



**Chevron**

April 19, 1996

Ms. Jennifer Eberle  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Chevron U.S.A. Products Company**  
2410 Camino Ramon  
San Ramon, CA 94583  
P.O. Box 5004  
San Ramon, CA 94583-0804

**Marketing Department**  
Phone 510 842 9500

ENVIRONMENTAL PROTECTION  
96 APR 22 AM 8:07

Re: Former Signal Service Station #S0800  
800 Center Street  
Oakland, California

Dear Ms. Eberle:

Enclosed is a copy of the the Soil and Groundwater Investigation Report dated April 18, 1996, that was prepared by our consultant Pacific Environmental Group, Inc. (Pacific), for the above referenced site. **Nine geoprobes were drilled to groundwater and soil and water samples taken.** These borings and temporary wells were drilled to supplement previous work and to complete delineration of hydrocarbons in the groundwater in the vicinity of the site.

Soil and water samples were submitted to Sequoia Analytical (SA) for analysis. Laboratory results indicate that **soil samples had concentrations ranging from below method detection limits to 13,000ppm for TPHH-g, while BTEX concentrations ranged from below method detection limits to 41ppm, and that was only in one probe well. No MTBE was detected in any soil samples. Analysis of water samples indicated concentrations of TPHH-g and BTEX ranged from below method detection limits in Probe P-9 to concentrations of 800,000ppb and 13,000ppb, respectively in Probe P-2. No MTBE was detected in any water samples. Probe P-7 located near old boring 5, which was drilled near the hydraulic lift, was sampled for oil/grease by using EPA Method 5520. The water analysis results indicated below method detection limits.**

**The water analysis for the off-site P-2 probe, indicated the presence of unknown non-petroleum hydrocarbons. These results may indicate some off-site contribution to the dissolved plume at the site.**

Dissolved hydrocarbons at the site appear to be defined to the south and southeast, and **there has been further defination of hydrocarbons in the groundwater to the southwest and northwst of the site.** **Hydrocarbons are not defined to the northeast, north, and to the west of the site. But it appears that sufficient data has been received to evaluate remediation alternatives.**

← from this invest.

It is my understanding that an agreement between all parties associated at this site, regarding the responsibility for hydrocarbon contamination present and associated costs for investigation and remediation is close to being signed. Upon receipt of the signed agreement and resolving the responsiblity, the remediation of the site can then be addressed.

With the recent reorganization that has taken place within Chevron Marketing, I have taken Mark Miller's place as the project manager for this site and all sites in Alameda County, except for the City of Berkely and the cities covered by the Alameda Water District. If you have any questions or comments related to this site please contact me at (510) 842-9136.



Ms. Jennifer Eberle  
April 19, 1996  
S0800

Sincerely,  
CHEVRON PRODUCTS COMPANY



Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. B. C. Owen

Mr. J. N. Robbins

Mr. Terrell A. Sadler  
618 Brooklyn Avenue  
Oakland, CA. 94606

Mr. James Scott  
BPH, Inc.  
580 Market Street, Suite 400  
San Francisco, CA. 94104

Ms. Sandi Nichols  
Washburn, Briscoe & McCarthy  
55 Francisco Street, Suite 600  
San Francisco, CA. 94133



PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

April 18, 1996  
Project 320-162.1A

Mr. Phil Briggs  
Chevron Products Company  
P.O. Box 5004  
San Ramon, California 94583-0804

Re: Soil and Groundwater Investigation  
Former Signal Service Station S0800  
800 Center Street at 8th Street  
Oakland, California

Dear Mr. Briggs:

This letter report, prepared by Pacific Environmental Group, Inc. (PACIFIC) on behalf of Chevron Products Company (Chevron), presents the results of a soil and groundwater investigation conducted at the site referenced above (Figure 1). The purpose of the investigation was to provide further delineation of the petroleum hydrocarbons in soil and groundwater in the vicinity of the site. The investigation was performed in accordance with PACIFIC's *Work Plan* dated January 29, 1996 and the *Work Plan Addendum* dated February 23, 1996. This letter report includes a discussion of site background, previous investigations, scope of work, and findings.

Field and laboratory procedures, and boring logs are presented as Attachment A. Certified analytical reports and chain-of-custody documentation are presented as Attachment B.

