Required	Signature:	Time:	Signature:	Time:	Signature: <u>Weather Hall</u>		Time: <u>3:50</u>
Data Deliverables Required Level I Level II Level III	Printed Name:	Date:	Printed Name:	Date:	Printed Name: <u>Weather Hall</u>		Date: <u>7/22/97</u>