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CSS ENVIRONMENTAL SERVICES, INC.  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
(415) 457-9551  
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August 15, 2001

Mr. Farrok Hosseinyoun  
DDH Group LLC  
95 Belvedere Street, Suite 1  
San Rafael, CA 94901

AUG 23 2001

**SUBJECT: Preliminary Site Assessment for the Property Located at  
15101 Freedom Avenue, San Leandro, California  
CSS Project No. 6159**

2/10/01

Dear Mr. Hosseinyoun:

This letter report transmits the results of a Preliminary Site Assessment (PSA) completed by CSS Environmental Services, Inc. (CSS) at the subject property, herein referred to as the site, whose location is shown on Figure 1, Site Location Map. The PSA consisted of the collection and analysis of soil and groundwater samples from five subsurface borings at the locations shown on Figure 2, Site Plan. Samples were analyzed for gasoline and related petroleum hydrocarbon compounds and the results of the analyses are summarized in Table 1, Summary of Analytical Results. As detailed in this report, the results indicate that petroleum hydrocarbons have been released to soil and groundwater at the subject property.

Following the text of this letter report you will find the following attachments:

- Figures 1 and 2,
- Table 1,
- Copies of each of the Field Log of Boring forms – Attachment A
- Copies of all Analytical Laboratory Reports – Attachment B

A complete copy of this report should be forwarded to lead regulatory agency for this site:

Alameda County Health Care Services Agency  
Environmental Health Division  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Attn: Mr. Scott Seary, CHMM

## Background

This PSA was performed at the request of the Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH) to further investigate potential petroleum hydrocarbon releases discovered during the removal and upgrade of underground storage tanks (USTs) at the site. CSS performed the PSA following the Workplan originally prepared by Cambria Environmental Technology and modified by Hanover Environmental Services, Inc. At the time of the field investigation the site was being renovated for continued use as a commercial gas station. New fueling facilities including a single site building were evident at the site.

## Investigation and Interpretation Methods

CSS retained the services of the following subcontractors in the execution of the PSA. California Utility Surveys provided subsurface utility clearance services, Fisch Environmental Exploration Services provided C-57 licensed drilling services, and Entech Analytical Labs, Inc. provided California-certified analytical laboratory services.

Drilling was conducted on July 5, 2001 under boring permit number W01-523 from the Alameda County Public Works Agency, Water Resources Section. A copy of the permit is attached. Drilled borings were completed using a direct-push Geoprobe 6600 drilling unit mounted in a small panel truck. Continuous soil samples were collected for observation using a 1-3/4 inch outside diameter steel rod lined with 4-foot long Butyrate tubes. Soils in each recovered tube were logged by a California-registered Professional Engineer, inspected for visual indications of contamination, and the screened for the presence of volatile organic compounds (VOCs) using an Organic Vapor Meter. Copies of the Field Log of Boring forms are attached. For borings where groundwater was immediately available in the open boring (SB-1, SB-2, and SB-5), a new 3/4 inch diameter disposable mini-bailer was inserted directly into the open boring for the purposes of collecting water samples. In boring SB-4, where groundwater was slow to recover, a temporary 1-inch diameter screened casing was inserted into the boring to allow time for water to recharge prior to sampling. At boring SB-3 sloughing pea gravel precluded the collection of soil samples. At this boring, Hydropunch technology was deployed to allow the recovery of water samples.

A single soil sample was selected from each boring except SB-3 for analysis based on field screening methods described above. In each case, screening methods indicated that soils in the capillary fringe showed the strongest evidence of potential VOCs and each analyzed sample was collected from between 24.5 and 25.5 feet below ground surface (bgs). For each soil sample, the ends of the sample tube were covered with Teflon-lined plastic caps, labeled and stored in an insulated container with ice. The samples were labeled sequentially (SB-1, SB-2, etc.) with the final field of the sample ID indicating the depth to the top of sample: e.g. sample SB-1-25.5 was collected from a depth of 25.5 feet in soil boring SB-1. Following the fieldwork, the samples were transferred to a sample refrigerator in CSS's office until pickup the following day by the analytical laboratory

courier. Samples were submitted to the analytical laboratory under chain-of-custody protocol for pre-established analytical methods based on the suspected source area. The following analytical methods were applied to each soil and groundwater sample:

- Total Petroleum Hydrocarbons as gasoline (TPHg) by Method 8015M,
- Benzene, Toluene, Ethylbenzene, total Xylenes and Methyl Tertiary Butyl Ether (MTBE) by Method 8020, and
- Confirmation of positive MTBE detections by Method 8260B.

To interpret the analytical laboratory results, soil and groundwater concentrations were compared to the Risk-Based Screening Levels (RBSLs) recommended by the California Regional Water Quality Control Board, San Francisco Bay Region in their Interim Final – August 2000 document “Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater.” The RBSLs found to be most relevant to this investigation are those for subsurface soil (> 3M bgs) at properties with commercial/industrial land use where groundwater is a current or potential source of drinking water. The RBSLs for the compounds tested are as follows:

Compound	Soil RBSL (mg/kg)	Groundwater RBSL (ug/L)
TPH (gasolines)	100	100
Benzene	0.045	1.0
Toluene	2.6	40
Ethylbenzene	2.5	30
Total Xylenes	1.0	13
MTBE	0.028	5.0

Comparison to the RBSLs is not intended to represent a comprehensive site risk assessment, but is presented as a preliminary indication of the significance of hydrocarbon impacts at the site.

**Results of Subsurface Investigation**

Native site soils encountered in borings SB-1, SB-2, SB-4 and SB-4 are predominated by clay with varying percentages of sand. A 12-inch section of well-graded sand was observed in SB-5 between 19 and 20 feet bgs. In boring SB-3, ½-inch diameter pea gravel was encountered to an apparent depth of 24 feet bgs (reported by the driller based on Geoprobe resistance), presumably fill around an existing UST or backfill from prior UST removal activities. Due to pea gravel sloughing this boring could not be logged nor could a soil sample be collected.

Saturated soils, primarily clayey sand, were first encountered in borings primarily at depths between 29 and 31 feet bgs, the total depth explored. The shallow water-bearing zone appears to be semi-confined as groundwater in most borings recovered to depths approximately 17 to 20 feet bgs.

Among the borings where soil was screened, no hydrocarbon odors or indications of VOCs by OVM measurements were recorded shallower than 19 feet bgs, indicating that shallow hydrocarbon source soils have been previously removed. The majority of soils below this depth, but above the saturated zone, had indications of hydrocarbon impacts: gasoline odors and OVM readings. The maximum OVM readings from screened soils, up to 440 ppm<sub>v</sub> in SB-4, were observed at depths between 24 and 26 feet bgs, indicating soil impacts in the site's capillary fringe.

