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Professional Environmental Consultants

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UST REMOVALS AND CLEANUP

FOR

ERA AVIATION, INC.
FAIRBANKS FACILITY

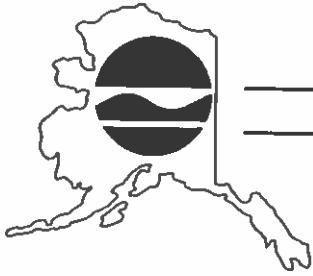
PREPARED FOR

MR. DAN BASKETFIELD, P.E.
NORTHERN REGIONAL OFFICE
ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
1001 NOVEL ST., SUITE 350
FAIRBANKS, ALASKA 99701



GEI PROJECT NO. 191048

MAY 14, 1992



GILFILIAN ENGINEERING, INC.

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May 14, 1992

Mr. Dan Basketfield, P.E.
Northern Regional Office, ADEC
1001 Nobel St., Suite 350
Fairbanks, Alaska 99701

RE: UST Removals and Clean-Up
ERA Aviation, Inc. - Fairbanks Facility
UST Facility I.D. No. 223
GEI Project No. 191048


Dear Mr. Basketfield:

Enclosed with this letter are the results of the UST removal and clean-up work conducted on the above referenced property. Several USTs have been removed from this site and two 5,000-gallon jet fuel USTs still exist at the site.

A Phase I Release Investigation and Groundwater Characterization Study was conducted on the project site. The release investigation involved the installation of four (4) groundwater monitoring wells for further characterization of the groundwater impacted by underground storage tanks (USTs) and/or associated product line piping. Presented herein is a work plan for the placement of additional groundwater monitoring wells and a groundwater remediation program. In addition, this report presents a work plan for the remediation of contaminated soil stockpile and proposed removal of one of the 5,000 gallon jet fuel USTs.

We would like to implement the above work plan in the near future. We would appreciate a prompt review and response concerning the proposed approach and look forward to working with you on this project. Please do not hesitate to contact me at 277-2021 should any questions arise during your review of this proposal.

Sincerely,
GILFILIAN ENGINEERING, INC.


J. Steven Rebillard
Senior Environmental Geologist
Enclosures

cc: Wilbur O'Brien, President of ERA Aviation, Inc.
Stan Halvarson, Fairbanks Base Manager
Rick Maier, Airport Safety, Fairbanks International Airport
W. Alan Braley, P.E., Airport Engineer, Fairbanks International Airport

TABLE OF CONTENTS

<u>Subject</u>	<u>Page</u>
PROJECT DESCRIPTION AND BACKGROUND	1
QUALITY ASSURANCE PROGRAM PLAN (QAPP)	1
DESCRIPTION OF UST REMOVALS AND CLEAN-UP	2
I. CLOSURE OF THREE (3) 500 GALLON USTs	2
TABLE 1: Laboratory Test Results for Soil Samples	3
II. TREATMENT OF STOCKPILED CONTAMINATED SOILS	4
III. PHASE I RELEASE INVESTIGATION AND GROUNDWATER CHARACTERIZATION STUDY	6
TABLE 2: Test Boring PID Readings	7
<u>Description of Soil Test Borings</u>	7
<u>Field Data</u>	8
<u>Laboratory Test Results</u>	9
TABLE 3: Groundwater Monitor Well Test Results	9
IV. PROPOSED REMOVAL OF 5,000 GALLON JET FUEL UST	10
V. RECOMMENDATIONS FOR GROUNDWATER REMEDIATION	11
FIGURE 1: Schematic Diagram of Remediation Processes	12
APPENDIX	

PROJECT DESCRIPTION AND BACKGROUND

Structural improvements on the project site consist of a large helicopter aircraft hangar and office complex and a small cold storage shop. Approximately half of the property is paved while the remaining half is currently exposed gravel base. The UST improvements that existed on the property in 1991 consisted of the following:

2 - 5,000 gallon jet fuel USTs

3 - 500 gallon gasoline USTs

The field work for this project was conducted in several phases. The first phase involved the removal of three (3)-500 gallon gasoline underground storage tanks (USTs) on August 2, 1991. In August 1991, the three (3) USTs were removed by AIC Soil Services, Inc. (AIC) under the direction of Mr. Jim Hill and monitored by Mr. Steve Rebillard of Gilfilian Engineering, Inc. (GEI).

A Site Assessment Report on the removal of the three (3)-500 gallon USTs was prepared by GEI on September 20, 1991, and was sent to Mr. Dan Basketfield, P.E. of the ADEC Northern Regional Office. During the UST removal work, a release of petroleum product was discovered in the subsurface soils and groundwater. Subsequent to submitting a soil treatment plan to ADEC, the contaminated soil stockpile was placed in to an on-site aboveground soil venting treatment cell.

During November 1991, soil test borings and groundwater monitor wells were installed on the project site to investigate for petroleum product release in the groundwater and to characterize the groundwater conditions. Results of the water sample analysis indicated groundwater contamination existed in the area of Monitor Well No. 2, located northwest of the UST excavation area.

QUALITY ASSURANCE PROGRAM PLAN (QAPP)

All field work on this project was supervised by Mr. Steve Rebillard, a Senior Environmental Geologist with GEI. Mr. Rebillard insured all work performed for this project was conducted in accordance with our firm's QAPP approved by the Alaska Department of Environmental Conservation (ADEC) in May 1991.

DESCRIPTION OF UST REMOVALS AND CLEAN-UP

I. CLOSURE OF THREE (3) 500 GALLON USTs

On August 2, 1991, Mr. Rebillard monitored the removal of the three (3) 500 gallon gasoline USTs and one (1) fuel dispenser located north of the metal cold storage building at the ERA Helicopters, Fairbanks Facility. The UST removal was performed subsequent to receipt of the acceptance of the UST Closure Notice submitted to Mr. Dave Belyea of ADEC on June 8, 1991.

As indicated earlier, AIC provided soil excavating and related equipment for the UST removals. Subsequent to the removal of the three (3) USTs, the tanks were visually inspected by Mr. Rebillard, to evaluate their apparent conditions. All the tanks appeared to be structurally sound, with no indication of rupture or excessive corrosion that might indicate a source of product release.

Prior to the UST removals, Mr. Rebillard also extensively visually investigated the product piping which consisted of a complex arrangement of piping network to allow delivery to a single common fuel dispenser. During this evaluation, Mr. Rebillard noted the piping system contained several poorly threaded connections that appeared to have leaked over an unknown period of time.

Soil samples were collected and field screened, periodically, in the field during removal via backhoe. The soil samples were evaluated from the backhoe bucket with a photoionization detector (PID) to assess the presence or absence of volatile petroleum hydrocarbons. During the removal of the USTs, petroleum product contaminated soil was apparent on the end of the tanks below the product piping system.

Additionally, apparent contaminated soil was noted directly beneath the bottom of the USTs and just above the groundwater table. Petroleum product contaminated soil was not detected below the fuel dispenser unit. Representative soil samples were collected by Mr. Rebillard from the soil strata located directly beneath the USTs, but just above the groundwater table.

Soil samples were submitted to Chem Lab for volatile petroleum hydrocarbon (VPH), total aromatic volatile organics (BTEX) testing per EPA Test Methods 5030/8125 and 8020, respectively. A water sample was collected from the bottom of the UST excavation during a subsequent return to the project site, and was also submitted to Chem

Lab for analysis by EPA Test Method 602 for BTEX. All samples were delivered under chain-of-custody procedures to Chem Lab. Results of the soil and groundwater analyses indicated petroleum hydrocarbon contamination still remained in the soils surrounding the UST excavation.

On September 27 and 28, 1991, GEI monitored the removal of additional contaminated soil from the excavation that had previously contained the three (3) 500-gallon gasoline USTs. The additional excavation consisted of extending the initial UST excavation pit toward the north and west. A track mounted backhoe was used to excavate soil that was field screened with a portable PID.

TABLE 1 provides a summary of the results of the analytical testing performed by Chem Lab on the representative soil samples collected from the bottom of the UST excavation at the soil ground water table interface. Based on the test results, the removal of the three (3)-500 gallon USTs satisfies ADEC requirements given in 18 AAC 78 for closure purposes. Enclosed in the Appendix is a completed form titled *Post-Closure Information For Alaska Underground Storage Tanks* signed by Robert E. Gilfilian, P.E.

The treatment of the stockpiled contaminated soil and a release investigation/groundwater characterization study needs to be addressed. The remainder of this report describes these items and presents a work plan for soil and groundwater remediation. A schematic diagram of the proposed remediation processes is presented in FIGURE 1.

TABLE 1: Laboratory Test Results for Soil Samples

SAMPLE LOCATION	VPH (ppm)	BENZENE (ppm)	BTEX (ppm)
South Wall	5.070	0.989	8.637
North Wall	0.755	0.494	0.494
East Wall	ND(0.400)	0.021	0.064
West Wall	ND(0.400)	0.072	0.105
Northwest Corner	ND(0.400)	0.076	0.103
Southwest Corner	ND(0.400)	0.069	0.122

II. TREATMENT OF STOCKPILED CONTAMINATED SOILS

The contaminated soils removed from the UST excavation on August 2, 1991 and September 27 and 28, 1991 were temporarily placed on 10 mil reinforced visqueen liner on the property for temporary storage. On September 9, 1991, Mr. Rebillard returned to the project site for the purpose of characterizing the contaminated soil stockpile.

The stockpile was characterized by methods described in ADEC's Guideline, dated July 11, 1991. Discreet soil samples were collected at key locations and were delivered under chain-of-custody procedures to Chem Lab for VPH and BTEX analyses. Subsequent to the additional excavation of the UST pit area, GEI again returned to the project site on October 10, 1991 to characterize the stockpile of the additionally excavated soil. Identical requirements and procedures were followed during the sampling of the additional soil excavation stockpile. It was decided, because of the fast approaching freezing temperatures and winter conditions, that the stockpiled soils would be placed in a soil treatment cell for further remediation. On October 4, 1991 a contaminated soil stockpile treatment plan was submitted to ADEC for approval.

The total volume of contaminated soil stockpiled in the treatment cell, is approximately 110-cubic yards. The treatment cell consists of an approximately 30 by 30 foot square base area, with a perimeter berm constructed of heavy wood timber material. An underliner containment liner was placed over the timber berm and bottom of the containment cell, consisting of 20 mil thick Novathane HDP Polyethylene high density liner material.

Six to seven inches of pea gravel was placed directly over the Novathane liner, a four inch diameter, perforated PVC piping network was embedded in the pea gravel prior to placement of a filter fabric consisting of Typar type R104N. The contaminated soil was then placed on the filter fabric for a depth of approximately 2-feet. A vacuum extraction piping network consisting of 1-inch hand cut slotted PVC piping was then placed over this portion of the stockpile and tied into a header pipe and single extraction pipe to be used in a vapor recovery program. The vapor extraction piping network consisted of hand cut slots on two (2) sides of the pipe, approximately 1-inch apart throughout the entire length of the piping network. The remainder of the contaminated soil was placed on top of the vacuum piping network and covered with 10 mil reinforced visqueen capped with 10 mil novathane.

Volatization of the petroleum hydrocarbon contaminants in the treatment cell is proposed via a vapor extraction treatment system manufactured by Dynamic Process Industries (DPI). The treatment unit consists of a skid mounted, 1-horse power, explosion proof, high volume integral mounted blower that will provide 98-cubic feet per minute air flow.

The treatment unit includes a 55-gallon moisture separator drum with anti-overflow valve and pressure relief valve. An in-line filter/silencer reduces noise level while insuring particulate free air is provided to the blower. A flow regulator valve and vacuum gauge are also integral to the unit. The vapor extraction system is a pre-manufactured treatment unit that will only need setting up in the field and connection to the piping network already installed in the treatment cell. Enclosed in the Appendix section is a catalog cut of the DPI Vapor Extraction System.