#### **SITE BACKGROUND**

The site is located at the northeast corner of the intersection at 8th Street and Center Street in Oakland, California. The former station building and the former pump islands remain at the site; however, the site is currently unoccupied. Land use near the site is commercial and residential.

The site was utilized as a retail service station from 1932 to the early 1970s. Station facilities included four 1,000-gallon fuel underground storage tanks (USTs), one used oil

tank, one product island, and associated piping. The USTs were reportedly removed from the site during 1973.

### Previous Investigations

Previous investigations at the site have been conducted by Subsurface Consultants, Inc. (SCI) and Groundwater Technology, Inc. (GTI). In August 1989, SCI installed and sampled five soil borings ranging in depth from 4.5 to 26 feet below ground surface (bgs). Temporary groundwater monitoring wells were installed in two of the five borings. In October 1995, GTI installed three additional soil borings to a depth of 12 feet bgs, and four groundwater monitoring wells to a depth of 15 feet bgs.

A brief discussion of the findings of these investigations are summarized below:

- The lithology encountered during the site investigations indicates that the site is underlain by soils consisting of predominantly sand, from fine sand to clayey sand.
- In August 1989, groundwater was encountered at depths of 11 to 13 feet bgs; in October 1995, groundwater was encountered at depths of 10 to 11 feet bgs. Based on data from the recently installed groundwater monitoring wells, the groundwater flow direction at the site is toward the southwest at a gradient of 0.002 foot per foot.
- Analytical results of soils indicate that petroleum hydrocarbon concentrations are present in the area adjacent to the former pump island and in the vicinity of the former USTs. Petroleum hydrocarbon concentrations in soils are generally highest at the 10 to 12 foot bgs interval.
- During the August 1989 soil and groundwater investigation, maximum total volatile hydrocarbons (TVH) in soils ranged from 950 parts per million (ppm) in Boring 3 (in the eastern portion of the site) to 31,000 ppm in Boring 2 (beneath the former USTs). Maximum total extractable hydrocarbons (TEH) concentrations in soils ranged from 220 ppm at Boring 3 to 14,000 ppm at Boring 2. Maximum benzene concentrations ranged from not detected in Boring 3 to 500 ppm in Boring 2.
- During the October 1995 soil and groundwater investigation, maximum total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) ranged from not detected in several borings to 14,000 ppm in Monitoring Well MW-1 (adjacent to the former USTs). Benzene

concentrations in soils ranged from not detected in several borings to 120 ppm in Monitoring Well MW-1.

- During the October 1995 soil and groundwater investigation, groundwater concentrations of TPPH-g ranged from not detected at Well MW-2 (in the southeastern corner of the site) to 170,000 parts per billion (ppb) at Well MW-1. Benzene concentrations ranged from not detected at Well MW-2 to 19,000 (ppb) at Well MW-1.
- Hydrocarbon concentrations in groundwater at the site are defined to the south and to the southeast by groundwater monitoring Wells MW-2 and MW-4, respectively.

## SCOPE OF WORK

In order to provide further delineation of petroleum hydrocarbons beneath the site, the following scope of work was performed:

- **Permits.** PACIFIC obtained the appropriate soil boring and groundwater monitoring well permits from the Zone 7 Water Agency prior to initiating field work.
- **Geoprobe Borings.** PACIFIC drilled nine geoprobe borings (P-1 through P-9) on March 22, 26, and 29, 1996. These borings and temporary wells were drilled to supplement previous work and to complete delineation of hydrocarbons in groundwater in the vicinity of the site.
- **Soil and Groundwater Analyses.** Selected soil samples and all groundwater samples were submitted to a California State-certified laboratory and analyzed for the presence of TPPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), methyl t-butyl ether (MTBE), and oil and grease.

## FINDINGS

### Subsurface Conditions

Nine groundwater probes were drilled both on and off site; the probe locations are shown on Figure 2. Soils encountered during drilling (to the maximum explored depth of approximately 20 feet bgs) consisted primarily of sand to clayey sands, with some silty clay. Groundwater was first encountered at approximately 6 feet bgs.