The analytical results of soil and groundwater samples from Entech Analytical Labs, Inc. are attached and are summarized in Table 1. Detected concentrations indicated in bold in Table 1 are in excess of their respective RBSLs. TPH-g and related hydrocarbon compounds were detected in soil and groundwater in all of the collected samples and the majority of detected compound concentrations were found to exceed their respective RBSLs. In general the highest concentrations of TPH-g and related hydrocarbon compounds were detected in soil at location SB-1 and in groundwater at location SB-2. The locations of all borings are shown on the attached Figure 2.

### *Soil Results*

All soil samples analyzed were collected from the capillary fringe at depths between 24.5 and 25.5 feet bgs. Soils shallower than 19 feet bgs had no indications of VOC impacts as screened by odor and OVM readings.

TPH-g was detected in soils at concentrations ranging from 78 mg/kg (SB-2) to 470 mg/kg (SB-1), with soil concentrations from SB-1 and SB-5 in excess of the 100 mg/kg RBSL. This RBSL is driven by protection of drinking water from soil leaching to a 0.1 mg/L EPA Suggested No-Adverse Response Limit (SNARL) for diesel.

Benzene was detected in soils at concentrations ranging from 0.37 mg/kg (SB-4/SB-5) to 2.6 mg/kg (SB-1), with all reported concentrations in excess of the 0.045 mg/kg RBSL. This RBSL is driven by protection of drinking water from soil leaching to a 1 ug/L drinking water standard.

Toluene was detected in soils at concentrations ranging from 0.37 mg/kg (SB-4) to 16 mg/kg (SB-1), with only SB-1's concentration in excess of the 2.6 mg/kg RBSL. This RBSL is driven by protection of drinking water from soil leaching to a 40 ug/L taste and odor threshold.

Ethylbenzene was detected in soils at concentrations ranging from 0.71 mg/kg (SB-4) to 12 mg/kg (SB-1), with only SB-1's concentration in excess of the 2.5 mg/kg RBSL. This RBSL is driven by protection of drinking water from soil leaching to a 30 ug/L taste and odor threshold.

Total Xylenes were detected in soils at concentrations ranging from 3.1 mg/kg (SB-4) to 73 mg/kg (SB-1), with all reported soil concentrations in excess of the 1.0 mg/kg RBSL.

This RBSL is driven by protection of surface waters from soil leaching to a 13 ug/L freshwater aquatic life protection level.

Ethylbenzene was detected in soils at concentrations ranging from 0.71 mg/kg (SB-4) to 12 mg/kg (SB-1), with only SB-1's concentration in excess of the 2.5 mg/kg RBSL. This RBSL is driven by protection of drinking water from soil leaching to a 30 ug/L taste and odor threshold.

MTBE was not detected in soils at the analytical method reporting limit of 0.005 mg/kg.

### *Groundwater Results*

TPH-g was detected in groundwater from each of the borings at concentrations ranging from 25 mg/L (SB-3, SB-4) to 83 mg/L (SB-2), with all reported concentrations in excess of the 0.10 mg/L RBSL. This RBSL is the EPA's Suggested No-Adverse Response Limit (SNARL) for diesel.

Benzene was detected in groundwater from each of the borings at concentrations ranging from 680 ug/L (SB-5) to 19,000 ug/L (SB-2), with all reported concentrations in excess of the 1.0 ug/L RBSL. This RBSL is a primary drinking water standard.

Toluene was detected in groundwater from each of the borings at concentrations ranging from 220 ug/L (SB-3) to 1,800 ug/L (SB-2), with all reported concentrations in excess of the 40 ug/L RBSL. This RBSL is a secondary drinking water standard based on taste and odor thresholds.

Ethylbenzene was detected in groundwater from each of the borings at concentrations ranging from 220 ug/L (SB-3) to 1,500 ug/L (SB-2), with all reported concentrations in excess of the 30 ug/L RBSL. This RBSL is a secondary drinking water standard based on taste and odor thresholds.

Total Xylenes were detected in groundwater from each of the borings at concentrations ranging from 750 ug/L (SB-3) to 73,000 ug/L (SB-1), with all reported concentrations in excess of the 13 ug/L RBSL. This RBSL is a freshwater aquatic life protection level.

MTBE was detected in groundwater at each of the borings except SB-4. The maximum reported concentration was 87,000 ug/L at SB-2. The detected concentrations in SB-1, SB-2, SB-3 and SB-5 exceed the RBSL of 5.0 ug/L. This RBSL is a secondary drinking water standard based on taste and odor thresholds.

**Closing**

A PSA has been conducted by CSS at the site, consisting of the collection and analysis of soil and groundwater samples from subsurface borings. Concentrations of TPH-g and related hydrocarbon compounds were found in soil and groundwater in each of the borings. A comparison of the detected concentrations in soil and groundwater to RBSLs indicates that they may necessitate additional investigation. CSS recommends that you forward a copy of this report to the ACDEH.

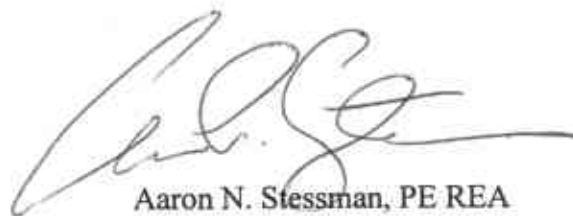
Should have any questions or desire additional information please do not hesitate to contact the undersigned.

Sincerely,  
CSS Environmental Services, Inc.