Exhaust venting is provided by 2-inch diameter PVC pipe that will extend a minimum 12-feet above the ground surface. The unit is provided with a plug-in electrical device and will be wired according to local and state codes. The vapor extraction system hookup configuration will consist of a connector pipe leading from the 1-inch PVC pipe near the top of the treatment cell into the vapor extraction system unit exhausting through the unit to the outside air 12-feet minimum above the ground surface. Fresh in-take air will be provided by the 4-inch diameter perforated PVC pipe that now exists at the bottom of the treatment cell connected to a common header and large diameter intake pipe. The required air flow for the vapor extraction treatment process is calculated by the following equation:

Air Flow for 110 Cubic Yards Treatment Cell

$$\begin{aligned} V - \text{Volume of voids} & \quad (30\% \times 3000 \text{ cf}) & = & \quad 900 \text{ cf} \\ T - \text{Turnover time} & & = & \quad 30 \text{ min.} \\ Q - V/T & = 900 \text{ cf}/30 \text{ min} & = & \quad 30 \text{ CFM} \end{aligned}$$

Differential Pressure of 50 IWG

As indicated in the enclosed catalog cut, the DPI Vapor Extraction System equipped with the one horsepower blower meets the above requirements.

III. PHASE I RELEASE INVESTIGATION AND GROUNDWATER CHARACTERIZATION STUDY

This section discusses the installation of four (4) groundwater monitor wells and the characterization of the groundwater on the project site. On November 20 and 21, 1991 four (4) soil test borings were drilled on the project site at locations indicated on the attached Site Plan. Groundwater monitoring wells were constructed in the soil borings. The groundwater monitoring wells were installed for the purpose of obtaining information on the hydrogeological and groundwater characteristics on the project site.

Mr. Rebillard supervised the drilling of the soil test borings and installation of the groundwater monitor wells. The wells were drilled by Discovery Drilling of Anchorage, Alaska. A truck-mounted, CME 45 drilling rig was used to drill the soil test borings.

Representative soil samples were collected by advancing an 8-inch diameter hollow stem continuous flight auger drill. Soil samples were collected at 5-foot intervals. As the test holes were drilled, soil samples were field screened for volatile petroleum product contamination using a Summit Interests SIP-1000 PID calibrated to a benzene standard. Soil samples were placed in 125 ml amber glass bottles and stored in a cooler, maintained at 4°C with blue-ice, until delivered to the laboratory.

Upon completion of drilling the soil test boring, a 10 foot section of 2-inch diameter PVC Schedule 40 well screen was installed in the bore hole. As the auger was withdrawn from the bore hole the annular space between the well screen and surrounding soil strata was backfilled with silica sand up to 2-feet above the top of the well screened section.

The remainder of the bore hole annular space was sealed with bentonite chips and finished at grade with a cement cap. The top section of the monitor well consisted of a solid section of 2-inch diameter PVC Schedule 40 pipe. The well screened section and casing are joined together with flush coupled threaded joints and capped with a water-tight cap that was provided with a locking mechanism. A manway aluminum cover and basin was placed over the monitor well at grade to provide a means to access the well casing at the ground surface.

Selected soil samples collected from the soil borings during the monitor well installation were analyzed for petroleum product contamination by Chem Lab. A description of the soil test boring logs and PID field screening measurements and locations can be found in the Appendix section. A summary of the PID readings taken from the test boring soil samples is provided in TABLE 2 and on the logs of the Soil Test Borings.

TABLE 2: Test Boring PID Readings

Test Boring No.	Depth Below Ground (ft.)	PID (ppm)	Laboratory Analysis
1	5 - 6.5	1.1	NO
1	10 - 11.5	1.0	NO
1	15.0 - 16.5	1.4	NO
2	5 - 6.5	1.1	NO
2	9.5 - 11.0	168.0	YES
2	15 - 16.5	130.0	NO
3	5 - 6.5	12.0	NO
3	9.0 - 10.5	4.4	NO
3	15 - 16.5	2.4	NO
4	5 - 6.5	2.1	NO
4	9 - 10.5	2.4	NO
24	15 - 16.5	1.4	NO

Description of Soil Test Borings

The following soil test borings were drilled at locations shown on the Site Plan given in the Appendix section:

Soil Test Boring No. 1 was drilled to a depth of 16.5-feet. Groundwater was encountered while drilling at 10.0-feet below the ground surface. As indicated in TABLE 2, field screening for volatile petroleum contamination was not detected at the 5-foot, 10-foot and 16.5-foot drilling depths.

Soil Test Boring No. 2 was drilled near the 5,000 gallon jet fuel UST located in the southwest corner of the hangar building. Subsurface soil and groundwater conditions encountered showed significant PID readings at the groundwater elevation encountered at 9.5-foot and 15-foot depths while drilling.

Soil Test Boring No. 3 was drilled to a depth of 16.5-feet and is located northwest of the northwest corner of the hangar building. Groundwater was encountered at 9.5-feet while drilling. PID field screening measurements indicate insignificant amounts of volatile petroleum hydrocarbons.

Soil Test Boring No. 4 was drilled upgradient of all UST improvements, located north of the cold storage building. The soil test boring was drilled to a depth of 16.5-feet. Groundwater was encountered at 8.5-feet while drilling. PID field screening measurements indicated insignificant amounts of volatile petroleum hydrocarbons.

Groundwater monitor wells were installed in each of the soil borings after completion of drilling to the drilling depths indicated. The groundwater monitor wells were constructed as previously described, as the drilling augers were withdrawn from the bore holes. The monitor wells are numbered Monitor Well No. 1, 2, 3 and 4, as noted on the Site Plan given in the Appendix section.

Field Data

Subsequent to installation of the groundwater monitor wells, the wells were purged of a minimum of three (3) bore volumes each and samples were collected for submittal to the analytical laboratory for hydrocarbon testing. All work performed during the test boring drilling and the groundwater study and sampling event was conducted in accordance with our firm's QAPP.

The first series of samples collected in the groundwater monitoring program was conducted in November 1991. A second series of groundwater sample collection was performed on April 24, 1992 by Mr. Rebillard, assisted by Mr. Kent Sheets, an Environmental Technician with GEI. The test results for the water samples collected from the groundwater monitor wells are summarized in TABLE 3.

On April 23, 1992, Mr. Rebillard and Mr. Sheets measured static water level elevation measurements from the four (4) groundwater monitor wells. The monitor wells were bailed of water to an equivalent of a minimum of 3 bore volumes, except Monitor Well No. 2. A floating product was found on the surface of the water in Monitor Well No. 2 at an estimated depth of approximately 8 inches. The presence of the floating product prohibited accurate static water level measurements; thus, the wells static water level elevation was not vertically tied in with relation to the other wells. Monitor Well No. 2 was bailed of approximately 20 gallons to insure complete removal of accumulated product and allow evaluation of the true floating product conditions. The purge water was contained in a 55-gallon drum stored on the property.

On April 24, 1992, Mr. Rebillard and Mr. Sheets collected groundwater samples from Monitor Well No.s 1, 3 and 4. The groundwater samples were collected with disposable teflon bailers and stored in 40-mil vials, capped with septum seal covers. The tops of the PVC monitor wells were vertically surveyed into a temporary bench mark located on a brass downspout spigot at the southeast corner of the hanger facility. The vertical survey provided elevation data that was needed to calculate a groundwater gradient of 0.0021 feet/foot and direction of flow toward the southwest (see Appendix A: Site Map - Groundwater Gradient and Direction).

A release from the 5,000 gallon jet fuel UST, located adjacent to the southwest corner of the hangar, was reported to the ADEC Northern Regional Office in August 1991. The release from the jet fuel UST was discovered during an annual tank tightness test and may be a possible cause of the groundwater contamination found in Monitor Well No. 2. Another possible source of groundwater contamination found in Well No. 2 may be from the product delivery line that is approximately 10-feet away from the monitor well as shown on the Site Plan.

Laboratory Test Results

The samples collected from the groundwater monitor wells were submitted to Chemical & Geological Laboratories of Alaska (Chem Lab) located in Anchorage, Alaska. The water samples were analyzed for BTEX, according to EPA Method 602. The samples were submitted under Chain of Custody, included with this report. Test results are shown in Appendix B and summarized in TABLE 3.

TABLE 3: Groundwater Monitor Well Test Results

WELL NO.	BENZENE (ppb)		BTEX (ppb)	
	11-22-91	4-24-92	11-22-91	4-24-92
1	ND	ND	3.1	7.0
2	27,700	NT	83,050	NT
3	ND	ND	11.8	ND
4	ND	ND	9.2	ND

LEGEND: ND = Non Detectable (within 1.0 ppb)
NT = Not Tested - Floating (Free) Product was found in Well 2

Based on the groundwater sample results, we believe the cause of the groundwater contamination found in Monitor Well No. 2 is not related to the three (3) 500-gallon USTs. This conclusion takes into consideration the groundwater gradient as determined for the November 1991 sampling event and the nearly identical flow direction as determined from the vertical survey taken during the April 1992 sampling event. It appears the source of the groundwater contamination may be associated with the 5,000-gallon jet fuel UST located near the southwest corner of the existing hanger facility and a nearby product line to a remote fueling pit.

The results of our groundwater characterization study indicate that additional groundwater monitoring wells will be needed to define the extent of the contaminant plume and impact to the groundwater downgradient from this area. We believe the installation of three (3) additional groundwater monitor wells are needed to accurately assess the impact of petroleum product contamination in the area of Monitor Well No. 2.

IV. PROPOSED REMOVAL OF 5,000 GALLON JET FUEL UST

During the fall of 1991, the two (2)-5,000 gallon jet fuel USTs were tested for tightness by Associated Environmental Systems (AES) of Alaska. The 5,000 gallon jet fuel UST located in the southwest corner of the hangar building was found to be leaking and required a release investigation to determine the cause of the tightness test failure. During August 1991 the UST was uncovered to determine the cause of the failed tightness test. The subsurface site condition was assessed by GEI and the construction work was conducted AIC.

Subsurface contamination was detected in the area surrounding the 5,000 gallon UST and the cause of the leakage was determined to be the result of loose fittings and a missing bung cap at the top of the tank. After the fittings were tightened, the tank was retested for tightness and found to be satisfactorily tight. The tank was subsequently placed back into operation for the winter of 1991-1992. Currently, the tank is being emptied. ERA desires to remove the 5,000 gallon UST as soon as possible after spring breakup. Enclosed in the Appendix is a copy of the UST Closure Notice that will be sent to ADEC on May 14, 1992.

All work associated with the removal of the 5,000 gallon jet fuel UST will be coordinated by GEI. The same procedures used during the removal of the three (3)-500 gallon gasoline USTs will be used for the removal of the 5,000 gallon jet fuel UST. Soil Services, Inc. (SSI) of Fairbanks, Alaska will be responsible for the construction work related to the removal of the UST. Mr. Jim Hill, President of SSI, is certified by ADEC for Tank Removals and Upgrade/Replacement in the ADEC UST Certification Program.

ERA AVIATION-FAIRBANKS FACILITY

GROUNDWATER



SOIL STOCKPILE

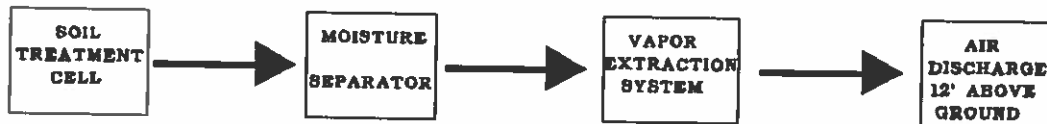


FIGURE 1: SCHEMATIC DIAGRAM OF REMEDIATION PROCESSES

GILFILIAN ENGINEERING, INC.