### **Soil Analytical Results**

Soil samples at Probes P-1, P-2, P-3, P-7, and P-8 were analyzed for TPPH-g, BTEX compounds, and MTBE. Soil analytical results indicate that maximum TPPH-g concentrations were detected in Probes P-2 and P-3 at 4,000 and 13,000 ppm, respectively. Benzene concentrations were detected in soils at Probe P-3 only. The maximum benzene concentration in Probe P-3 was 41 ppm at the 16 foot interval. Soil analytical results indicate that MTBE was not detected in any of the soil samples. A summary of the soil analytical results is presented in Table 1.

### **Groundwater Analytical Results**

Groundwater was collected at each of the probe locations, P-1 through P-9. Groundwater samples were collected directly from the borehole with a hand bailer. This technology does not allow for purging prior to sampling; therefore, analytical results are significantly greater than the results obtained from a comparable monitoring well in a similar location.

TPPH-g and BTEX compounds were detected in groundwater from Probes P-1 through P-8. Laboratory analytical reports indicate that maximum TPPH-g concentrations were detected in groundwater at Probes P-1, P-2, and P-7 at 320,000, 800,000, and 160,000 ppb, respectively. Benzene concentrations were detected in groundwater at Probes P-1 through P-4, P-6, and P-7. Benzene concentrations in groundwater from these probes ranged from 460 ppb at Probe P-3 to 13,000 ppb at Probe P-2. A summary of the groundwater analytical results is presented in Table 2.

Laboratory analytical results indicated that unknown non-petroleum hydrocarbons were present in groundwater at off-site Probe P-2. These findings may indicate that migration from off-site sources has contributed to the dissolved hydrocarbon plume beneath the site.

Dissolved petroleum hydrocarbons beneath the site are defined to the southeast and the south by Monitoring Wells MW-2 and MW-4. This investigation provided further definition of hydrocarbons groundwater to the southwest and northwest of the site. Petroleum hydrocarbons in groundwater are not defined to the northeast, to the north, and to the west of the site.

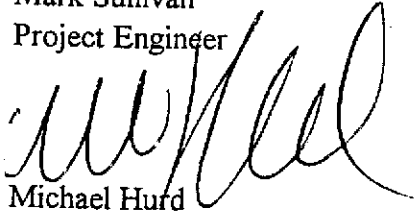
If there are any questions regarding the contents of this letter report, please call.

Sincerely,

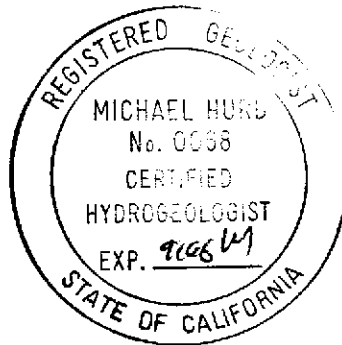
Pacific Environmental Group, Inc.



Mark Sullivan  
Project Engineer



Michael Hurd  
Senior Geologist  
CHG 0068



- Attachments:
- Table 1 - Soil Analytical Data -  
Total Petroleum Hydrocarbons  
(TPPH as Gasoline, BTEX Compounds, and MTBE)
  - Table 2 - Groundwater Analytical Data -  
Total Petroleum Hydrocarbons  
(TPPH as Gasoline, BTEX Compounds, MTBE, and TRPH)
  - Figure 1 - Site Location Map
  - Figure 2 - Site Map
  - Attachment A - Field and Laboratory Procedures, and Boring Logs
  - Attachment B - Certified Analytical Reports and Chain-of-Custody  
Documentation

**Table 1**  
**Soil Analytical Data**  
 Total Petroleum Hydrocarbons  
 (TPPH as Gasoline, BTEX Compounds, and MTBE)

Former Signal Service Station S0800  
 800 Center Street at 8th Street  
 Oakland, California

Well Number	Sample Depth (feet)	Date Sampled	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	MTBE (ppm)
P-1	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		510	ND	18	9.7	46	ND
	17		ND	ND	ND	0.008	0.009	ND
P-2	6	03/22/96	4,000	ND	120	71	330	ND
P-3	10	03/22/96	<del>13,000</del>	38	780	280	1,400	ND
	16		5,400	<del>41</del>	310	110	1,400	ND
	20		260	3.7	21	6.2	27	ND
P-7	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		1	ND	ND	ND	ND	ND
	15		13	ND	0.31	0.15	0.71	ND
P-8	6	03/22/96	ND	ND	ND	ND	ND	ND
	12		ND	ND	ND	0.0068	ND	ND

TPPH = Total purgeable petroleum hydrocarbons  
 MTBE = Methyl t-butyl ether  
 ppm = Parts per million  
 ND = Not detected  
 See certified analytical reports for detection limits.