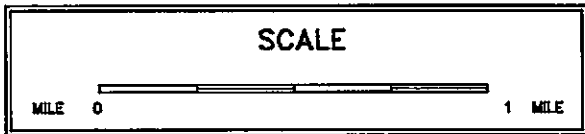
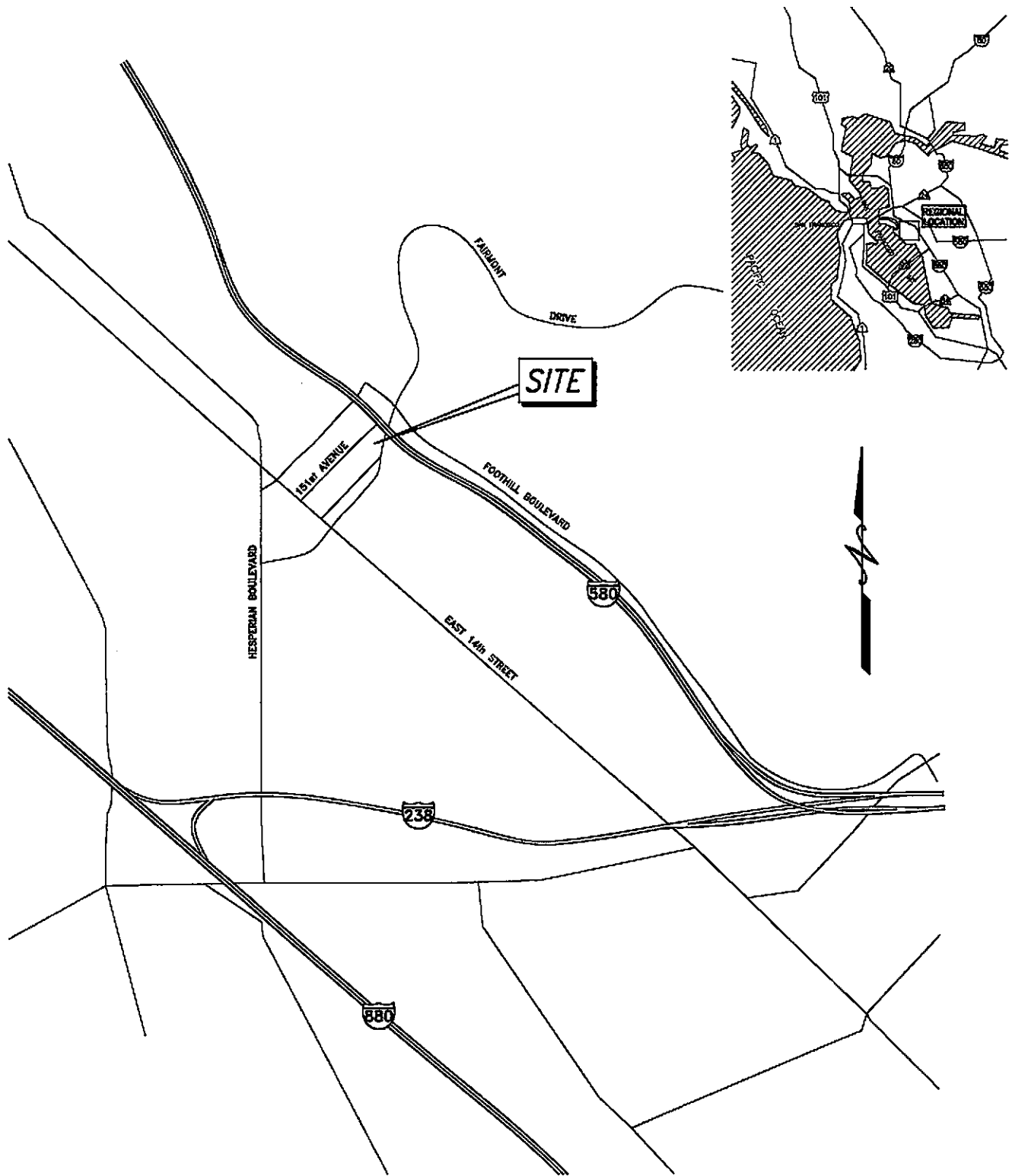
Terry Carter REA  
Project Manager

Attachments



Aaron N. Stessman, PE REA  
Senior Engineer



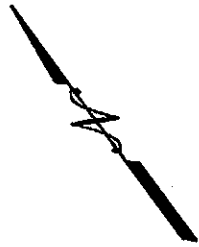


CSS ENVIRONMENTAL SERVICES, INC.

REGIONAL LOCATION MAP  
 FORMER FREEDOM ARCO STATION  
 16101 FREEDOM AVENUE  
 SAN LEANDRO, CALIFORNIA

FIGURE  
 1

JOB NUMBER	DATE	DRAWING	BY	REVISED
6159	06/01	6159LOC	BED	00/00



151st AVENUE

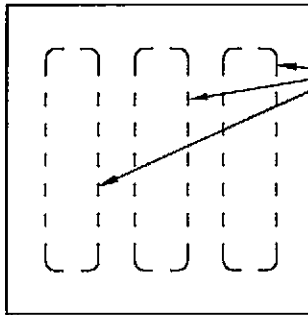
FREEDOM AVENUE

FAIRMONT AVENUE

SB-4



DISPENSER ISLAND



GASOLINE USTs

SB-1



SB-3



SB-2



SB-5



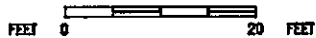
DISPENSER ISLANDS

STATION BUILDING

LEGEND

● JULY 5, 2001 BORING LOCATION

APPROXIMATE SCALE



CSS ENVIRONMENTAL SERVICES, INC.

SITE PLAN

FORMER FREEDOM ARCO STATION  
16101 FREEDOM AVENUE  
SAN LEANDRO, CALIFORNIA

FIGURE

2

JOB NUMBER	DATE	DRAWING	BY	REVISED
6159	06/01	6159SITE	BED	07/01



**Table 1**

**Summary of Analytical Results from July 5, 2001 Soil Borings  
Former Freedom ARCO Station  
16101 Freedom Avenue  
San Leandro, California**

Sample ID	Sampling Date	Matrix	TPH-G (mg/L, mg/Kg)*	B	T	E	X	MTBE
				(Water in ug/L, Soil in ug/Kg)				
SB-1	07/05/01	Water	26	5,100	1,100	670	3,300	11,000
SB-1-25.5'	07/05/01	Soil	470	2,600	16,000	12,000	73,000	<5
SB-2	07/05/01	Water	83	19,000 /	1,800	1,500	4,600	87,000
SB-2-25.5'	07/05/01	Soil	78	430	780	740	4,100	<5
SB-3	07/05/01	Water	25	8,900 /	220	220	750	13,000
SB-4	07/05/01	Water	25	5,900	1,300	920	3,600	<5
SB-4-24.5'	07/05/01	Soil	90	370	370	710	3,100	<5
SB-5	07/05/01	Water	19	680	640	800	2,500	6,900
SB-5-25.5'	07/05/01	Soil	210	370	890	2,000	8,900	<5

**LEGEND**

- 5,100 Concentrations in **BOLD** exceed their respective RBSLs.
- TPH-G: Total Petroleum Hydrocarbons as Gasoline
- B: Benzene
- T: Toulene
- E: Ethylbenzene
- X: Total Xylenes
- MTBE: Methyl tert-butyl ether, positive results as confirmed by EPA 8260B.
- ug/L: Micrograms per Liter
- mg/L: Milligrams per Liter
- ug/Kg: Micrograms per Kilogram
- mg/Kg: Milligrams per Kilogram
- NA: Analysis not performed
- \* TPH-G Water in mg/L, Soil in mg/Kg



