

GILFILIAN ENGINEERING & ENVIRONMENTAL TESTING, INC.

Professional Environmental Consultants

2605 Denali Street, Suite 203 □ Anchorage, Alaska 99503-2749 Tel: (907) 277-2021 □ Fax: (907) 274-8683

January 16, 1996

Mike Kreiber, P.E. Alaska Department of Environmental Conservation Mat-Su District Office PO Box 871064 Wasilla, AK 99687



JAN 1 7 1996

RE:

Ground water Monitoring Report ADEC UST Facility ID. #2540 **Knik Texaco**, Wasilla, Ak GE²T Project No. 93147 DEPARTMENT OF ENVIRONMENTAL CONSERVATION MSDO

Dear Mr. Kreiber:

This letter is to present you with the laboratory test results from the most recent ground water monitoring event at the above referenced site. On December 8, 1995, Mr. Tom Johnston, an Environmental Specialist with our firm, purged MW1, MW2, and MW3 of 8 gallons of water (approximately 3 bore volumes). After sufficient time elapsed to allow for the wells to recharge, ground water samples were collected. The water samples were submitted to CT&E for analysis of BTEX according to EPA Test Method 602. The test results are included with this letter (referenced as CT&E Reference No. 95.5386), and are summarized in Table 1.

Table 1: Water Test Results

Sample No.	Date Collected	Static Water*	Benzene	Total BTEX
		Elevation (ft.)	(ppb)	(ppb)
MW1	12/8/95	89.14	1190	1342.5
MW2	12/8/95	88.96	86	592
MW3	12/8/95	88.84	6500	24366
MW4 **	12/8/95	-	6410	24800

ppb = parts per billion

Our firm is in the process of researching a ground water treatment method for Knik Texaco. The method utilizes ORC, Oxygen Release Compound, to release oxygen slowly into the water to enhance bioremediation. This method is being used at numerous sites around the country, and is very cost effective. We would like to discuss this treatment method with you and if it meets with your preliminary approval, we will prepare a work plan for submittal to your office for final approval.

^{* -} Ground Water elevations, reference to datum at top of NE bolt on Goodyear Sign

^{** -} MW4 sample is a duplicate of MW3.

We look forward to your response to this letter. If you have any questions, please contact us at 277-2021.

Sincerely,

Mary L. Shreves, PEI Engineering Associate

Mary J. Shu

c: Herb Rosencrans, Knik Texaco



CT&E Environmental Services Inc.

Laboratory Division

Matrix

WATER

Laboratory Analysis Report

Client Sample ID S1 MW-1

Client Name

Ordered By

Project Name

KNIK TEXACO

Project#

PWSID

TESORO AK PETROLEUM

UA

WORK Order

Printed Date

12/13/95 @ 15:09 hrs.

Collected Date

12/08/95 @ 14:00 hrs.

Received Date

12/08/95 @ 16:20 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: TOM JOHNSTON.

Parameter	QC Results Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Aromatics-BTEX			EPA 602 18AAC78	n/a			
Benzene	1.19 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
Toluene	0.019	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM
Ethylbenzene	0.063	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM
p&m Xylene	0.068	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM
o-Xylene	0.0025	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM

See Special Instructions Above

** See Sample Remarks Above

U = Undetected, Reported value is the practical quantification limit.

D = Secondary dilution.

UA = Unavailable

NA = Not Analyzed

LT = Less Than

GT = Greater Than



95.5386-2

Matrix

WATER

Client Sample ID S2 MW-2

Client Name

TESORO AK PETROLEUM

Ordered By

Project Name KNIK TEXACO

Project#

PWSID

UA

WORK Order

20080

Printed Date

12/13/95 @ 15:09 hrs.

Collected Date 12/08/95 @ 14:15 hrs.

Received Date

12/08/95 @ 16:20 hrs.