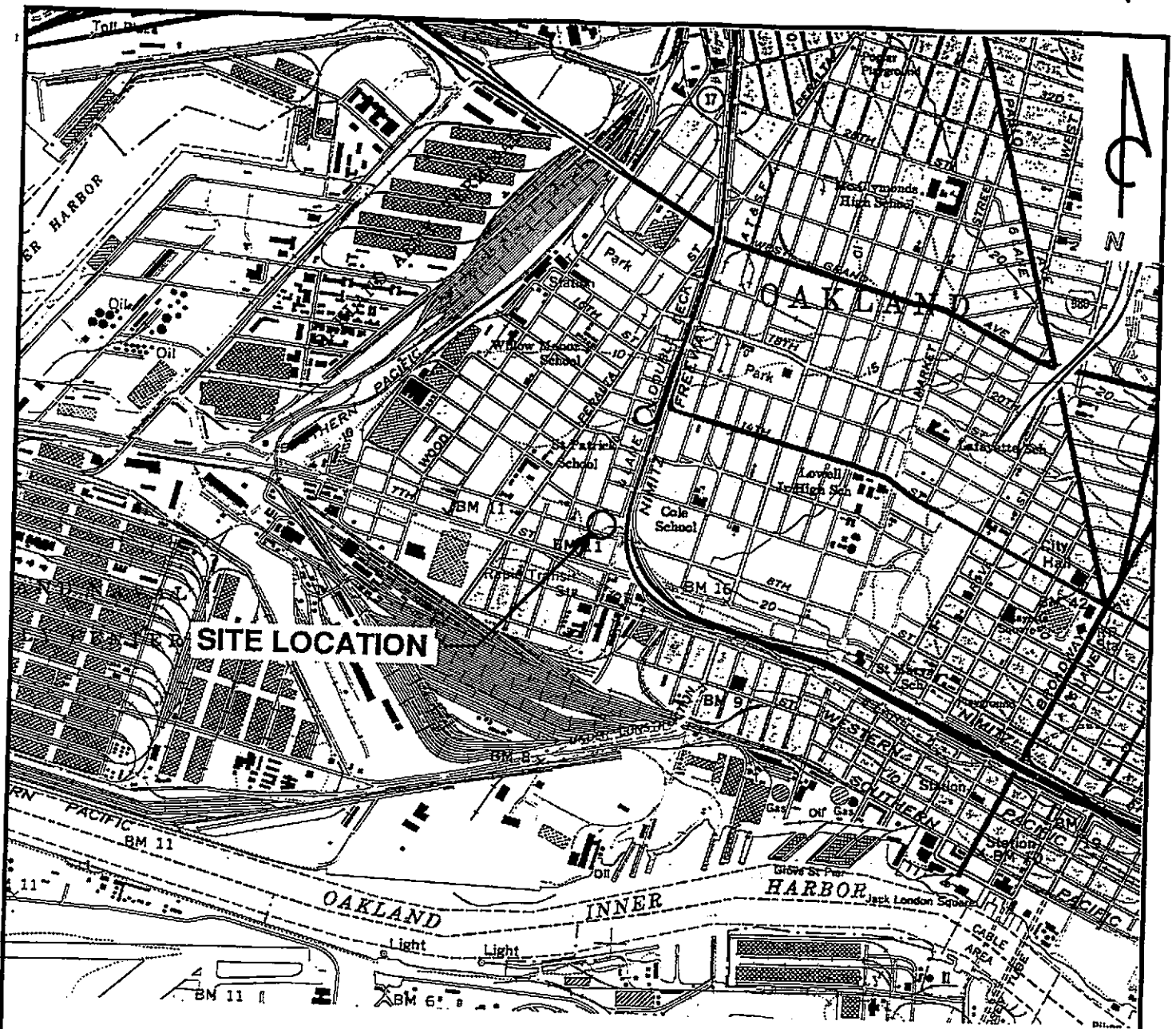


**Table 2**  
**Groundwater Analytical Data**  
**Total Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, MTBE, and TRPH)**