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# ***ATTACHMENT A***

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***Boring Logs***

**Location of Boring:**  
 151 Ave

**Project:** 6159 - 15101  
 Freedom Ave, <sup>Texas</sup> San Antonio, Station San Antonio

**Boring No.:** SB-1  
**Total Depth:** 31'

**Job No.:** 6159  
**Logged By:** AS

**Proj. Mgr.:** TC  
**Edited By:**

**Drilling Contractor:** Fisch ESS

**Drill Rig Type:** Geoprobe (400, 660)

**Drillers Name:** Dave Fisch 45

**Sampling Methods:** Laxa Tube - Large Bore

**Hammer Wt.:**  
**Drop:**

**Started, Time:** 08:10  
**Date:** 7/15/01

**Completed, Time:** 09:22  
**Date:** 7/15/01

**Boring Depth (ft.):** 31'

**Casing Depth (ft.):** or 31' Temp

**Water Depth (ft.):** 20.3'

**Time:** 9:30

**Date:** 7/15/01

**Backfilled, Time:** 13:30  
**Date:** 7/15  
**By:** Fisch

**Surface Elev.:**  
**Datum:**

**Conditions:** Clear, warm, breezy

New station, not yet in use.

PID/OVA/OVM Reading	Blows/ft-in.	Inches Driven	Sample Recovery	Well Description	Well Diagram	Depth in Feet	Graphic Log
0.0						0	AC 2" Asphaltic Concrete
						1	AB 4" Aggregate Base fill, Angular to 1/2"
						2	ML Clayey silt, Tan color, soft, sil plastic
						3	CL Black silty clay w/minor (<5%) med sand
						4	Firm, silty mod plastic
0.0						5	CL Black silty clay w/minor med sand (15%)
0.0						6	Firm, silty mod plastic expansive clay
						7	CL Brown sandy clay, 25% well graded sand, firm, sil plastic expansive clay
0.0						8	
0.0						9	SC Clayey Sand, brown/Sandy Clay
						10	CL ~50% well graded sand, 50% clay, firm, non-plastic, expansive
0.0						10'	SAMPLE SB-1-10' @ 8:43 - No Odor



# FIELD LOG OF BORING (continued)

Sheet 2 of 2

CSS ENVIRONMENTAL SERVICES, INC.

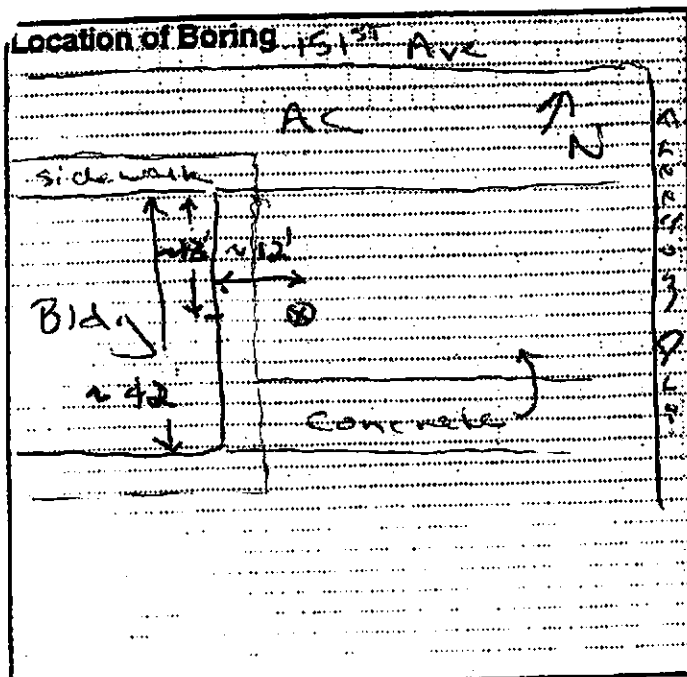
PID/OVA	Blows	Driven	Recovery	Well Description	Diagram	Depth	Graphic Log	Project: 6159	No.	Boring No. SB-1
						11	SC			
0.0						12	CL			
0.0						13				
						14				
0.0						15	CL			
0.0						16				
						17				
						18				
0.0						19				
						20	CL			
0.0						21				
						22				
3.0						23	CL			
						24				
9.0						25	X			
						26				
						27				
						28				
05.0						29	NR			
						30	X			
0.0						31	SC			
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						100				



# FIELD LOG OF BORING

CSS ENVIRONMENTAL SERVICES, INC.

Sheet 1 of 2



Project: Freedom Ave Terraces  
 Station: San Leandro  
 15101 San Leandro, CA

Boring No. SB-2  
 Total Depth: 31'

Job No.: 6159  
 Logged By: AS

Proj. Mgr.: TC  
 Edited By:

Drilling Contractor: Fisch ESS

Drill Rig Type: Geoprobe 6600

Drillers Name: Dave Fisch

Sampling Methods: Large Bore - Loran Tube (1 1/8" dia)

Hammer Wt.:  
 Drop:

Started, Time: 11:09  
 Date: 7/5/01

Completed, Time: 12:06  
 Date: 7/5/01

Boring Depth (ft.): 31'

Casing Depth (ft.): — 31' Temp

Water Depth (ft.): 16.9 ← 10 min recharge

Time: 12:16

Date: 7/5/01

Backfilled, Time: 13:40  
 Date: 7/5 By: Fisch

Surface Elev.:  
 Datum:

Conditions: Clear, warm, sl. breeze

Concrete (cement)

Black silty clay, firm, mod. plastic.

Brown sandy clay  
 ~50% well graded sand  
 firm, non-plastic

PID/OVA/OVM Reading	Blows/ft.-In.	Inches Driven	Sample Recovery	Well Description	Well Diagram	Depth in Feet	Graphic Log
0.0						0	cc
						1	
						2	
						3	
						4	
						5	CL
						6	
0.0						7	
						8	
0.0						9	
						10	SC
						11	CL
0.0						11 to	

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				Project: 6139	No.	Boring No. SB-2	
PID/DA	Blows	Driven	Recovery	Well Description	Diagram	Depth	Graphic Log
0.0						14'	SC
0.0						15'	CL
0.0						16'	:
0.0						17'	:
0.0						18'	:
0.0						19'	:
0.0						20'	SC
0.0						21'	CL
0.0						22'	:
0.0						23'	:
25.0						24'	SC
0.0						25'	CL
0.0						26'	CL
0.0						27'	:
0.0						28'	:
0.0						29'	SC
0.0						30'	SC
0.0						31'	CL
						5'	
						6'	
						7'	
						8'	
						9'	
						10'	

Brown clayey sand, ~50% well graded sand. soft firm, non-plastic.