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DATE: 5-13-92

GEI PROJECT # 191048

GEI will monitor for the presence or absence of contaminated soil during the UST removal. The soils excavated during the removal of the UST will be field screened by a PID and all detectable soils encountered will be stockpile on-site for temporary storage. Stockpiled soil will be characterized according to ADEC requirements and a work plan will be prepared for treatment and disposal.

V. RECOMMENDATIONS FOR GROUNDWATER REMEDIATION

The groundwater in Monitor Well No. 2 was found to be highly contaminated with petroleum product. The extent of contamination in the subsurface soils and groundwater will be investigated during the removal of the 5,000 gallon jet fuel UST. In addition, the product line from the 5,000 gallon UST to a below grade fueling dispenser located several hundred feet to the south of the UST will be uncovered and investigated for potential release problems. The site conditions will be further evaluated for the future placement of additional groundwater monitoring wells downgradient of this area.

It is our recommendation the floating (free) product in Monitor Well No. 2 be removed as soon as possible. Enclosed in the Appendix is a catalog cut of a free product recovery system we propose to use for the removal of the free product in groundwater Monitor Well No. 2. The recovery system is manufactured by Dynamic Process Industries (DPI) and utilizes a continuous belt extraction system that is designed to retain hydrocarbons but repel water.

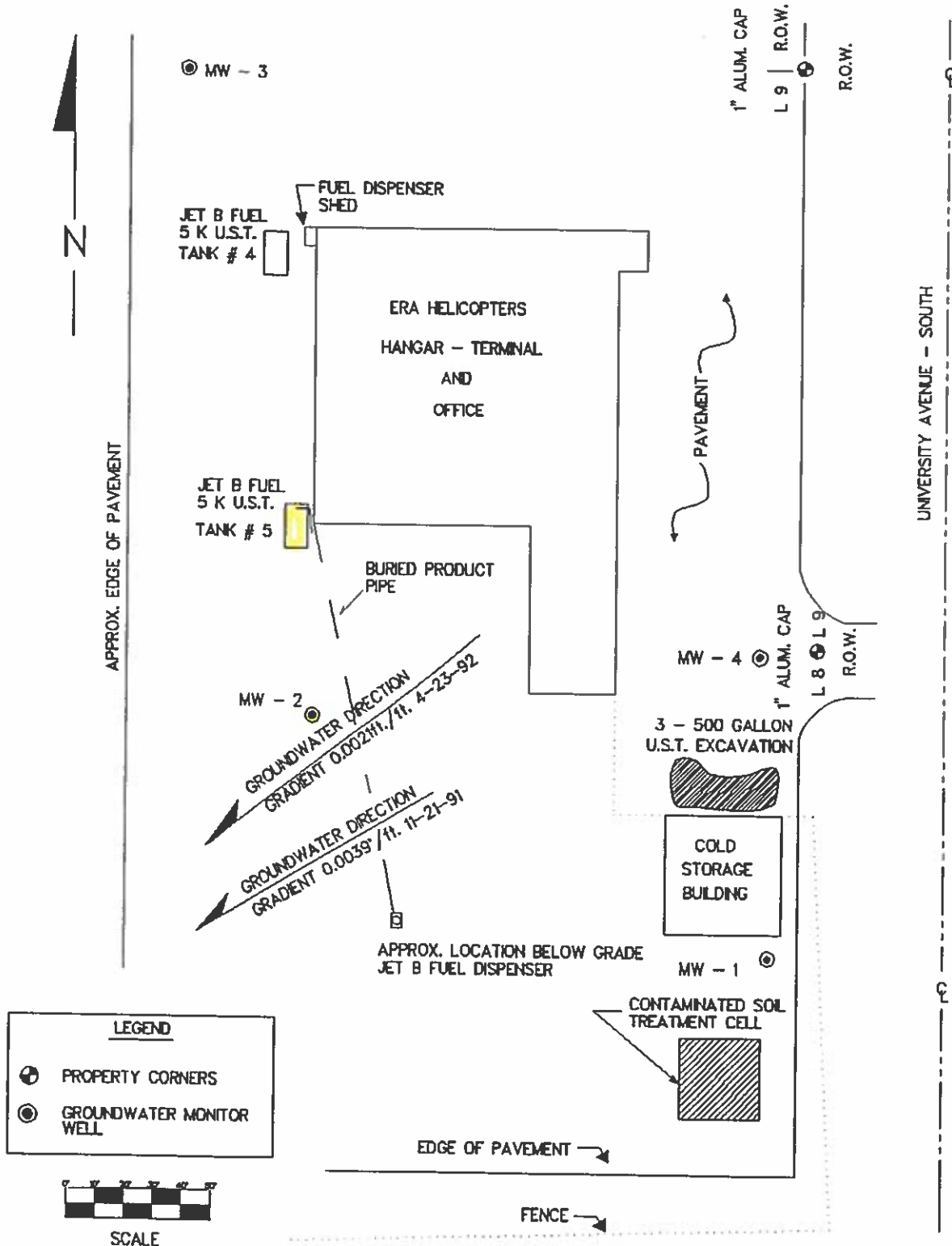
We propose to use the Petro-Belt model PB-8 Hydrocarbon Skimmer in Monitor Well No. 2. The Petro-Belt is designed to remove gasoline, diesel, fuel, oil and other hydrocarbons from the groundwater with minimal water removal. We have contacted the manufacturer and understand the system will work in cold temperature conditions. The manufacturer provided us with a partial customer list (enclosed) of firms throughout the United States who have successfully used this system for product recovery.

The DPI remediation package includes a continuous skimmer belt that is installed in 2 to 4-inch diameter and larger monitor wells and found to be effective in most applications where free product is found floating on the groundwater. A vapor tight cabinet is employed in the system to eliminate hydrocarbon vapors escaping to the atmosphere as free product is being recovered. Removal rate is up to 2 gallon per hour of the diesel fuel weight hydrocarbons according to the manufacturers information. This system is capable of continuous duty and constant year round operation. We believe this type of recovery system is best suited for this situation compared to high volume pumping recovery systems because of the relatively low permeability of the subsurface soils at the groundwater table.

APPENDIX

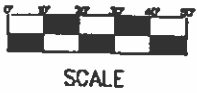
- Site Plan Drawing (1 page)**
- Soil Test Boring Geologic Logs (4 pages)**
- Soil Analytical Test Results for The Three (3)-500 Gallon UST Removal (6 pages)**
- Chain-of-Custody for Soil Samples From The Three (3)-500 Gallon UST Removal (1 page)**
- Soil Analytical Test Results for Stockpile Characterization (4 pages)**
- Chain-of-Custody for Stockpile Soil Samples (1 page)**
- Soil Analytical Test Results for Soil Test Boring No. 2 (1 page)**
- Water Analytical Test Results for 11/22/91 Sampling Series (6 pages)**
- Chain-of-Custody for Soil Test Boring Soil Samples and Groundwater Samples Collected on 11/22/91 (1 page)**
- Water Analytical Test Results for 4/24/92 Sampling Series (4 pages)**
- Chain-of-Custody for Water Samples Collected on 4/24/92 (1 page)**
- Catalog Cut of DPI Vapor Extraction System (1 page)**
- Catalog Cut of DPI Groundwater Hydrocarbon Skimmer (1 page)**
- Dynamic Process Industries (DPI) Partial Customer List (1 page)**
- Post Closure Notification for Three (3)-500 Gallon UST (1 page)**
- Closure Notification for One (1)-5,000 Gallon Jet Fuel UST (1 page)**

product



LEGEND

- ⊕ PROPERTY CORNERS
- ⊙ GROUNDWATER MONITOR WELL

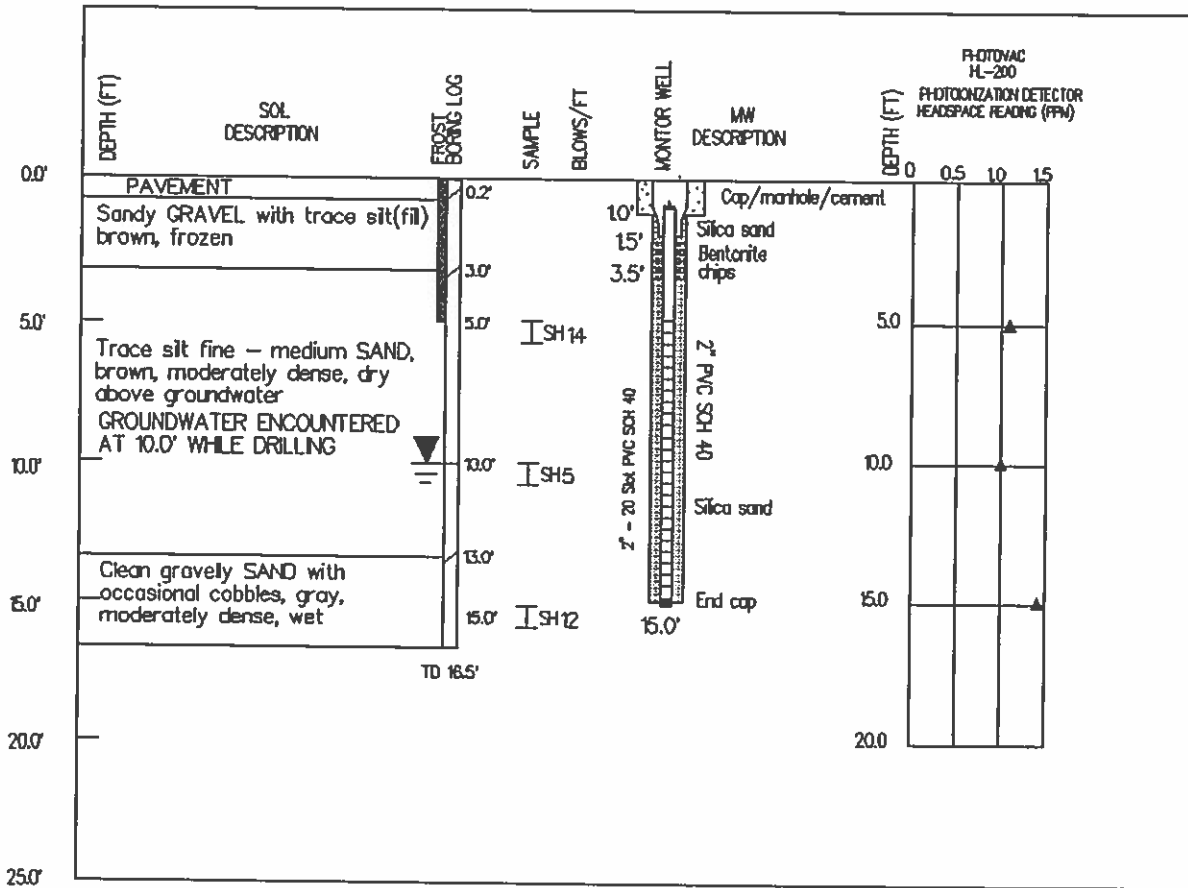


SITE PLAN FOR ERA HELICOPTERS - FAIRBANKS AIRPORT

GILFILIAN ENGINEERING, INC.