**Former Signal Service Station S0800**  
**800 Center Street at 8th Street**  
**Oakland, California**

Boring Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TRPH (ppm)
P-1	03/22/96	320,000	7,700	52,000	7,300	31,000	ND	NA
P-2	03/22/96	800,000	13,000	72,000	15,000	76,000	ND*	NA
P-3	03/22/96			9,500	2,000	9,000	NA	NA
P-4	03/26/96			16,000	2,700	11,000	ND	NA
P-5	03/26/96	1,900	ND		ND	ND	ND	NA
P-6	03/26/96	2,100		ND	ND	ND	ND	NA
P-7	03/22/96	160,000	8,400	28,000	3,200	16,000	ND	ND
P-8	03/22/96	58	ND	4.1	0.55	2.9	ND	NA
P-9	03/26/96	ND	ND	ND	ND	ND	ND	NA

TPPH = Total purgeable petroleum hydrocarbons  
 MTBE = Methyl t-butyl ether  
 TRPH = Total recoverable petroleum hydrocarbons  
 ppb = Parts per billion  
 ND = Not detected  
 NA = Not analyzed  
 \* = Originally reported by Sequoia Analytical as 8,900 ppb MTBE; 8260 analysis indicated that MTBE was not present in the sample. GC results should be regarded as coelution of another compound in the sample in the retention window for MTBE.  
 See certified analytical reports for detection limits.