16.9 - Water level @ 12:16 (10 min)  
(read as 17.6 @ 13:24)

Brown clayey sand  
~50% very fine sand  
soft, non-plastic

sample SB-2-20.5 @ 11:49

Brown clayey sand / sandy clay  
~50% very fine sand.  
Soft, non-plastic, gasoline odor

sample SB-2-25.5 @ 12:03

Green clayey sand, ~60%  
well graded sand, saturated  
loose, non plastic, No odor

- 3" very dense clay found at end of tube.

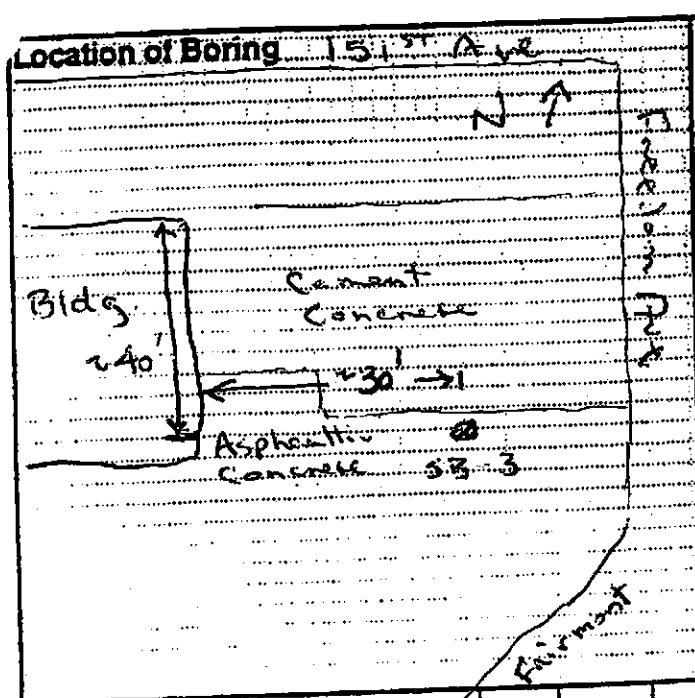
sample SB-2 (water)  
collected @ 12:20



# FIELD LOG OF BORING

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Sheet 1 of 2  
AS



Project: 15101 Freedom Ave. Texaco Sta., San Leandro		Boring No. SB-3
Job No.: 6159		Total Depth: 36'
Proj. Mgr.: TC		Logged By: AS
Drilling Contractor: Fisch ESS		Edited By:
Drill Rig Type: Geoprobe 6600		
Drillers Name: Dave Fisch		
Sampling Methods: Hydropunch		
Hammer Wt.:	Drop:	
Started, Time: 12:55	Date: 7/5/01	
Completed, Time: 13:13	Date: 7/5/01	
Boring Depth (ft.): 36'		

PID/OVA/DVM Reading	Blow#-In.	Inches Driven	Sample Recovery	Well Description	Well Diagram	Depth in Feet	Graphic Log
						1	Ac 2" Asphaltic Concrete
						2	GP 1/2" Dia. Pen Gravel Fill
						3	Pen gravel caves when retracting probe, will push directly to 30' for water sample. Driller will "feel" when pen gravel ends. Won't sample soil due to caving hole. Estimate bottom of pen gravel @ 24'.
						4	
						5	
						6	
						24	3 Screens deployed (Hydropunch)
						32	
						36	14:14 Collected water samples SB-3
						10	



# FIELD LOG OF BORING

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Sheet 1 of 2

**Location of Boring**  
 151<sup>st</sup> Ave N →

**Project:** Texaco Freedom Ave. Station San Leandro<sup>CA</sup>

**Boring No.:** SB-4

**Job No.:** 6159 **Logged By:** AS

**Proj. Mgr.:** TC **Edited By:**

**Drilling Contractor:** Fisch E.S.S.

**Drill Rig Type:** Gesprobe 6400 6600

**Drillers Name:** Dave Fisch

**Sampling Methods:** Lexan Tube - Large Bore

**Hammer Wt.:** **Drop:**

**Started, Time:** 9:56 **Date:** 7/5/01

**Completed, Time:** 10:54 **Date:** 7/5/01

**Boring Depth (ft.):** 31'

**Casing Depth (ft.):** 31' Temp

**Water Depth (ft.):** 29.0

**Time:** 15:35

**Date:** 7/5/01

**Backfilled, Time:** **Date:** **By:**

**Surface Elev.:** **Datum:**

**Conditions:** warm, clear and breezy.

Concrete (Cement) (~2")

Discrete sampling @ 5' intervals

Black silty clay. Firm, mod. plastic.

Brown sandy clay ~50% well graded sand. Firm, non-plastic.

PID/OVA/OVM Reading	Blows/ft-in.	Inches Driven	Sample Recovery	Well Description	Well Diagram	Depth in Feet	Graphic Log
0.0						1	
						2	
						3	
						4	
						5	CL
						6	
0.0						7	
						8	
0.0						9	
						10	SC
						11	CL
0.0						12	





# FIELD LOG OF BORING (continued)

Sheet 2 of 2

CSS ENVIRONMENTAL SERVICES, INC.

				Project: 6159	No.	Boring No. SB-4	
PID/OVA	Blows	Driven	Recovery	Well Description	Diagram	Depth	Graphic Log
0.0						14.1	SC
						15.2	CL
						16.3	
0.0						17.4	CL
0.0						20.5	CL
						21.6	X
0.0						24.7	SC
4.0						25.8	CL
						26.9	
						29.0	
						30.1	NR
						31.2	
						32.3	
						33.4	
						34.5	
						35.6	
						36.7	
						37.8	
						38.9	
						40.0	