Mat-Su Office: 5751 Mayflower Ct., Wasilla, Alaska 99654
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SCALE AS SHOWN
DATE: 5-13-92
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LEGEND

- SH - SPLIT SPOON SAMPLE-340# HAMMER WITH 2.5" SPLIT SPOON
- IG - GRAB SAMPLE
- * - SAMPLE SUBMITTED FOR LAB ANALYSIS
- - FROZEN

SCALE IN FEET



ERA FAIRBANKS - GEOLOGIC LOG OF SOIL BORING

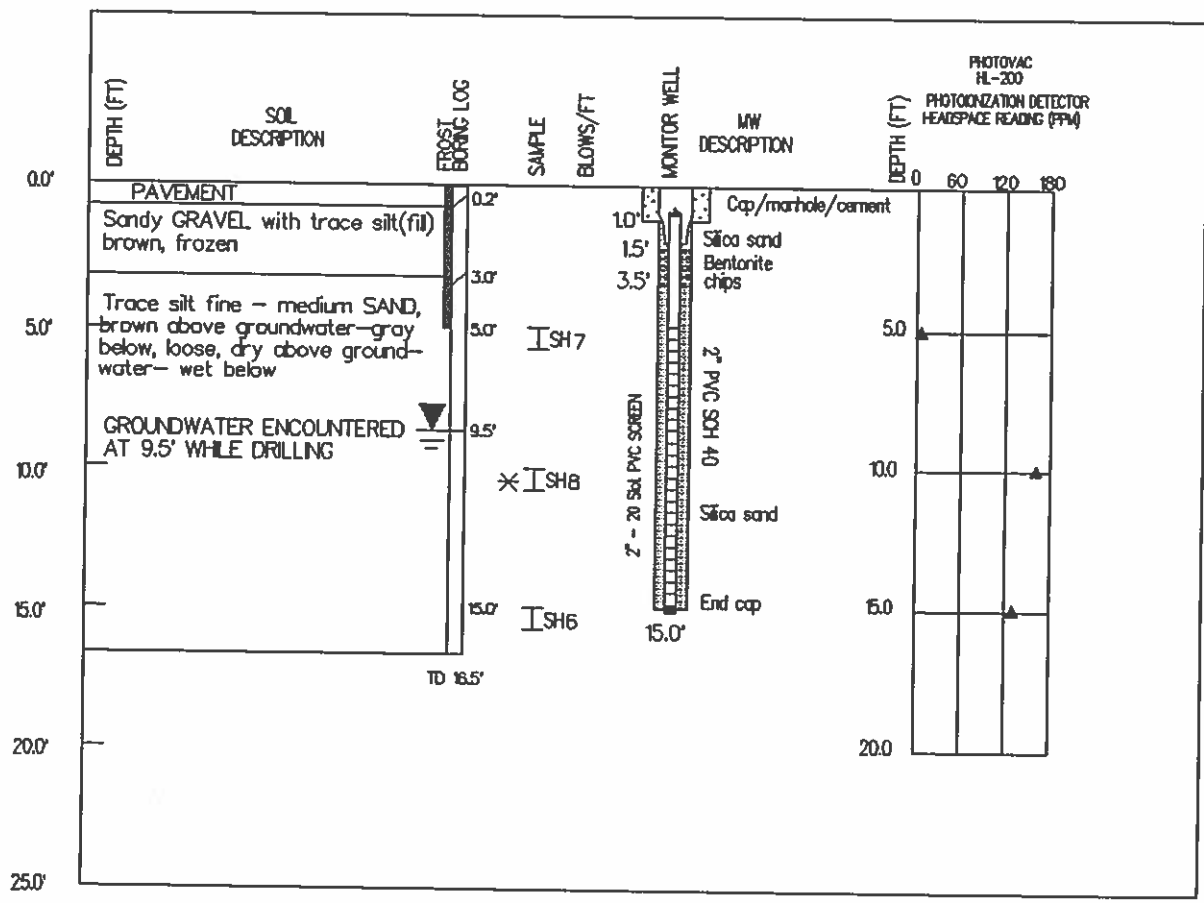
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TEST BORING #1

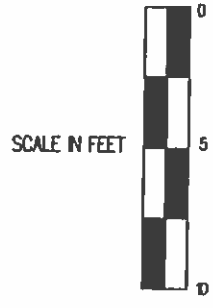
DATE LOGGED: 11-20-91

GEI PROJECT # 191048



LEGEND

- ISH - SPLIT SPOON SAMPLE-340# HAMMER WITH 2.5" SPLIT SPOON
- IG - GRAB SAMPLE
- * - SAMPLE SUBMITTED FOR LAB ANALYSIS
- - FROZEN



ERA FAIRBANKS - GEOLOGIC LOG OF SOIL BORING

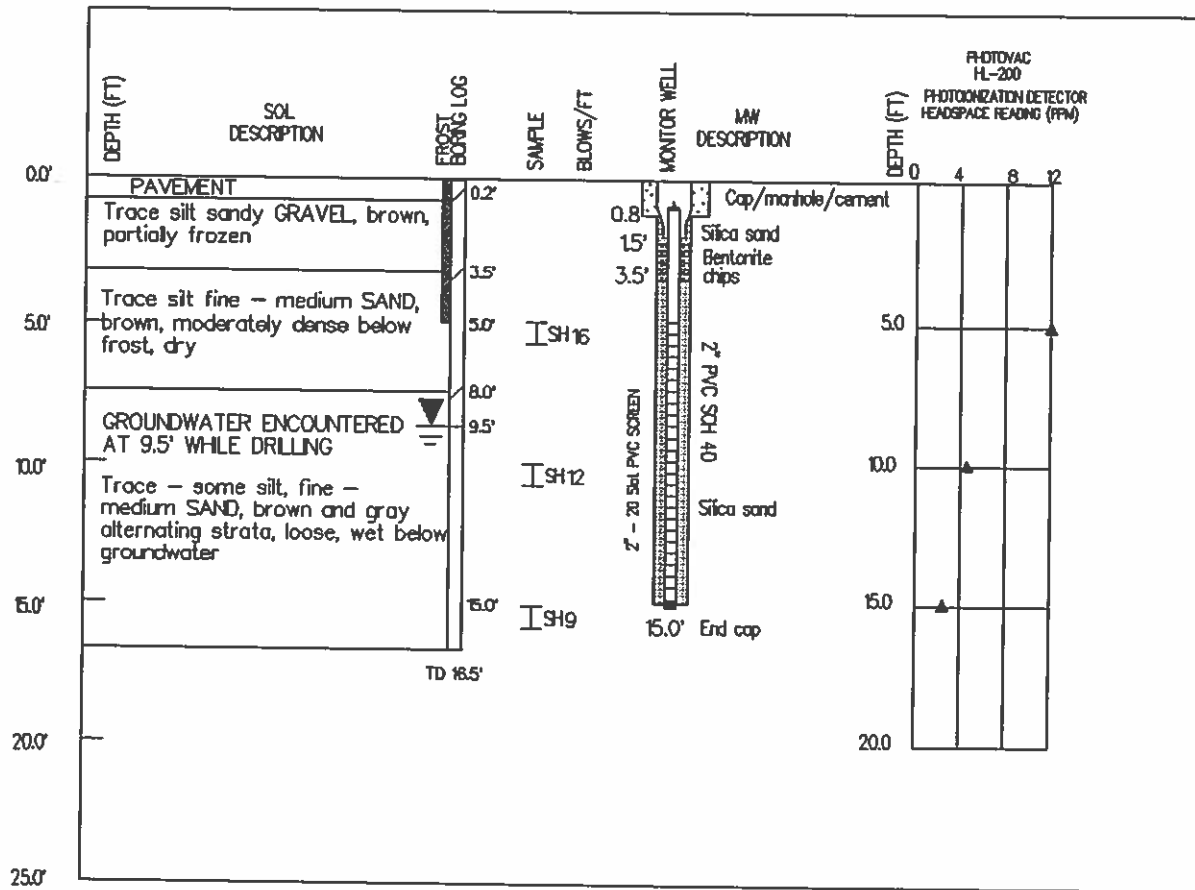
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Mat-Su Office: 5761 Mayflower Ct., Wasilla, Alaska 99654
 Anchorage Office: 255 E. Fireweed Ln., Suite 102, Anchorage, Alaska 99503

TEST BORING #2

DATE LOGGED: 11-21-91

GEI PROJECT # 191048



LEGEND

- SH - SPLIT SPOON SAMPLE-340# HAMMER WITH 2.5" SPLIT SPOON
- IG - GRAB SAMPLE
- * - SAMPLE SUBMITTED FOR LAB ANALYSIS
- - FROZEN

SCALE IN FEET



ERA FAIRBANKS - GEOLOGIC LOG OF SOIL BORING

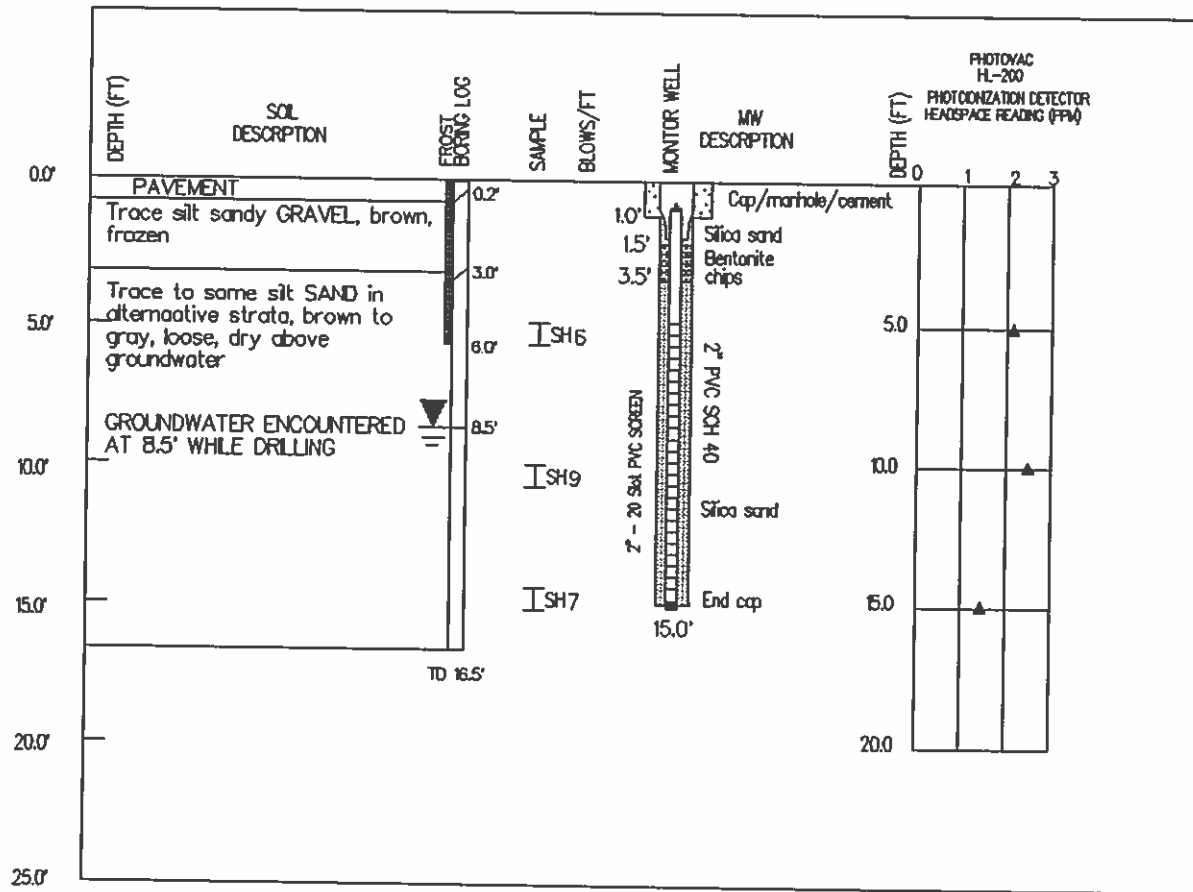
GILFILIAN ENGINEERING, INC.

