Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: 510-450-6000

August 17, 1993

Jennifer Eberle
Alameda County Department
of Environmental Health
80 Swan Way
Oakland, CA 94621

Re: Tank Excavation Sampling
Shell Service Station
510 East 14th Street
Oakland, California
WIC #204-5508-6007
WA Job #81-421-09

Dear Ms Eberle:

On behalf of Shell Oil Company, Weiss Associates (WA) is presenting the results of the March 30, 1993 tank removal and sampling activities at the Shell service station referenced above (Figure 1). The objectives of the work were to document the removal and condition of one 550-gallon underground waste oil storage tank (UST), and to assess whether hydrocarbons were in soil beneath the tank. The soil sampling and tank documentation were conducted in accordance with the California Administrative Code, Title 23, Chapter 3, Subchapter 16, UST and piping closure regulations, and Alameda County closure regulations. Our scope of work and the tank removal sampling results are presented below.

SCOPE OF WORK

WA's scope of work for this investigation was to:

- Observe the removal of the tank;
- Inspect and document the condition of the tank;
- Collect soil samples from the tank excavation;

- Analyze the soil samples for total petroleum hydrocarbons as gasoline (TPH-G), and as diesel (TPH-D), petroleum oil and grease (POG), and benzene, ethylbenzene, toluene and total xylenes (BETX);

- Backfill the excavation with clean fill, and

- Report the results.

BACKGROUND

Site Setting

Location: The site is located at the corner of East 14th street and 5th Avenue in Oakland, California (Figure 1).

Surroundings: Mixed commercial and residential.

Excavation and Sampling Results

Parties Present: WA geologist Jonathan Weingast and Alameda County Department of Environmental Health (ACDEH) inspector Jennifer Eberle were present during the tank removal.

Excavation Dates: On March 30, 1993, one 550-gallon waste oil tank was removed with a backhoe.

Tank Condition: No holes or leaks were observed in the waste oil tank.

Maximum Excavation Depth: 6.5 ft

Excavation Observations:

No hydrocarbon stained soil was observed in the tank excavation walls or floor.

Sediments Encountered:

Clayey to sandy silts.

Ground Water Depth:

Ground water was not encountered in the excavation.

Soil Sampling Method:

Samples were collected by driving 2-in diameter stainless steel tubes into soil collected from a backhoe bucket. The tubes were immediately sealed with Teflon sheeting, plastic caps and Teflon tape, and refrigerated for transport to Anametrix, Inc., in San Jose, a state-certified laboratory.

Number of Samples:

Two soil samples, T-1 and T-2, were collected from the floor of the excavation and analyzed (Figure 2).

Analytic Method for Soil:

The soil samples from the excavation floor were analyzed for TPH-G and TPH-D by Modified EPA Method 8015, BETX by EPA Method 8020 and POG by EPA Method 5520 E&F.

Soil Analytical Results:

No TPH-G, TPH-D, POG or BETX were detected in either soil sample.

Waste Disposal:

The excavated tank was transported by Erickson Engineering Inc. to their facility in Richmond, California. A copy of the tank transportation manifest is included in attachment B. Since no hydrocarbons were detected in a composite soil sample collected from the excavation stockpile, the soil was used to backfill the excavation after approval from the ACDEH[1].

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[1] Telephone conversation between Jennifer Eberle of the Alameda County Department of Environmental Health and Eric Anderson of Weiss Associates on March 31, 1993.

CONCLUSIONS

Since no holes were observed in the removed waste oil tank and since no hydrocarbons were observed in soil or detected in the soil samples, no hydrocarbons appear to have been released from the waste oil tank. Therefore, on behalf of Shell Oil Company, WA would like to request case closure for the waste oil tank. We believe waste oil tank closure is applicable since there is no evidence that hydrocarbons were ever released from the waste oil tank.

We appreciate the opportunity to provide hydrogeologic consulting services on behalf of Shell Oil Company. Please call if you have any questions or comments.