Green silt clayey sand ~ 50% well graded sand. Soft, non-plastic

Grey sandy clay - very fine sand soft, non plastic & gasoline odor

Sample SB-4 - 20.5 @ 10:26

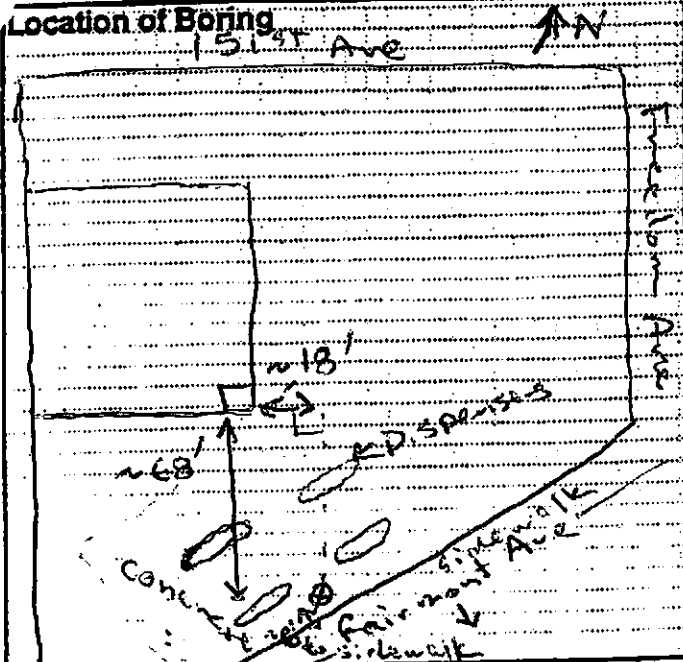
Sample SB-4 - 24.5 @ 10:33  
Grey clayey sand ~ 50% well graded sand. Soft, nonplastic w/ gasoline odor.

water level @ 15:35

No Recovery.

10:54 - Will set screen and see if water recovers

15:35 - Collected water sample SB-4 w/ mini. bailer.



**Project:** 15101 Freedom Ave  
San Leandro, Texas, Sta

**Boring No.:** SB-5

**Total Depth:**

**Job No.:** 6159 **Logged By:** AS

**Proj. Mgr.:** TC **Edited By:**

**Drilling Contractor:** Fisch EES

**Drill Rig Type:** Geoprobe 6600

**Drillers Name:** Dave Fisch

**Sampling Methods:** Large Bore - Lexan Tube

**Hammer Wt.:** **Drop:**

**Started, Time:** 14:24 **Date:** 7/5/01

**Completed, Time:** 15:15 **Date:** 7/5/01

**Boring Depth (ft.):**

PID/OVA/DVM Reading	Blow/s-ft-in.	Inches Driven	Sample Recovery	Well Description	Well Diagram	Depth in Feet	Graphic Log
						0	2" Cement Concrete
						1	
						2	
0.0						3	CL Black Clay w/ minor med sand (<5%) Firm, mod plastic
						4	CL Brown sandy clay ~25% well graded sand. Firm, non-plastic
2.0						5	
						6	
						7	
3.0						9	CL Exp. Green sandy clay. Very fine sand ~40%. Soft, non- plastic. No odor
						10	SC
						11	
5.0						12	

**CSS ENVIRONMENTAL SERVICES, INC.**

PID/OVA	Blows	Driven	Recovery	Well Description	Diagram	Depth	Graphic Log	Project: 6159	No.	Boring No. SB-5
2.0						14'	CL			
						15'	SC			
						16'				
0.0						17'				
0.0						18'				
						19'	SW			
						20'	SE			
				Water level @ 15:24		21'	NR			
0.0						22'				
						23'				
3.0						24'				
						25'	CL			
						26'	SC			
4.4						27'				
						28'				
5.0						29'				
						30'	CL			
						31'	SC			
2.0						6'				
						7'				
						8'				
						9'				
						10'				



CSS ENVIRONMENTAL SERVICES, INC.

***ATTACHMENT B***

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***Laboratory Analytical Report  
Chain of Custody Documentation***

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

July 13, 2001

Aaron Stessman  
CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901

**Order:** 26161  
**Project Name:** Freedom Ave Texaco  
**Project Number:** 6159  
**Project Notes:**

**Date Collected:** 7/5/01  
**Date Received:** 7/6/01  
**P.O. Number:** 6159

On July 06, 2001, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable) EPA 8020
Solid		EPA 8015 MOD. (Purgeable) EPA 8020

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,



Michelle L. Anderson  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-001

Client Sample ID: SB-1

Sample Time: 9:35 AM

Sample Date: 7/5/01

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	5100		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Toluene	1100		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Ethyl Benzene	670		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Xylenes, Total	3300		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
				Surrogate		Surrogate Recovery		Control Limits (%)		
				aaa-Trifluorotoluene		91		65 - 135		
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	6500		100	5	500	µg/L	N/A	7/9/01	WGC42084	EPA 8020
				Surrogate		Surrogate Recovery		Control Limits (%)		
				aaa-Trifluorotoluene		91		65 - 135		
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	26000		100	50	5000	µg/L	N/A	7/9/01	WGC42084	EPA 8015 MOD. (Purgeable)
				Surrogate		Surrogate Recovery		Control Limits (%)		
				aaa-Trifluorotoluene		96		65 - 135		


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161	Lab Sample ID: 26161-002	Client Sample ID: SB-2								
Sample Time: 12:20 PM	Sample Date: 7/5/01	Matrix: Liquid								
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	19000		500	0.5	250	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Toluene	1800		500	0.5	250	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Ethyl Benzene	1500		500	0.5	250	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Xylenes, Total	4600		500	0.5	250	µg/L	N/A	7/9/01	WGC42084	EPA 8020
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			92			65 - 135	
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	50000		500	5	2500	µg/L	N/A	7/9/01	WGC42084	EPA 8020
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			92			65 - 135	
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	83000		500	50	25000	µg/L	N/A	7/9/01	WGC42084	EPA 8015 MOD. (Purgeable)
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			99			65 - 135	


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161	Lab Sample ID: 26161-003	Client Sample ID: SB-3								
Sample Time: 2:14 PM	Sample Date: 7/5/01	Matrix: Liquid								
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	8900		200	0.5	100	µg/L	N/A	7/10/01	WGC42084B	EPA 8020
Toluene	220		200	0.5	100	µg/L	N/A	7/10/01	WGC42084B	EPA 8020
Ethyl Benzene	220		200	0.5	100	µg/L	N/A	7/10/01	WGC42084B	EPA 8020
Xylenes, Total	750		200	0.5	100	µg/L	N/A	7/10/01	WGC42084B	EPA 8020
				<b>Surrogate</b>		<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>		
				aaa-Trifluorotoluene		95		65 - 135		
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	8800		200	5	1000	µg/L	N/A	7/10/01	WGC42084B	EPA 8020
				<b>Surrogate</b>		<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>		
				aaa-Trifluorotoluene		95		65 - 135		
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	25000		200	50	10000	µg/L	N/A	7/10/01	WGC42084B	EPA 8015 MOD. (Purgeable)
				<b>Surrogate</b>		<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>		
				aaa-Trifluorotoluene		100		65 - 135		