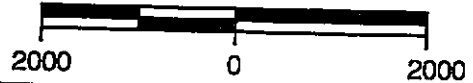


QUADRANGLE  
LOCATION

**REFERENCES:**

USGS 7.5 MIN. TOPOGRAPHIC MAP  
TITLED: OAKLAND WEST, CALIFORNIA  
DATED: 1959 REVISED: 1980

SCALE IN FEET



PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

**FORMER SIGNAL SERVICE STATION S0800**  
800 Center Street at 8th Street  
Oakland, California

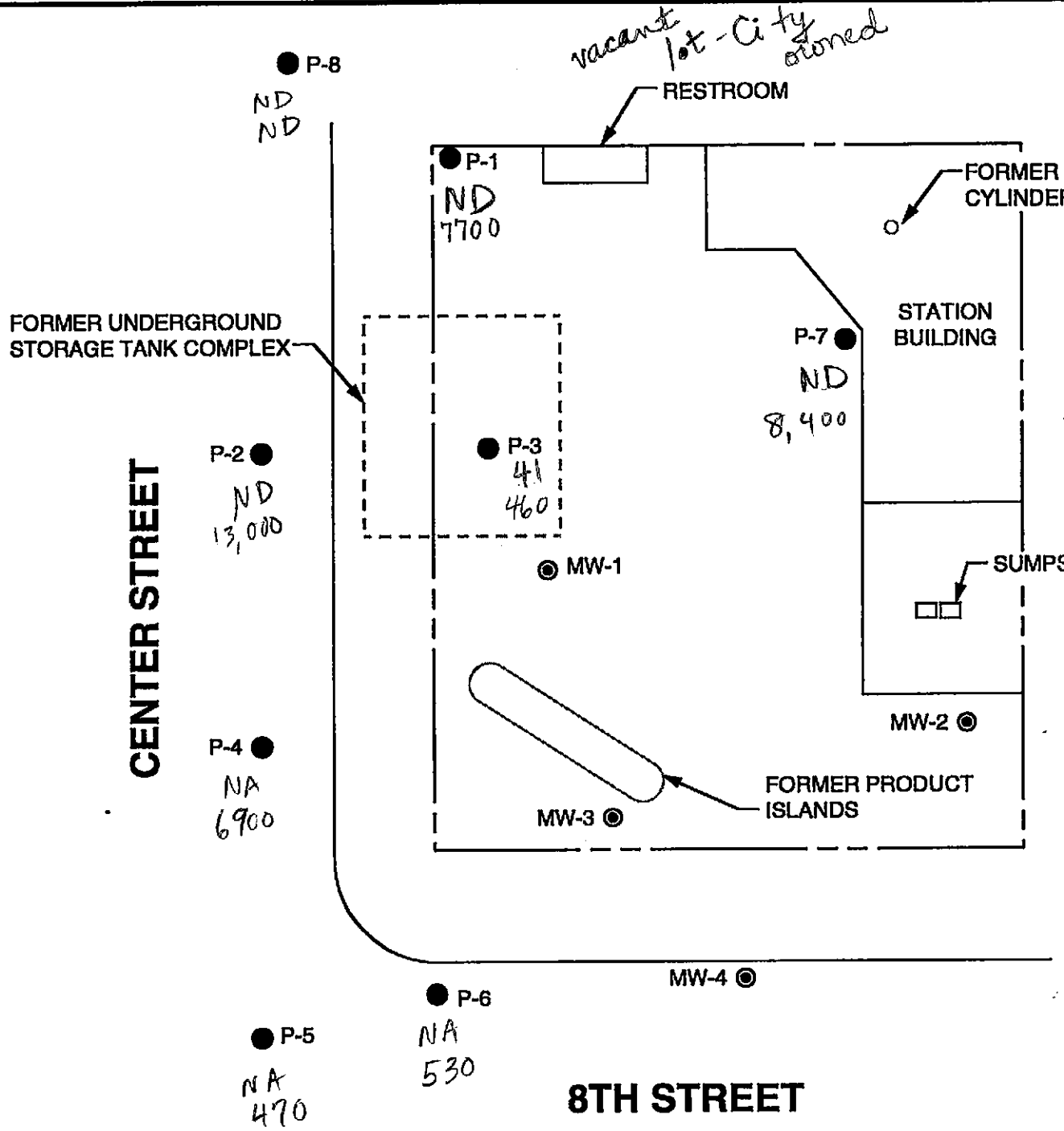
**SITE LOCATION MAP**

FIGURE:

**1**

PROJECT:

320-162.1A



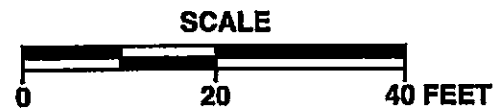
- LEGEND**
- MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - P-6 ● SOIL BORING LOCATION AND DESIGNATION

max benzene in soil / water  
 ppm / ppb  
 March 1996

SOURCE: MAP BY GROUNDWATER TECHNOLOGY; DATED: 3-7-95



PACIFIC ENVIRONMENTAL GROUP, INC.



**FORMER SIGNAL SERVICE STATION S0800**  
 800 Center Street at 8th Street  
 Oakland, California

**SITE MAP**

FIGURE: **2**  
 PROJECT: 320-162.1A

**ATTACHMENT A**  
**FIELD AND LABORATORY PROCEDURES**  
**AND BORING LOGS**

## ATTACHMENT A

### FIELD AND LABORATORY PROCEDURES

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#### **Groundwater Probes**

The groundwater probes were installed using 1.5-inch diameter steel pipe. The pipe was hydraulically driven or pneumatically driven into the subsurface. Selected soil samples will be collected in acetate liners. Groundwater samples will be collected with a bailer from the borehole or custom well screen. Groundwater probe sampling equipment were either steam-cleaned or cleaned in a tri-sodium phosphate solution prior to use. Soil and groundwater samples were preserved in accordance to the procedures discussed below.

#### **Organic Vapor Procedures**

Soil samples collected during drilling were analyzed in the field for ionizable organic compounds using the HNU Model PI-101 (or equivalent) photo-ionization detector (PID) with a 10.2 eV lamp. The test procedure involved placing approximately 30 grams of soil from an undisturbed soil sample in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The jar was warmed for approximately 20 minutes in the sun, the foil pierced, and the head-space within the jar analyzed for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument was calibrated prior to drilling using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 55, which relates the photo-ionization potential of benzene to that of isobutylene at 100 ppm. The results of the field testing will be noted on the boring logs. PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate hydrocarbon levels with the confidence of laboratory analyses.

#### **Laboratory Procedures**

Selected soil samples and groundwater samples were analyzed for the presence of total purgeable petroleum hydrocarbons calculated as gasoline, benzene, toluene, ethylbenzene, and xylenes, methyl t-butyl ether, and oil and grease using modified EPA Methods 8015, 8020, and 5520.