Mat-Su Office: 5751 Mayflower Ct., Wasilla, Alaska 99654
 Anchorage Office: 255 E. Fireweed Ln., Suite 102, Anchorage, Alaska 99503

TEST BORING #3

DATE LOGGED: 11-21-91

GEI PROJECT # 191048



LEGEND

- ISH - SPLIT SPOON SAMPLE-340# HAMMER WITH 2.5" SPLIT SPOON
- IG - GRAB SAMPLE
- * - SAMPLE SUBMITTED FOR LAB ANALYSIS
- - FROZEN

SCALE IN FEET



ERA FAIRBANKS - GEOLOGIC LOG OF SOIL BORING

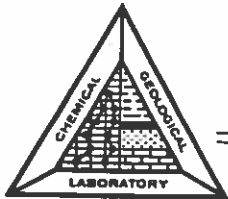
GILFILIAN ENGINEERING, INC.

Mat-Su Office: 5751 Mayflower Ct., Wasilla, Alaska 99654
 Anchorage Office: 255 E. Fireweed Ln., Suite 102, Anchorage, Alaska 99503

TEST BORING #4

DATE LOGGED: 11-21-91

GEI PROJECT # 191048



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:56

Client Sample ID:#1 AT GRNDWTR SOUTHWALL
PWSID :UA
Collected SEP 27 91 @ 17:05 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

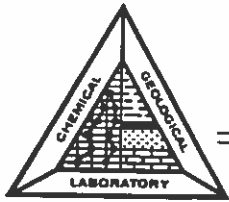
Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpl ID: 1 Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	5.07	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.989	ppm	EPA 8020	
TOLUENE	0.750	ppm	EPA 8020	
ETHYLBENZENE	0.207	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	0.976	ppm	EPA 8020	
o-XYLENE	0.645	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

1i Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:56

Client Sample ID:#2 AT GRNDWTR NORTHWALL
PWSID :UA
Collected SEP 27 91 @ 17:15 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor STEPHEN C. EDE
Released By : *[Signature]*

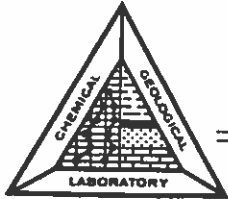
Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpi ID: 2 Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	0.755	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.494	ppm	EPA 8020	
TOLUENE	ND(0.020)	ppm	EPA 8020	
ETHYLBENZENE	ND(0.020)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	ND(0.020)	ppm	EPA 8020	
o-XYLENE	ND(0.020)	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

11 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:56

Client Sample ID:#3 AT GRNDWTR EASTWALL
PWSID :UA
Collected SEP 27 91 @ 17:25 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpl ID: 3

Matrix: SOIL

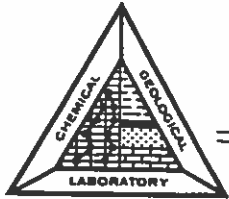
Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	ND(0.400)	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.021	ppm	EPA 8020	
TOLUENE	ND(0.020)	ppm	EPA 8020	
ETHYLBENZENE	ND(0.020)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	0.043	ppm	EPA 8020	
o-XYLENE	ND(0.020)	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

11 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LI-Less Than, GI-Greater Than



Member of the SGS Group (Société Générale de Surveillance)



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:57

Client Sample ID: #4 AT GRNDWTR WESTMALL
PWSID :UA
Collected SEP 28 91 @ 13:50 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

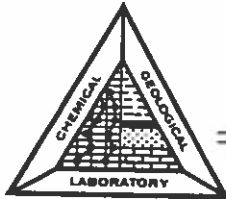
Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpl ID: 4 Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	ND(0.400)	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.072	ppm	EPA 8020	
TOLUENE	ND(0.020)	ppm	EPA 8020	
ETHYLBENZENE	ND(0.020)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	0.033	ppm	EPA 8020	
o-XYLENE	ND(0.020)	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

11 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than



CHEMICAL & GEOLOGICAL LABORATORY

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5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:58

Client Sample ID: #5 AT GRNDWTR NW CORNER
PWSID :UA
Collected SEP 28 91 @ 13:54 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpl ID: 5

Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	ND(0.400)	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.076	ppm	EPA 8020	
TOLUENE	ND(0.020)	ppm	EPA 8020	
ETHYLBENZENE	ND(0.020)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	0.027	ppm	EPA 8020	
o-XYLENE	ND(0.020)	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

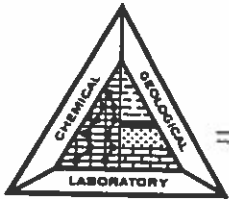
Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

11 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above UA-Unavailable
** See Sample Remarks Above
LT-Less Than, GT-Greater Than



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CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 38918

Date Report Printed: OCT 15 91 @ 14:58

Client Sample ID:#6 AT GRNDWTR SW CORNER
PWSID :UA
Collected SEP 28 91 @ 14:00 hrs.
Received OCT 1 91 @ 17:00 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # NONE RECEIVED
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 11 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915190 Lab Smpl ID: 6

Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	ND(0.400)	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	0.069	ppm	EPA 8020	
TOLUENE	ND(0.020)	ppm	EPA 8020	
ETHYLBENZENE	ND(0.020)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
p & m XYLENE	0.053	ppm	EPA 8020	
o-XYLENE	ND(0.020)	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.020)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. ERA - FAIRBANKS.
Remarks:

11 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above UA-Unavailable
** See Sample Remarks Above
LT-Less Than, GT-Greater Than



Member of the SGS Group (Société Générale de Surveillance)

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

TELEPHONE (907) 562-2343

ANCHORAGE INDUSTRIAL CENTER
5633 B Street
Anchorage, Alaska 99518



GILFILIAN ENGINEERING, INC.

91.5190 CHAIN OF CUSTODY RECORD

SURVEY **GEI #** SAMPLERS: (Signature)

ERA - Fairbanks

Steve Rebillard

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
① 1	@ Gravelly Southwall	9-27-91	1705	Soil		1	VPH & BTEX
② 2	@ Gravelly Northwall	9-27-91	1715	Soil		1	VPH & BTEX
③ 3	@ Gravelly Eastwall	9-27-91	1725	Soil		1	VPH & BTEX
④ 4	@ Gravelly Westwall	9-28-91	1350	Soil		1	VPH & BTEX
⑤ 5	@ Gravelly NW Corner	9-28-91	1354	Soil		1	VPH & BTEX
⑥ 6	@ Gravelly SW Corner	9-28-91	1400	Soil		1	VPH & BTEX

CONDITION OF SAMPLES UPON RECEIPT AT FIELD:
CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS: ex: (sampling witness)

CONDITION OF SAMPLES UPON RECEIPT AT LAB:
CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS:

METHOD OF SHIPMENT FROM LAB TO FIELD: METHOD OF SHIPMENT FROM FIELD TO LAB:
Ked Cooper

Relinquished by: (Signature) <i>Steve Rebillard</i>	Received by: (Signature) <i>[Signature]</i>	Date/Time 9/29/91 1230
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date/Time
Relinquished by: (Signature) <i>[Signature]</i>	Received by Mobile Laboratory for field analysis (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time	Received for Laboratory by: <i>Procedura Sweetzer</i> 10-1 1700

RECEIVED
10/31/91



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 39408

Date Report Printed: OCT 30 91 @ 11:35

Client Sample ID: STOCKPILE SAMPLE 1
PWSID :UA
Collected OCT 10 91 @ 16:47 hrs.
Received OCT 16 91 @ 11:45 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # 191048
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 28 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

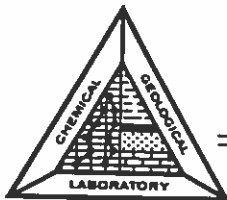
Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915540 Lab Supl ID: 1 Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	2440	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	1.53	ppm	EPA 8020	
TOLUENE	11.3	ppm	EPA 8020	
ETHYLBENZENE	4.76	ppm	EPA 8020	
CHLOROBENZENE	ND(0.150)	ppm	EPA 8020	
p & m XYLENE	78.7	ppm	EPA 8020	
o-XYLENE	36.0	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.150)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.150)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.150)	ppm	EPA 8020	

Sample REMARKS: SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA
Remarks: FAIRBANKS.

11 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 39408

Date Report Printed: OCT 30 91 @ 11:35

Client Sample ID: STOCKPILE SAMPLE 2

PWSID :UA

Collected OCT 10 91 @ 16:52 hrs.

Received OCT 16 91 @ 11:45 hrs.

Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR

Client Acct :GILFILP

BPO #

PO # 191048

Req #

Ordered By :BOB GILFILIAN

Analysis Completed :OCT 25 91

Laboratory Supervisor :STEPHEN C. EDE

Released By :

Send Reports to:

1)GILFILIAN ENGR

2)

Chemlab Ref #: 915540 Lab Smpl ID: 2

Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	171	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	ND(0.200)	ppm	EPA 8020	
TOLUENE	2.21	ppm	EPA 8020	
ETHYLBENZENE	0.920	ppm	EPA 8020	
CHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
p & m XYLENE	27.5	ppm	EPA 8020	
o-XYLENE	12.7	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA

Remarks: FAIRBANKS.

11 Tests Performed

ND- None Detected

NA- Not Analyzed

* See Special Instructions Above

** See Sample Remarks Above

LT-Less Than, GT-Greater Than

UA-Unavailable



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CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 39408

Date Report Printed: OCT 30 91 @ 11:35

Client Sample ID: STOCKPILE SAMPLE 3
PWSID :UA
Collected OCT 10 91 @ 16:58 hrs.
Received OCT 16 91 @ 11:45 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # 191048
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 25 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915540 Lab Smpl ID: 3

Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	774	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	ND(0.200)	ppm	EPA 8020	
TOLUENE	0.740	ppm	EPA 8020	
ETHYLBENZENE	ND(0.200)	ppm	EPA 8020	
CHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
p & m XYLENE	91.8	ppm	EPA 8020	
o-XYLENE	93.5	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	

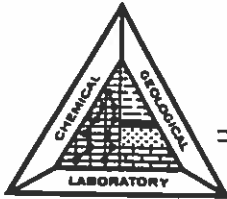
Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GHI PROJECT #191048 ERA
Remarks: FAIRBANKS.

11 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above UA-Unavailable
** See Sample Remarks Above
LT-Less Than, GT-Greater Than



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CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS REPORT BY SAMPLE for WORKorder# 39408

Date Report Printed: OCT 30 91 @ 11:36

Client Sample ID: STOCKPILE SAMPLE 4
PWSID :UA
Collected OCT 10 91 @ 17:05 hrs.
Received OCT 16 91 @ 11:45 hrs.
Preserved with :AS REQUIRED

Client Name :GILFILIAN ENGR
Client Acct :GILFILP
BPO # PO # 191048
Req #
Ordered By :BOB GILFILIAN

Analysis Completed :OCT 25 91
Laboratory Supervisor :STEPHEN C. EDE
Released By : *[Signature]*

Send Reports to:
1)GILFILIAN ENGR
2)

Chemlab Ref #: 915540 Lab Smpl ID: 4 Matrix: SOIL

Parameter Tested	Result	Units	Method	Allowable Limits
HYDROCARBONS VPH	71.2	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	ND(0.200)	ppm	EPA 8020	
TOLUENE	0.242	ppm	EPA 8020	
ETHYLBENZENE	0.299	ppm	EPA 8020	
CHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
p & m XYLENE	2.19	ppm	EPA 8020	
o-XYLENE	2.93	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(0.200)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA
Remarks: FAIRBANKS.

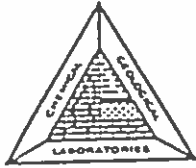
11 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than

91.5540

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

TELEPHONE (907) 562-2343

ANCHORAGE INDUSTRIAL CENTER
5633 B Street
Anchorage, Alaska 99518



GILFILIAN ENGINEERING, INC.