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
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Environmental Analysis Since 1983



# Entech Analytical Labs, Inc.

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CSS Environmental Services  
 95 Belvedere Street, Suite 2  
 San Rafael, CA 94901  
 Attn: Aaron Stessman

Date: 7/13/01  
 Date Received: 7/6/01  
 Project Name: Freedom Ave Texaco  
 Project Number: 6159  
 P.O. Number: 6159  
 Sampled By: Client

## Certified Analytical Report


Order ID: 26161      Lab Sample ID: 26161-004      Client Sample ID: SB-4  
 Sample Time: 3:35 PM      Sample Date: 7/5/01      Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	5900		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Toluene	1300		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Ethyl Benzene	920		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Xylenes, Total	3600		100	0.5	50	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Surrogate						Surrogate Recovery			Control Limits (%)	
aaa-Trifluorotoluene						92			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		100	5	500	µg/L	N/A	7/9/01	WGC42084	EPA 8020
Surrogate						Surrogate Recovery			Control Limits (%)	
aaa-Trifluorotoluene						92			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	25000		100	50	5000	µg/L	N/A	7/9/01	WGC42084	EPA 8015 MOD. (Purgeable)
Surrogate						Surrogate Recovery			Control Limits (%)	
aaa-Trifluorotoluene						94			65 - 135	

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit  
 Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
 Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983



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CSS Environmental Services  
 95 Belvedere Street, Suite 2  
 San Rafael, CA 94901  
 Attn: Aaron Stessman

Date: 7/13/01  
 Date Received: 7/6/01  
 Project Name: Freedom Ave Texaco  
 Project Number: 6159  
 P.O. Number: 6159  
 Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-006

Client Sample ID: SB-1-25.5'

Sample Time: 9:14 AM

Sample Date: 7/5/01

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	2.6		1000	0.0005	0.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Toluene	16		1000	0.0005	0.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Ethyl Benzene	12		1000	0.0005	0.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Xylenes, Total	73		1000	0.001	1	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			95			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1000	0.005	5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			95			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	470		1000	0.050	50	mg/Kg	N/A	7/10/01	SGC22085	EPA 8015 MOD. (Purgeable)
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			89			65 - 135	

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons.


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
 Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-007

Client Sample ID: SB-2-25.5'

Sample Time: 12:03 PM

Sample Date: 7/5/01

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	0.43		500	0.0005	0.25	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Toluene	0.78		500	0.0005	0.25	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Ethyl Benzene	0.74		500	0.0005	0.25	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Xylenes, Total	4.1		500	0.001	0.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			93			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		500	0.005	2.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			93			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	78		500	0.050	25	mg/Kg	N/A	7/10/01	SGC22085	EPA 8015 MOD. (Purgeable)
			<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene			98			65 - 135	

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons.


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle Anderson, Laboratory Director

Environmental Analysis Since 1983

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-008

Client Sample ID: SB-4-24.5'

Sample Time: 10:38 AM

Sample Date: 7/5/01

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	0.37		50	0.0005	0.025	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Toluene	0.37		50	0.0005	0.025	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Ethyl Benzene	0.71		50	0.0005	0.025	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020
Xylenes, Total	3.1		50	0.001	0.05	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	75	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		50	0.005	0.25	mg/Kg	N/A	7/10/01	SGC22085	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	75	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	90		50	0.050	2.5	mg/Kg	N/A	7/10/01	SGC22085	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	68	65 - 135

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons.

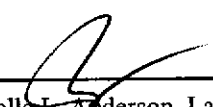
DF = Dilution Factor

ND = Not Detected

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Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/13/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-009

Client Sample ID: SB-5-25.5'

Sample Time: 3:04 PM

Sample Date: 7/5/01

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	0.37		500	0.0005	0.25	mg/Kg	N/A	7/11/01	SGC22085	EPA 8020
Toluene	0.89		500	0.0005	0.25	mg/Kg	N/A	7/11/01	SGC22085	EPA 8020
Ethyl Benzene	2.0		500	0.0005	0.25	mg/Kg	N/A	7/11/01	SGC22085	EPA 8020
Xylenes, Total	8.9		500	0.001	0.5	mg/Kg	N/A	7/11/01	SGC22085	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	89	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		500	0.005	2.5	mg/Kg	N/A	7/11/01	SGC22085	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	89	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	210		500	0.050	25	mg/Kg	N/A	7/11/01	SGC22085	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	87	65 - 135

Comment: Sample required methanol extraction due to high concentrations of target hydrocarbons.


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

## Quality Control Results Summary

QC Batch #: WGC42084  
Matrix: Liquid

Units: µg/L  
Date Analyzed: 7/9/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		561		474.08	LCS	84.5			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			103		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		6.2		6.219	LCS	100.3			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		7.220	LCS	92.6			65.0 - 135.0
Toluene	EPA 8020	ND		35.8		34.349	LCS	95.9			65.0 - 135.0
Xylenes, total	EPA 8020	ND		43		38.204	LCS	88.8			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			102		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		46.974	LCS	89.0			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			102		65 - 135					
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		561		470.77	LCSD	83.9	0.70	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			101		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		6.2		6.239	LCSD	100.6	0.32	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		7.089	LCSD	90.9	1.83	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		35.8		34.453	LCSD	96.2	0.30	25.00	65.0 - 135.0
Xylenes, total	EPA 8020	ND		43		37.737	LCSD	87.8	1.23	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			100		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		45.688	LCSD	86.5	2.78	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			100		65 - 135					

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## Quality Control Results Summary

QC Batch #: WGC42084B  
Matrix: Liquid

Units: µg/L  
Date Analyzed: 7/10/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		561		472.58	LCS	84.2			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			101		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		6.2		6.103	LCS	98.4			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		7.054	LCS	90.4			65.0 - 135.0
Toluene	EPA 8020	ND		35.8		33.489	LCS	93.5			65.0 - 135.0
Xylenes, total	EPA 8020	ND		43		37.712	LCS	87.7			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			99		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		49.477	LCS	93.7			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			99		65 - 135					
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		561		484.27	LCS	86.3	2.44	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			99		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		6.2		6.126	LCS	98.8	0.38	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		7.8		7.215	LCS	92.5	2.26	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		35.8		34.735	LCS	97.0	3.65	25.00	65.0 - 135.0
Xylenes, total	EPA 8020	ND		43		38.359	LCS	89.2	1.70	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			101		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		52.8		45.809	LCS	86.8	7.70	25.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			101		65 - 135					



# Entech Analytical Labs, Inc.

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## Quality Control Results Summary