Sincerely,
Weiss Associates

Eric W. Anderson
Senior Staff Geologist

N. Scott MacLeod, R.G.
Project Geologist

JCW/EWA:jcw

J:\HC-ENG\SHELL\OAK-421\421R1JN3.WP

Attachments: Figures
Table
A - Analytic Results
B - Tank Manifest

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California, 94520-9998
Lester Feldman, California Regional Water Quality Control Board - San Francisco Bay Region, 1800 Harrison Street, Oakland, California, 94612

FIGURES

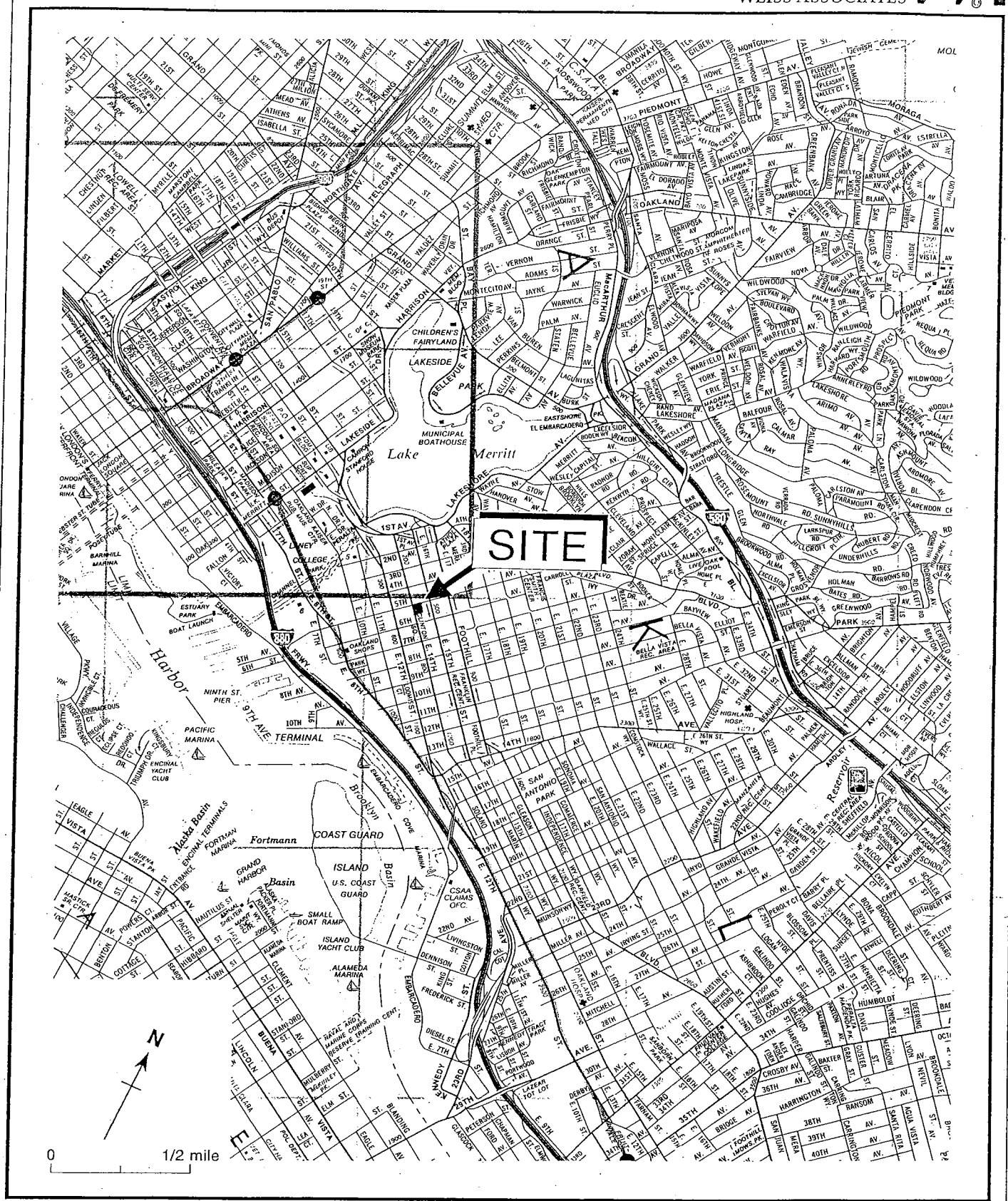

Figure 1. Site Location Map - Shell Service Station WIC# 204-5508-6007, 510 East 14th Street, Oakland, California