CHAIN OF CUSTODY RECORD

SURVEY Proj # 191048 GRA - Fairbanks				SAMPLERS: (Signature) <i>Steve Rebillard</i>			
STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
1	Stockpile Sample 1	10-10-91	1647	Soil		1	VAP & BTEX
2	Stockpile Sample 2	10-10-91	1652	Soil		1	VAP & BTEX
3	Stockpile Sample 3	10-10-91	1658	Soil		1	VAP & BTEX
4	Stockpile Sample 4	10-10-91	1705	Soil		1	VAP & BTEX

CONDITION OF SAMPLES UPON RECEIPT AT FIELD:
CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS: ex: (sampling witness)

CONDITION OF SAMPLES UPON RECEIPT AT LAB:
CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS:

METHOD OF SHIPMENT FROM LAB TO FIELD: METHOD OF SHIPMENT FROM FIELD TO LAB:
Iced Cooler

Relinquished by: (Signature)
Steve Rebillard

Received by: (Signature)
[Signature]

Date/Time
10/16/91 1120

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)
[Signature]

Received by Mobile Laboratory for field analysis (Signature)

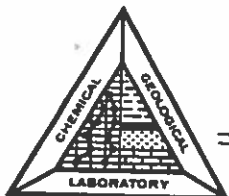
Date/Time

Dispatched by: (Signature)
[Signature]

Date/Time

Received for Laboratory by
Cassandra Switzer

Date/Time
10/16/91 1145



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref.# 91.6318 Sample # 1 Matrix: SOIL

Client Sample ID : STA #3 TB-2 9.5 - 11.0'
PWSID : UA
Collected : NOV 21 91 @ 10:20 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

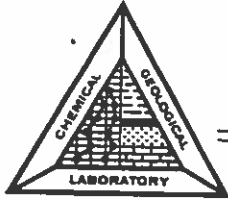
Analysis Completed : DEC 2 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

Parameter	Results	Units	Method	Allowable Limits
HYDROCARBONS EPH	461	ppm	3510/3550/8100 MOD	
HYDROCARBONS VPH	8410	ppm	5030/8015 MOD	
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 8020	n/a
BENZENE	255	ppm	EPA 8020	
TOLUENE	924	ppm	EPA 8020	
ETHYLBENZENE	314	ppm	EPA 8020	
CHLOROBENZENE	ND(250)	ppm	EPA 8020	
p & m XYLENE	1080	ppm	EPA 8020	
o-XYLENE	313	ppm	EPA 8020	
1,4 DICHLOROBENZENE	ND(250)	ppm	EPA 8020	
1,3 DICHLOROBENZENE	ND(250)	ppm	EPA 8020	
1,2 DICHLOROBENZENE	ND(250)	ppm	EPA 8020	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS.

12 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LT-Less Than, GT-Greater Than



CHEMICAL & GEOLOGICAL LABORATORY

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ANALYSIS RESULTS for INVOICE # 40570
Chenlab Ref. # 91.6318 Sample # 2 Matrix: WATER

Client Sample ID : MONITOR WELL #1
PWSID : UA
Collected : NOV 22 91 @ 16:30 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered by : BOB GILFILIAN

Analysis Completed : NOV 27 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	mg/L	EPA602	
TOLUENE	0.0021	mg/L	EPA602	
ETHYLBENZENE	ND(0.0010)	mg/L	EPA602	
CHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
p & m XYLENE	0.0010	mg/L	EPA602	
o-XYLENE	ND(0.0010)	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	

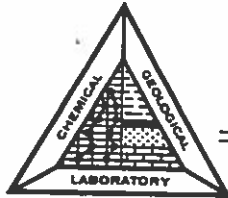
Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS. TAG MARKED SAMPLE COLLECTED BY K. SHEETS, WITNESSED BY STEVE.

10 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above UA-Unavailable
** See Sample Remarks Above
LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref.# 91.6318 Sample # 3 Matrix: WATER

Client Sample ID : MONITOR WELL #2
PWSID : UA
Collected : NOV 22 91 @ 15:35 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : DEC 2 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	27.7	mg/L	EPA602	
TOLUENE	40.0	mg/L	EPA602	
ETHYLBENZENE	3.36	mg/L	EPA602	
CHLOROBENZENE	ND(1.00)	mg/L	EPA602	
p & m XYLENE	8.27	mg/L	EPA602	
o-XYLENE	3.72	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(1.00)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(1.00)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(1.00)	mg/L	EPA602	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS. TAG MARKED SAMPLE COLLECTED BY K.S.

10 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref. # 91.6318 Sample # 4 Matrix: WATER

Client Sample ID : MONITOR WELL #3
PWSID : UA
Collected : NOV 22 91 @ 15:50 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

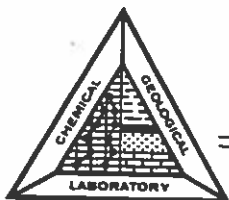
Analysis Completed : NOV 27 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	ng/L	EPA602	
TOLUENE	0.0042	ng/L	EPA602	
ETHYLBENZENE	0.0013	ng/L	EPA602	
CHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
p & m XYLENE	0.0042	ng/L	EPA602	
o-XYLENE	0.0021	ng/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS. TAG MARKED SAMPLE COLLECTED BY K.S.

10 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LI-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref.# 91.6318 Sample # 5 Matrix: WATER

Client Sample ID : MONITOR WELL #4
PWSID : UA
Collected : NOV 22 91 @ 16:15 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : NOV 27 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

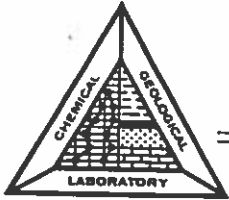
Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	mg/L	EPA602	
TOLUENE	0.0029	mg/L	EPA602	
ETHYLBENZENE	0.0012	mg/L	EPA602	
CHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
p & m XYLENE	0.0035	mg/L	EPA602	
o-XYLENE	0.0016	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS. TAG MARKED SAMPLE COLLECTED BY K.S.

10 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref.# 91.6318 Sample # 7 Matrix: WATER

Client Sample ID : TRIP BLANK
PWSID : UA
Collected : NOV 19 91 @ 08:00 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : NOV 27 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

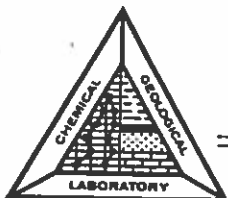
Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	ng/L	EPA602	
TOLUENE	ND(0.0010)	ng/L	EPA602	
ETHYLBENZENE	ND(0.0010)	ng/L	EPA602	
CHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
p & m XYLENE	ND(0.0010)	ng/L	EPA602	
o-XYLENE	ND(0.0010)	ng/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	

Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS. TAG MARKED AS BOILED DISTILLED WATER, ALSO ON TOP MARKED
NOV. 6, 91, C. FULTZ.

10 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 40570
Chemlab Ref.# 91.6318 Sample # 6 Matrix: WATER

Client Sample ID : EQUIPMENT RINSE
PWSID : UA
Collected : NOV 21 91 @ 15:35 hrs.
Received : NOV 25 91 @ 15:00 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : NOV 27 91
Laboratory Supervisor : STEPHEN C. EDE
Released By :

Send Reports to:
1) GILFILIAN ENGR
2)

Parameter	Results	Units	Method	Allowable Limits
EPA 602 ANALYSIS	n/a	n/a	EPA 602	n/a
BENZENE	0.0012	mg/L	EPA602	
TOLUENE	0.0039	mg/L	EPA602	
ETHYLBENZENE	ND(0.0010)	mg/L	EPA602	
CHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
p & m XYLENE	0.0015	mg/L	EPA602	
o-XYLENE	ND(0.0010)	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	

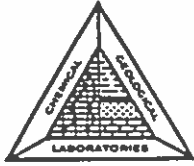
Sample SAMPLE COLLECTED BY: STEVE REBILLARD. GEI PROJECT #191048 ERA -
Remarks: FAIRBANKS.

10 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

TELEPHONE (907) 562-2343

ANCHORAGE INDUSTRIAL CENTER
5633 B Street
Anchorage, Alaska 99518



GILFILIAN ENGINEERING, INC.

CHAIN OF CUSTODY RECORD

SURVEY				SAMPLERS: (Signature)			
ERA - Fairbanks 191048				Saw Rebillard			
STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
① 3	TB-2 9.5-11.0'	✓ 11-21-91	1020	Soil		1	EPH-YPH-BTEX
②	Monitor well # 1	✓ 11-22-91	1630	water		2	602
③	Monitor well # 2	✓ 11-22-91	1535	water		2	602
④	Monitor well # 3	✓ 11-22-91	1550	water		2	602
⑤	Monitor well # 4	✓ 11-22-91	1615	water		2	602
⑥	Equipment Rise	✓ 11-21-91	1535	water		2	602
⑦	Trip Blank	✓ 11-19-91	800	water		2	602
* DATA Deliverable PKG *							91.6318

CONDITION OF SAMPLES UPON RECEIPT AT FIELD:

CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS: ex: (sampling witness)

CONDITION OF SAMPLES UPON RECEIPT AT LAB:

CUSTODY SEALS SIGNED AND INTACT: YES NO
COMMENTS:

METHOD OF SHIPMENT FROM LAB TO FIELD:

METHOD OF SHIPMENT FROM FIELD TO LAB:
iced cooler

Relinquished by: (Signature)

Saw Rebillard 11-25-91

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis (Signature)

Date/Time

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

Cassandra Switzer 11/25/91 1500

RECEIVED
5/6/92



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS RESULTS for INVOICE # 53263
Chemlab Ref. # 92.1791 Sample # 1 Matrix: WATER

Client Sample ID : MONITOR WELL #E-1
PWSID : UA
Collected : APR 24 92 @ 09:00 hrs.
Received : APR 28 92 @ 14:24 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

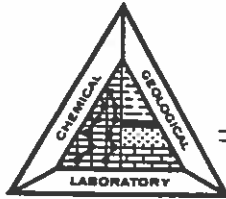
Analysis Completed : MAY 4 92
Laboratory Supervisor : STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1) GILFILIAN ENGR
2) GILFILIAN ENGINEERING

Parameter	Results	Units	Method	Allowable Limits
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	mg/L	EPA602	
TOLUENE	ND(0.0010)	mg/L	EPA602	
ETHYLBENZENE	ND(0.0010)	mg/L	EPA602	
CHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
p & m XYLENE	0.0019	mg/L	EPA602	
o-XYLENE	0.0051	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	

Sample SAMPLE COLLECTED BY: S. REBILLARD. GEI PROJECT #191048.
Remarks: ERA - FAIRBANKS. SAMPLE CONTAINS 0.0038 MG/L OF TETRACHLOROETHYLENE.

10 Tests Performed * See Special Instructions Above UA-Unavailable
ND- None Detected ** See Sample Remarks Above
NA- Not Analyzed LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 53263
Chemlab Ref.# 92.1791 Sample # 2 Matrix: WATER

Client Sample ID : MONITOR WELL #E-3
PWSID : UA
Collected : APR 24 92 @ 09:15 hrs.
Received : APR 28 92 @ 14:24 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

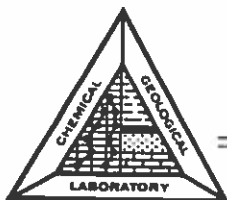
Analysis Completed : MAY 4 92
Laboratory Supervisor : STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1) GILFILIAN ENGR
2) GILFILIAN ENGINEERING

Parameter	Results	Units	Method	Allowable Limits
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	ng/L	EPA602	
TOLUENE	ND(0.0010)	ng/L	EPA602	
ETHYLBENZENE	ND(0.0010)	ng/L	EPA602	
CHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
p & m XYLENE	ND(0.0010)	ng/L	EPA602	
o-XYLENE	ND(0.0010)	ng/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	

Sample SAMPLE COLLECTED BY: S. REBILLARD. GEI PROJECT #191048
Remarks: ERA - FAIRBANKS.