QC Batch #: SGC22085  
Matrix: Solid

Units: mg/Kg  
Date Analyzed: 7/10/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		0.561		0.468	LCS	83.4			65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			97		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		0.0062		0.007	LCS	112.9			55.0 - 153.0
Ethyl Benzene	EPA 8020	ND		0.0078		0.007	LCS	89.7			58.4 - 116.0
Toluene	EPA 8020	ND		0.0358		0.033	LCS	92.2			56.1 - 127.0
Xylenes, total	EPA 8020	ND		0.043		0.037	LCS	86.0			64.9 - 105.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			93		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		0.062		0.050	LCS	80.6			45.0 - 119.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			93		65 - 135					
<b>Test: TPH as Gasoline</b>											
TPH as Gasoline	EPA 8015 M	ND		0.561		0.464	LCSD	82.7	0.86	30.00	65.0 - 135.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			95		65 - 135					
<b>Test: BTEX</b>											
Benzene	EPA 8020	ND		0.0062		0.007	LCSD	112.9	0.00	30.00	55.0 - 153.0
Ethyl Benzene	EPA 8020	ND		0.0078		0.007	LCSD	89.7	0.00	30.00	58.4 - 116.0
Toluene	EPA 8020	ND		0.0358		0.034	LCSD	95.0	2.99	30.00	56.1 - 127.0
Xylenes, total	EPA 8020	ND		0.043		0.038	LCSD	88.4	2.67	30.00	64.9 - 105.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			94		65 - 135					
<b>Test: MTBE by EPA 8020</b>											
Methyl-t-butyl Ether	EPA 8020	ND		0.062		0.052	LCSD	83.9	3.92	30.00	45.0 - 119.0
<b>Surrogate</b>			<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>						
	aaa-Trifluorotoluene			94		65 - 135					

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## Quality Control Results Summary

QC Batch #: WMS31077  
 Matrix: Liquid

Units: µg/L  
 Date Analyzed: 7/11/01

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
<b>Test: EPA 8260B</b>											
1,1-Dichloroethene	EPA 8260B	ND		20		20.3	LCS	101.5			65.0 - 135.0
Benzene	EPA 8260B	ND		20		22.6	LCS	113.0			65.0 - 135.0
Chlorobenzene	EPA 8260B	ND		20		21.6	LCS	108.0			65.0 - 135.0
Methyl-t-butyl Ether	EPA 8260B	ND		20		19.9	LCS	99.5			56.0 - 135.0
Toluene	EPA 8260B	ND		20		22.3	LCS	111.5			65.0 - 135.0
Trichloroethene	EPA 8260B	ND		20		26.4	LCS	132.0			65.0 - 135.0
			<b>Surrogate</b>	<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>					
			4-Bromofluorobenzene	89		65 - 135					
			Dibromofluoromethane	107		57 - 139					
			Toluene-d8	123		65 - 135					
<b>Test: EPA 8260B</b>											
1,1-Dichloroethene	EPA 8260B	ND		20		19.3	LCSD	96.5	5.05	25.00	65.0 - 135.0
Benzene	EPA 8260B	ND		20		21.2	LCSD	106.0	6.39	25.00	65.0 - 135.0
Chlorobenzene	EPA 8260B	ND		20		19.7	LCSD	98.5	9.20	25.00	65.0 - 135.0
Methyl-t-butyl Ether	EPA 8260B	ND		20		21.4	LCSD	107.0	7.26	25.00	56.0 - 135.0
Toluene	EPA 8260B	ND		20		20.9	LCSD	104.5	6.48	25.00	65.0 - 135.0
Trichloroethene	EPA 8260B	ND		20		25.3	LCSD	126.5	4.26	25.00	65.0 - 135.0
			<b>Surrogate</b>	<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>					
			4-Bromofluorobenzene	86		65 - 135					
			Dibromofluoromethane	106		57 - 139					
			Toluene-d8	123		65 - 135					



# Entech Analytical Labs, Inc.

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July 19, 2001

Aaron Stessman  
CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901

**Order:** 26161  
**Project Name:** Freedom Ave Texaco  
**Project Number:** 6159

**Date Collected:** 7/5/01  
**Date Received:** 7/6/01  
**P.O. Number:** 6159

**Project Notes:**

On July 06, 2001, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Liquid	MTBE by EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,



Michelle L. Anderson  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/19/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-001

Client Sample ID: SB-1

Sample Time: 9:35 AM

Sample Date: 7/5/01

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	11000		100	5	500	µg/L	7/11/01	WMS31077	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene			83			65 - 135		
	Dibromofluoromethane			107			57 - 139		
	Toluene-d8			126			65 - 135		

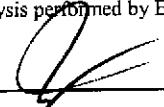
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

*Environmental Analysis Since 1983*

# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/19/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-002

Client Sample ID: SB-2

Sample Time: 12:20 PM

Sample Date: 7/5/01

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	87000		2000	5	10000	µg/L	7/11/01	WMS31077	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene			81			65 - 135		
	Dibromofluoromethane			106			57 - 139		
	Toluene-d8			126			65 - 135		

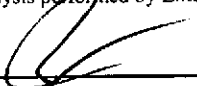
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

*Environmental Analysis Since 1983*

# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/19/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-003

Client Sample ID: SB-3

Sample Time: 2:14 PM

Sample Date: 7/5/01

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	13000		200	5	1000	µg/L	7/11/01	WMS31077	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene			86			65 - 135		
	Dibromofluoromethane			106			57 - 139		
	Toluene-d8			124			65 - 135		

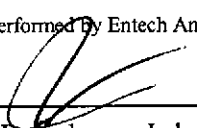
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

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# Entech Analytical Labs, Inc.

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CSS Environmental Services  
95 Belvedere Street, Suite 2  
San Rafael, CA 94901  
Attn: Aaron Stessman

Date: 7/19/01  
Date Received: 7/6/01  
Project Name: Freedom Ave Texaco  
Project Number: 6159  
P.O. Number: 6159  
Sampled By: Client

## Certified Analytical Report

Order ID: 26161

Lab Sample ID: 26161-005

Client Sample ID: SB-5

Sample Time: 3:24 PM

Sample Date: 7/5/01

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	6900		50	5	250	µg/L	7/11/01	WMS31077	EPA 8260B

### Surrogate

### Surrogate Recovery

### Control Limits (%)

4-Bromofluorobenzene

85

65 - 135

Dibromofluoromethane

105

57 - 139

Toluene-d8

127

65 - 135

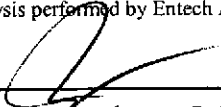
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983