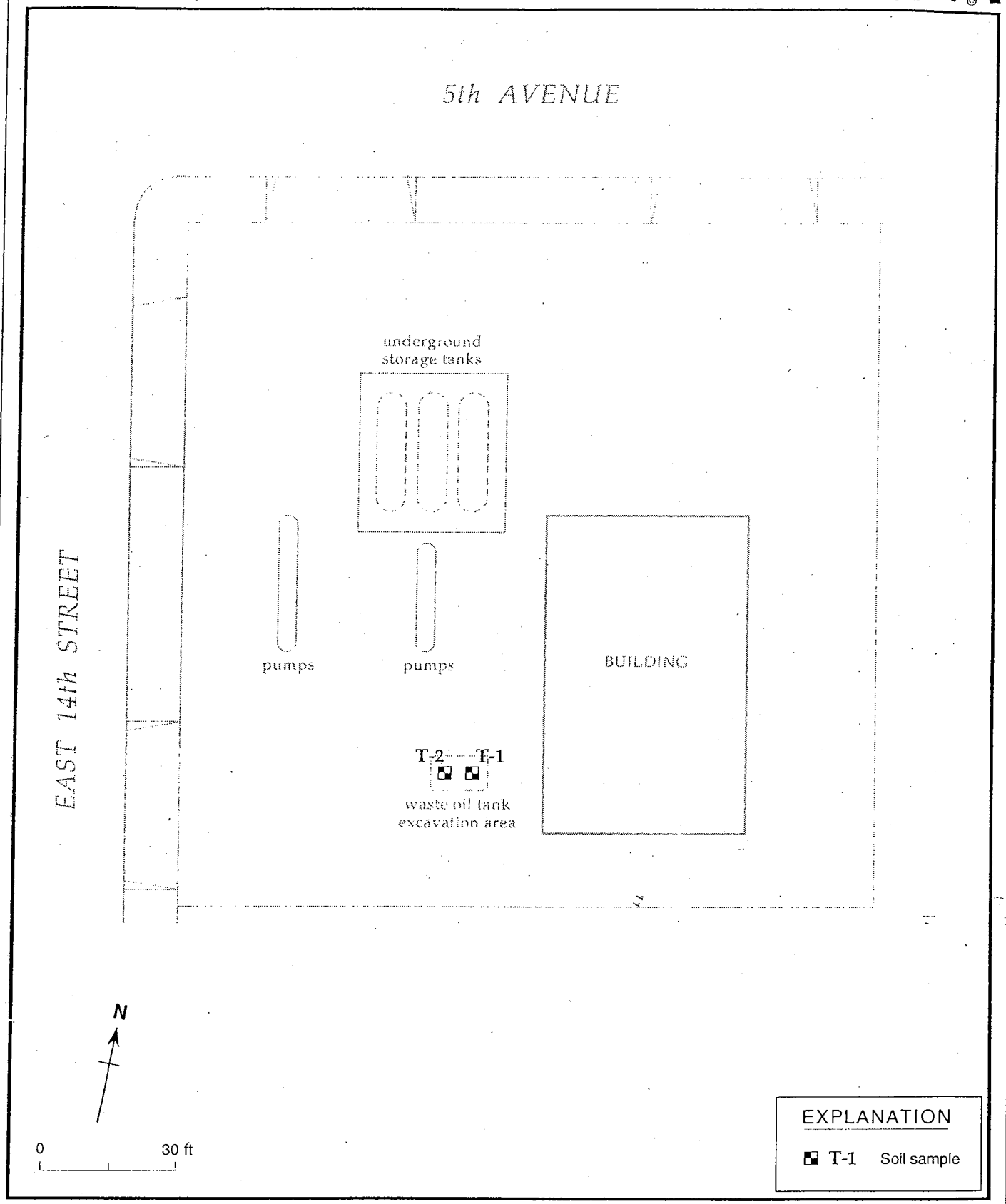

Figure 2. Soil Sample Locations - Shell Service Station WIC# 204-5508-6007, 510 East 14th Street, Oakland, California