10 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than



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ANALYSIS RESULTS for INVOICE # 53263
Chemlab Ref.# 92.1791 Sample # 3 Matrix: WATER

Client Sample ID : MONITOR WELL #E-4
PWSID : UA
Collected : APR 24 92 @ 09:25 hrs.
Received : APR 28 92 @ 14:24 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : MAY 4 92
Laboratory Supervisor : STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1) GILFILIAN ENGR
2) GILFILIAN ENGINEERING

Parameter	Results	Units	Method	Allowable Limits
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	ng/L	EPA602	
TOLUENE	ND(0.0010)	ng/L	EPA602	
ETHYLBENZENE	ND(0.0010)	ng/L	EPA602	
CHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
p & m XYLENE	ND(0.0010)	ng/L	EPA602	
o-XYLENE	ND(0.0010)	ng/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	ng/L	EPA602	

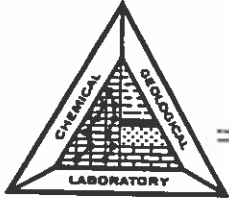
Sample SAMPLE COLLECTED BY: S. REBILLARD. GEI PROJECT #191048
Remarks: ERA - FAIRBANKS.

10 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above UA-Unavailable
** See Sample Remarks Above
LT-Less Than, GT-Greater Than



Member of the SGS Group (Société Générale de Surveillance)



CHEMICAL & GEOLOGICAL LABORATORY

A DIVISION OF COMMERCIAL TESTING & ENGINEERING CO.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343 FAX: (907) 561-5301

ANALYSIS RESULTS for INVOICE # 53263

Chemlab Ref.# 92.1791 Sample # 4 Matrix: WATER

Client Sample ID : TRIP BLANK MAPCO STORE #5017
PWSID : UA
Collected : APR 24 92 @ 09:30 hrs.
Received : APR 28 92 @ 14:24 hrs.
Preserved with : AS REQUIRED

Client Name : GILFILIAN ENGR
Client Acct : GILFILP
BPO# : PO# : 191048
Req# :
Ordered By : BOB GILFILIAN

Analysis Completed : MAY 4 92
Laboratory Supervisor : STEPHEN C. EDE
Released By : *Stephen C. Ede*

Send Reports to:
1) GILFILIAN ENGR
2) GILFILIAN ENGINEERING

Parameter	Results	Units	Method	Allowable Limits
AROMATIC VOLATILE ORGANICS	n/a	n/a	EPA 602	n/a
BENZENE	ND(0.0010)	mg/L	EPA602	
TOLUENE	ND(0.0010)	mg/L	EPA602	
ETHYLBENZENE	ND(0.0010)	mg/L	EPA602	
CHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
p & m XYLENE	ND(0.0010)	mg/L	EPA602	
o-XYLENE	ND(0.0010)	mg/L	EPA602	
1,4 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,3 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	
1,2 DICHLOROBENZENE	ND(0.0010)	mg/L	EPA602	

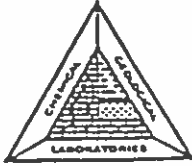
Sample : SAMPLE COLLECTED BY: S. REBILLARD. GEI PROJECT #191048
Remarks: ERA - FAIRBANKS. COLLEGE & AURORA, FAIRBANKS.

10 Tests Performed * See Special Instructions Above UA-Unavailable
 ND- None Detected ** See Sample Remarks Above
 NA- Not Analyzed LT-Less Than, GT-Greater Than

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

TELEPHONE (907) 562-2343

ANCHORAGE INDUSTRIAL CENTER
5633 B Street
Anchorage, Alaska 99518



92.1791

GILFILIAN ENGINEERING, INC.



CHAIN OF CUSTODY RECORD

SURVEY <u>GEI Projed NO. 191048</u> <u>ERA - Fairbanks</u>	SAMPLERS: (Signature) <u>S. Rebilard</u>
---	---

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
① 1	Monitor Well # E-1	4-24-92	0900	water		2	BTEX-602
2	Monitor well # E-2	4-24-92	0905	water		2	BTEX-602
③ 3	Monitor well # E-3	4-24-92	0915	water		2	BTEX-602
④ 4	Monitor well # E-4	4-24-92	0925	water		2	BTEX-602
	* Trip Blank in Conjunction with Mapco Store 5017	4-24-92	0930	water		2	BTEX-602
- Do not run Monitor Well # E-2 as per the conversation with Steve Rebillard 4/28/92 @ 0900							
* (1) 40 ml vial from set of two (other went to another sample site) per Stephen Ed.							

CONDITION OF SAMPLES UPON RECEIPT AT FIELD: CUSTODY SEALS SIGNED AND INTACT: YES <input type="checkbox"/> NO <input type="checkbox"/> COMMENTS: ex: (sampling witness)	CONDITION OF SAMPLES UPON RECEIPT AT LAB: CUSTODY SEALS SIGNED AND INTACT: YES <input type="checkbox"/> NO <input type="checkbox"/> COMMENTS:
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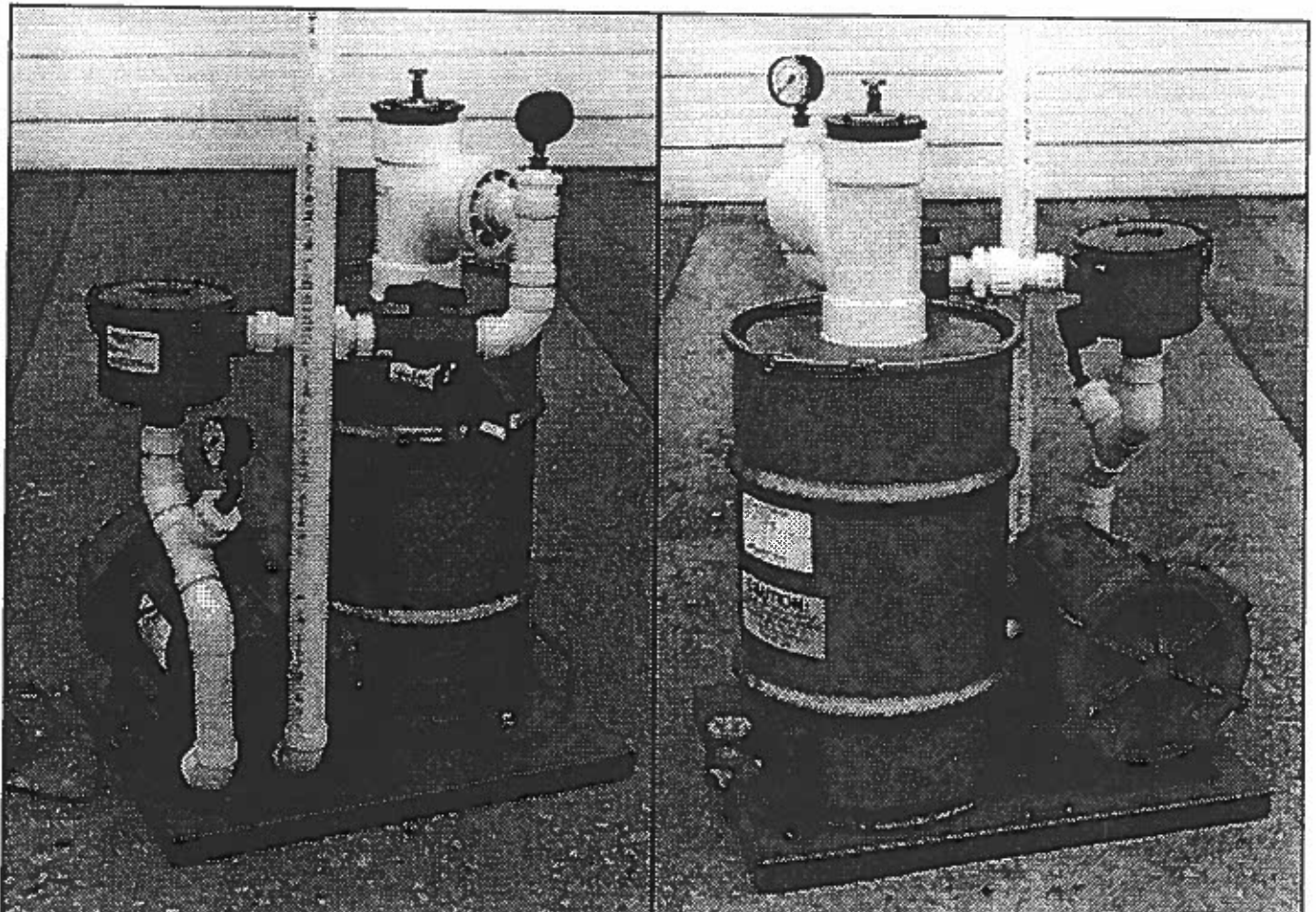
METHOD OF SHIPMENT FROM LAB TO FIELD:	METHOD OF SHIPMENT FROM FIELD TO LAB: <u>Cooler</u>
---------------------------------------	--

Relinquished by: (Signature) <u>S. Rebilard</u>	Received by: (Signature) <u>Bob Brown</u>	Date/Time <u>4-27</u>
Relinquished by: (Signature) <u>Bob Brown</u>	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time	Received for Laboratory by: <u>Nancy Jones</u>
		Date/Time <u>4/28/92 1550</u>

- DESCRIPTION:** Skid mounted system for soil vapor extraction. Standard system consists of: ROTRON 1HP blower, moisture separator, in-line filter, throttling valve, and (2) vacuum gauges. Mounted on formed, welded, carbon steel skid for easy handling by one person.
- BLOWERS:**
- Type:* Blowers are rugged, industrial-duty, regenerative type, free of contacting moving parts other than motor ball bearings.
- Duty:* Designed for continuous industrial service. Blowers are explosion-proof and have a minimum service factor of 100% when handling corrosive or non-corrosive gases.
- Construction:* Impellor, housing, cover and acoustical integral manifold cavity are of rugged, aluminum alloy.
- Motors:* Integrally mounted, direct-drive motors, 120V, 60Hz, Single Phase, TEFC, explosion-proof.
- MOISTURE SEPARATOR:** Carbon steel cannister-type, with anti-overflow valve and pressure relief valve.
- IN-LINE FILTER:** Filter/silencer reduces noise level while ensuring clean air is provided to the blower. Replaceable filter element.
- VACUUM GAUGE:** Phosphor bronze diaphragms on independent brass mountings.
- DIMENSIONS:** Length- 27" Width- 21" Height- 38". **WEIGHT:** 75 lbs maximum.
- Note: It is imperative that blower be wired in strict compliance with local and national electrical codes.*

Design subject to change without notice.