Technical Director STEPHEN C. EDE

Released By 5 hour Poston

Sample Remarks: SAMPLE COLLECTED BY: TOM JOHNSTON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Aromatics-BTEX				EPA 602 18AAC78	n/a			
Benzene	0.08	6	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM
Toluene	0.01	7	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM
Ethylbenzene	0.268	8 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
p&m Xylene	0.190	0 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
o-Xylene	0.03	1	mg/L	EPA 602 18AAC78		12/11/95	12/11/95	SPM

^{*} See Special Instructions Above

^{**} See Sample Remarks Above

U = Undetected, Reported value is the practical quantification limit.

D = Secondary dilution.

UA = Unavailable

NA = Not Analyzed

LT = Less Than

GT = Greater Than



95.5386-3

Matrix

WATER

Client Sample ID S3 MW-3

KNIK TEXACO

Client Name Ordered By

TESORO AK PETROLEUM

Project Name Project#

PWSID

UA

WORK Order

20080

Printed Date Collected Date 12/13/95 @ 15:09 hrs.

12/08/95 @ 14:30 hrs.

Received Date

12/08/95 @ 16:20 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: TOM JOHNSTON.

Parameter		QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Aromatics-BTEX				EPA 602 18AAC78	n/a			
Benzene	6.50	D	mg/L	EPA 602 18AAC78	880 4 , 880	12/12/95	12/12/95	SPM
Toluene	7.19	D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
Ethylbenzene	0.986	D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
p&m Xylene	5.27	D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
o-Xylene	4.42	D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM

^{**} See Sample Remarks Above

U = Undetected, Reported value is the practical quantification limit.

D = Secondary dilution.

UA = Unavailable

NA = Not Analyzed

LT = Less Than

GT = Greater Than



95.5386-4

Matrix

WATER

Client Sample ID S4 MW-4

Client Name

TESORO AK PETROLEUM

Ordered By

Project Name

KNIK TEXACO

Project#

PWSID

UA

WORK Order

20080

Printed Date

12/13/95 @ 15:09 hrs.

12/08/95 @ 14:40 hrs.

Collected Date Received Date

12/08/95 @ 16:20 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: TOM JOHNSTON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Aromatics-BTEX				EPA 602 18AAC78	n/a			
Benzene	6.4	1 D	mg/L	EPA 602 18AAC78	/	12/12/95	12/12/95	SPM
Toluene	7.3	0 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
Ethylbenzene	1.0	6 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
p&m Xylene	5.4	5 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM
o-Xylene	4.5	8 D	mg/L	EPA 602 18AAC78		12/12/95	12/12/95	SPM

^{*} See Special Instructions Above

^{**} See Sample Remarks Above

U = Undetected, Reported value is the practical quantification limit.

D = Secondary dilution.



95.5386-5

Matrix

OTHER

Client Sample ID LEVEL 1 QA/QC DATA PACKAGE-ORGANICS

Client Name

TESORO AK PETROLEUM

Ordered By

Project Name

KNIK TEXACO

Project#

PWSID

UA

WORK Order

20080

Printed Date

12/13/95 @ 15:09 hrs.

Collected Date

12/08/95 @

Received Date

12/08/95 @ 16:20 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: TECHNICAL/COMPLETENESS REQUIREMENTS MET EXCEPT FOR CONDITIONS LISTED.

QC Allowable Ext. Anal Results Qual Units Method Limits Date Date

QA/QC Summary I Organics

....I. Receipt Sample received in good condition unless noted

.....II. Holding Time All holding times met unless noted

Regulatory

.....III. Analysis

A. Calibration

...All criteria met

B. Blanks

... All criteria met

C. Spike Sample(s)

...All criteria met

D. Duplicate Sample(s)

... All criteria met

E. LabControl Sample(s)

... All criteria met

F. Surrogate(s)

... All criteria met

Certified by:

K. MAHER

^{*} See Special Instructions Above

^{**} See Sample Remarks Above

U = Undetected, Reported value is the practical quantification limit.

D = Secondary dilution.