TABLES

Table 1. Analytic Results for Soil - Shell Service Station WIC #204-5508-6007, 510 East 14th Street, Oakland, California

Sample ID	Date	Approximate Depth (ft)	TPH-G	TPH-D	B	E	T	X	Oil & Grease
			<---------- parts per million (mg/kg) ---------->						
Waste Oil Tank									
T-1	03/30/93	7.5	<0.5	<10	<0.005	<0.005	<0.005	<0.005	<30
T-2	03/30/93	7.5	<0.5	<10	<0.005	<0.005	<0.005	<0.005	<30
Waste Oil Tank Stockpile									
C-1-4	03/30/93	---	<0.5	<10	<0.005	<0.005	<0.005	<0.005	<30

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method 820
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
Oil & Grease by EPA Method 5520E,F

Analytical Laboratory:

All samples analyzed by Anametrix, Inc., of San Jose, California

Notes:

--- = Not applicable

ATTACHMENT A

ANALYTICAL RESULTS

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

MR. ERIC ANDERSON
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9303384
Date Received : 03/31/93
Project ID : 204-5508-6007
Purchase Order: MOH-B813

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9303384- 1	C1,2,3,4
9303384- 2	T-1
9303384- 3	T-2
9303384- 4	T-3
9303384- 5	T-4
9303384- 6	T-5
9303384- 7	T-6

This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

04-13-93
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ERIC ANDERSON
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9303384
Date Received : 03/31/93
Project ID : 204-5508-6007
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9303384- 1	C1,2,3,4	SOIL	03/30/93	TPHd
9303384- 2	T-1	SOIL	03/30/93	TPHd
9303384- 3	T-2	SOIL	03/30/93	TPHd
9303384- 1	C1,2,3,4	SOIL	03/30/93	TPHg/BTEX
9303384- 2	T-1	SOIL	03/30/93	TPHg/BTEX
9303384- 3	T-2	SOIL	03/30/93	TPHg/BTEX

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Date Received : 03/31/93
Project ID : 204-5508-6007
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 4/7/93
Department Supervisor Date

Reggie Dawson 4/8/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9303384
Matrix : SOIL
Date Sampled : 03/30/93

Project Number : 204-5508-6007
Date Released : 04/05/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# C1,2,3,4 -01	Sample I.D.# T-1 -02	Sample I.D.# T-2 -03	Sample I.D.# BA0101E3 BLANK
Benzene	0.005	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND	ND
% Surrogate Recovery		75%	85%	85%	106%
Instrument I.D.		HP21	HP21	HP21	HP21
Date Analyzed		04/01/93	04/01/93	04/01/93	04/01/93
RLMF		1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Peggie Davison 6/1/93
Analyst Date

Cheryl Balmer 6/1/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9303384
Matrix : SOIL
Date Sampled : 03/30/93
Date Extracted: 04/01/93

Project Number : 204-5508-6007
Date Released : 04/05/93
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9303384-01	C1,2,3,4	04/01/93	10	ND
9303384-02	T-1	04/01/93	10	ND
9303384-03	T-2	04/01/93	10	ND
DSBL040193	METHOD BLANK	04/01/93	10	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.
ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Davison 4/8/93
Analyst Date

Cheryl Baemer 4/7/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW0401
Matrix	: WATER	Analyst	: RV
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 04/01/93	Date Released	: 04/02/93
		Instrument I.D.	: HP21

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	375	457	122%	67-127
p-BFB			91%	61-139

* Quality control established by Anametrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3550 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Extracted: 04/01/93
Date Analyzed : 04/05/93

Anametrix I.D. : LCSS0401
Analyst : BD
Supervisor : BD
Date Released : 04/07/93
Instrument I.D.: HP9