Bulletin No. VES7191



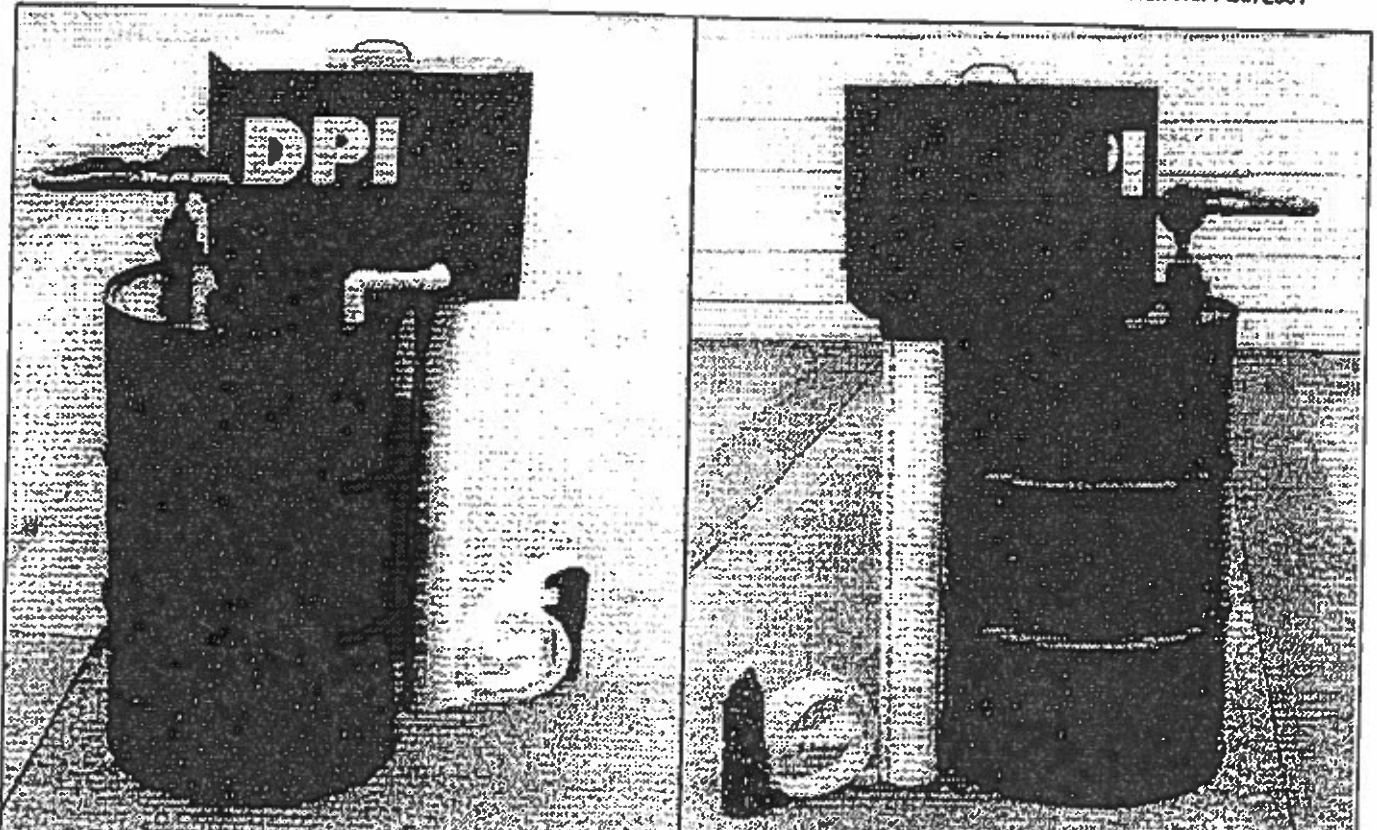
MODEL PB-8

PETRO-BELT

Enclosed Hydrocarbon Skimmer

- OPERATING PRINCIPLE:** Utilizes the natural tendency of polyplastics to selectively attract and retain hydrocarbons but repel water. Removes gasoline, diesel, fuel oil and other hydrocarbons from groundwater with minimal water removal.
- APPLICATIONS:** Vapor-tight cabinet virtually eliminates hydrocarbon vapors from escaping to atmosphere while free-product is being skimmed. This allows the PB-8 to be used in combination with optional vapor extractor system and control panel for unattended site remediation. Removes floating product down to a surface sheen. Recovers floating hydrocarbons directly from 2", 4" and larger monitor wells found at service stations and other underground fuel storage locations. Effective in almost any application where the liquid surface can be accessed.
- REMOVAL RATE:** Removes up to 2 gallons per hour of diesel fuel. Lighter hydrocarbons have slightly lower recovery rates, while heavier hydrocarbons have higher recovery rates.
- BELT:** Hybrid Poly-Urethane belt with a smooth, thermal welded seam to allow scraping of both sides of belt. Belts of 10', 15', 20', 25', 30', 35' submergence depth in stock, custom lengths available. Estimated service life of 2 years.
- SKIMMING DEPTHS:** Skimming depths down to 60 feet field-tested. For greater depths, consult factory.
- PORTABILITY:** Large, comfortable handle and removable belt with lower-pulley allows one-person assembly and installation. Sets directly on standard 55-gallon barrel.
- OPTIONS:** XP Automatic Float-Switch, PETRO-CART, Control Panel/Timer.
- DIMENSIONS:** Length- 19" Width- 14" Height- 15" **WEIGHT:** 85 lbs. maximum.

MOTOR: Explosion-proof, 1/3 horsepower, 1725 rpm, 115 volts, 60 Hz, capacitor-start, NEMA 56C, End-mount, Full-load 6.8 Amps, Insulation Class A, Auto thermal protection, continuous duty, UL listed for use in Class I, Group D and Class II, Groups E, F, and G hazardous locations. **GEAR REDUCER:** C-Face right angle speed reducer, nominal output 43 rpm at Input 1725rpm, continuous duty 324 in-lbs output torque, overhung load- 983 lbs. Design subject to change without notice. Bulletin No. PB872591



TECHNICAL DATA SHEET

DPI
 ENVIRONMENTAL
 PROCESS
 INDUSTRIES


DYNAMIC PROCESS INDUSTRIES

 1900 West Northwest Highway
 Dallas, Texas 75220
 (214) 556-0010

**PETRO-BELT
 PARTIAL CUSTOMER LIST**

 ECT Tech Inc.
 5200 Newberry Rd.
 Suite E-1
 Gainesville, FL 32607
 Gene Honeycutt
 904/336-0444

 W.J. Scott Co.
 PO Box 277
 RR 2
 Springfield, IL 62707
 Walter Scott
 217/787-6081

 NJ Transit Authority
 1148 Newark Turnpike
 Kearny, NJ 07032
 Frank Lami
 201/955-5858

 Delta Environmental
 11225 N. 28TH Drive
 Suite D115
 Phoenix, AZ 85029
 Roger Ukeneskey
 602/866-3469

 Converse Environmental East
 103 E. Beaver Ave.
 State College, PA 16801
 Bill Brusse
 814/234-3223

 United Refining
 PO Box 599
 Warren, PA 16365
 Bill Schneider
 814/723-2736

 Hydro-Systems
 2340 Commonwealth Drive
 Suite 202
 Charlottesville, VA 22901
 Jeff Sittler
 804/973-9740

 EA Engineering
 1420 Vailwood Pkwy., Ste 170
 Carrollton, TX 75006
 Chuck Place
 214/484-1420

 Wehran EnviroTech
 6 Riverside Dr. Ste. 101
 Andover MA 01810
 Jeff Hamel
 508/682-1980

 Heindel & Noyes Inc.
 285 N. St.
 Burlington, VT 05401
 Bob Rooks
 802/658-0820

 ATEC Assoc., Inc.
 11316 Mathis
 Dallas, TX 75229
 Steve George
 214/556-2204

 Eder & Associates Inc.
 8000 Excelsior Dr.
 Suite 302
 Madison, WI 53717-1914
 Jay Piper
 608/836-1500

 CTL Thompson
 1971 W 12th Ave
 Denver, CO 80204
 Mike Snyder
 303/825-0777

 Dames & Moore
 20 W Market, Suite 301
 York, PA 17401
 Ted Taormina
 717/843-4474

 Recycling Alternatives
 737 E. Main St.
 Salisbury, MD 21801
 Richard Klempe
 410/860-0268

 Canonic Environmental
 16920 Park Row
 Houston, TX 77084
 Dennis Schilly
 713/579-8686

 Geraghty & Miller
 322 E Michigan
 Milwaukee, WI 53202
 Dan Peplinski
 414/276-7742



POST-CLOSURE INFORMATION FOR ALASKA UNDERGROUND STORAGE TANKS

Post Closure information and site assessment report is required 30 days closure activities.



Facility - Location
(Do not use P.O. Box)

Tank Owner

Name ERA Aviation, Inc.
Address Fairbanks International Airport
Fairbanks, Alaska 99703
Phone (907) 474-0838

Name ERA Aviation, Inc.
Address 6160 South Airpark Dr.
Anchorage, Alaska 99502
Phone 243-6633

Facility ID # 223

SITE ASSESSMENT MUST BE COMPLETED FOR ANY TANK CLOSURE

Site Assessment Performed By: Gilfilian Engineering, Inc.

Date Site Assessment Performed: September 1991

SITE ASSESSMENT REPORT MUST BE SUBMITTED TO DEPARTMENT OF ENVIRONMENTAL CONSERVATION DISTRICT OFFICE

Was the closed tank replaced by new UST? Yes _____ No X
If yes, please submit a new registration form containing information on the new tanks.

Tanks Removed Or Closed In-ground

<u>Tank Number</u>	<u>Tank Size</u>	<u>Removed or Closed In-ground</u>	<u>Last Product Stored</u>	<u>Leaking?</u>
<u>1</u>	<u>500</u>	<u>Removed</u>	<u>Gasoline</u>	<u>Yes</u>
<u>2</u>	<u>500</u>	<u>Removed</u>	<u>Gasoline</u>	<u>Yes</u>
<u>3</u>	<u>500</u>	<u>Removed</u>	<u>Gasoline</u>	<u>Yes</u>

All releases should be reported to a DEC District Office within 24 hours. For further information refer to the Alaska Underground Storage Tank Regulations (18 AAC 78) or contact the Department of Environmental Conservation.

Submitted By: Robert E. Gilfilian, P.E. Gilfilian Engineering, Inc. 277-2021
(Name)
(Firm)
(Phone)

Return Completed Form to: Alaska Department of Environmental Conservation
3601 C Street, Suite 398
Anchorage, AK 99503
FAX # (907) 273-4280



CLOSURE NOTICE FOR ALASKA UNDERGROUND STORAGE TANKS

Notice of Closure is required for any tank removed or closed in-ground.



Facility - Location

(Do not use P.O. Box)

Tank Owner

Name ERA Aviation, Inc.
Address Fairbanks International Airport
Fairbanks, Alaska 99703

Name ERA Aviation, Inc.
Address 6160 South Airpark Dr.
Anchorage, Alaska 99502

Phone (907) 474-0838

Phone 243-6633

Facility ID Number (If Known) 223
Scheduled Date for Closure May 29, 1992

This form MUST be completed and sent at least 15 and no more than 60 days prior to closure.

Alaska Statute 48.03.375 requires those who supervise an UST closure be certified after March 25, 1992.

A Site Assessment in accordance with 18 AAC 78.090 must be performed at time of closure by an impartial third party with an approved quality assurance program plan (QAPP).

Contractor to Perform Closure Soil Service, Inc. UST Worker License # AA101

Firm to Perform Site Assessment Gilfilian Engineering, Inc. QAPP on File? Yes

Method of Closure: Removal _____
In-ground _____ If In-ground, Type of Fill Material _____

Is there a leak/spill at this site? Yes (if so, please notify the closest DEC office)
Have you contacted the local fire department of your intent to close the tank(s)? Yes

Where are the tank, piping, equipment, and sludge to be disposed?
To salvage by contractor upon proper cleaning

Tanks to be Closed

Tank Number	Tank Age	Tank Size	Last Product Stored	Date Last Used
5	18 yrs.	5,000	Jet Fuel	Currently In Use

Closure Notice Submitted By:

J. Steve Rebillard Environmental Geologist 5-14-92
(Signature) (Title) (Date)

I. Steve Rebillard 376-3005
(Please print name) (Phone)

Return Completed Form to: Alaska Department of Environmental Conservation
3601 C Street, Suite 398
Anchorage, AK 99503
FAX # (907) 273-4280