COMPOUND	SPIKE AMT (mg/Kg)	REC LCS (mg/Kg)	% REC LCS	% REC LIMITS
Diesel	125	99	79%	72-143

*Limits established by Anametrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ERIC ANDERSON
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9303384
Date Received : 03/31/93
Project ID : 204-5508-6007
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9303384- 1	C1,2,3,4	SOIL	03/30/93	5520EF
9303384- 2	T-1	SOIL	03/30/93	5520EF
9303384- 3	T-2	SOIL	03/30/93	5520EF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. ERIC ANDERSON
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9303384
Date Received : 03/31/93
Project ID : 204-5508-6007
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor 4/12/93 Date

Chemist 04/12/93 Date

ANALYSIS DATA SHEET - TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
ANAMETRIX, INC. (408) 432-8192

Project # : 204-5508-6007
Matrix : SOIL
Date sampled : 03/30/93
Date extracted: 04/06/93
Date analyzed : 04/07/93

Anametrix I.D. : 9303384
Analyst : TS
Supervisor : [signature]
Date released : 04/12/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9303384-01	C1,2,3,4	30	ND
9303384-02	T-1	30	ND
9303384-03	T-2	30	ND
BA06H1W9	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TRPH - Total Recoverable Petroleum Hydrocarbons are determined by - Standard Method 5520EF.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS MATRIX SPIKE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-5508-6007,T-1
Matrix : SOIL
Date sampled : 03/30/93
Date extracted : 04/06/93
Date analyzed : 04/07/93

Anametrix I.D. : HMM38402
Analyst : TS
Supervisor : CW
Date Released : 04/08/93

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	%REC MS	MD AMT (mg/Kg)	%REC MD	%RPD	% REC LIMITS
Motor Oil	300	7	300	98%	310	101%	3%	48-114%

* Quality control limits established by Anametrix, Inc.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: MA06H1W9
Matrix	: SOIL	Analyst	: VS
Date sampled	: N/A	Supervisor	: CJ
Date extracted	: 04/06/93	Date Released	: 04/08/93
Date analyzed	: 04/07/93		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	270	90%	68-113%

Quality control established by Anametrix, Inc.

ATTACHMENT B

TANK MANIFEST

State of California—Environmental Protection Agency
Form Approved OMB No. 2050–0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

51664

See Instructions on back of page 6.

Department of Toxic Substances Contro
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A D 9 8 1 4 0 1 [illegible] | Manifest Document No.: [illegible] 2 4 4 6
2. Page 1 of [illegible]

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: SHELL OIL COMPANY / HAZARDOUS WASTE DEPT. / P.O. BOX 4846 / ANAHEIM, CA [illegible]
4. Generator's Phone ([illegible]) [illegible]

A. State Manifest Document Number: 92047427
B. State Generator's ID: [illegible]

5. Transporter 1 Company Name: [illegible]
6. US EPA ID Number: C A D 9 8 [illegible]

C. State Transporter's ID: 310520 DC
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: ERICKSON, INC. / 255 PARR BLVD. / RICHMOND, CA. 94801
10. US EPA ID Number: C A D 0 0 [illegible]

G. State Facility's ID: CAD009466392
H. Facility's Phone: [illegible]

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. [illegible]	001	TP	00550	P	State / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: [illegible] WASTE OIL STORAGE TANK / [illegible] ATED PIPING [illegible]

K. Handling Codes for Wastes Listed Above: a. 01 b. c. d.

15. Special Handling Instructions and Additional Information
AVOID CONTACT WITH EYES/SKIN
24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300

FACILITY:
SERVICE STATION
510 E. FOURTEENTH STREET
OAKLAND, CA. 94606

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature: ON BEHALF OF SHELL OIL CO. | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DANIEL CASTELLON | Signature: Daniel Castell[illegible] | Month Day Year: 03 30 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: DAVID SATO | Signature: DAVE SATO | Month Day Year: 03 30 93

20455006007+3998 JS

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DTSC 8022A (12/91)
EPA 8700—22

Green: HAULER RETAINS