# WELL LOG KEY TO ABBREVIATIONS

## Drilling Method

HSA - Hollow stem auger  
CFA - Continuous flight auger  
Air - Reverse air circulation

## Gravel Pack

CA - Coarse aquarium sand

## Sampling Method

Cal. Mod. - California modified split-spoon sampler (2" inner diameter) driven 18" by a 140-pound hammer having a 30" drop. Where penetration resistance is designated "P", sampler was instead pushed by drill rig.  
Disturbed - Sample taken from drill-return materials as they surfaced.  
Shelby - Shelby Tube thin-walled sampler (3" diameter), where sampler is pushed by drill-rig.

## Moisture Content

Dry - Dry  
Dp - Damp  
Mst - Moist  
Wt - Wet  
Sat - Saturated

## Sorting

PS - Poorly sorted  
MS - Moderately sorted  
WS - Well sorted

## Plasticity

L - Low  
M - Moderate  
H - High

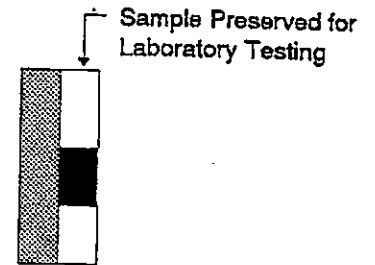
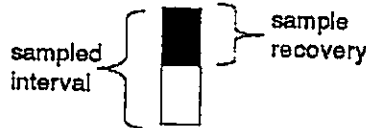
## H-NU (ppm)

ND - No detection

## Symbols

▽ - First encountered ground water

▼ - Static ground water level



## Density (Blows/Foot - Cal Mod Sampler)

### Sands and gravels

0 - 5 - Very Loose  
5 - 13 - Loose  
13 - 38 - Medium dense  
38 - 63 - Dense  
over 63 - Very dense

### Silts and Clays

0 - 2 - Very Soft  
2 - 4 - Soft  
4 - 9 - Firm  
9 - 17 - Stiff  
17 - 37 - Very Stiff  
37 - 72 - Hard  
over 72 - Very Hard
















## GRAIN - SIZE SCALE

### GRADE LIMITS

U.S. Standard

### GRADE NAME

inch	sieve size		
12.0			Boulders
3.0	3.0 in.		Cobbles
0.19	No. 4		Gravels
0.08	No. 10	coarse	
	No. 40	medium	Sand
	No. 200	fine	
			Silt
			Clay Size

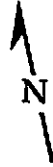
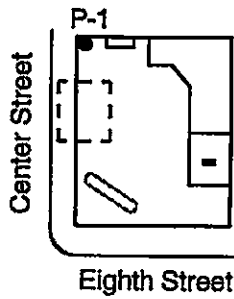
Primary Divisions		Group Symbol/Graphic		Typical Names
<b>COARSE GRAINED SOILS</b>  more than half is larger than #200 sieve	<b>GRAVELS</b>  half of coarse fraction larger than #4 sieve	<b>CLEAN GRAVELS</b>  (less than 5% fines)	GW 	Well graded gravels, gravel-sand mixtures; little or no fines
			GP 	Poorly graded gravels or gravel-sand mixtures; little or no fines
		<b>GRAVEL WITH FINES</b>	GM 	Silty gravels, gravel-sand-silt mixtures
			GC 	Clayey gravels, gravel-sand-clay mixtures
	<b>SANDS</b>  half of coarse fraction smaller than #4 sieve	<b>CLEAN SANDS</b>  (less than 5% fines)	SW 	Well graded sands, gravelly sands, little or no fines
			SP 	Poorly graded sands or gravelly sands; little or no fines
		<b>SANDS WITH FINES</b>	SM 	Silty sands, sand-silt mixtures
			SC 	Clayey sands, sand-clay mixtures, plastic fines
<b>FINE GRAINED SOILS</b>  more than half is smaller than #200 sieve	<b>SILTS AND CLAYS</b>  liquid limit less than 50%	ML 	Inorganic silts and very fine sand, rock flour, silty or clayey fine sands or clayey silts, with slight plasticity	
		CL 	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL 	Organic silts and organic silty clays of low plasticity	
	<b>SILTS AND CLAYS</b>  liquid limit more than 50%	MH 	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		CH 	Inorganic clays of high plasticity, fat clays	
		OH 	Organic clays of medium to high plasticity, organic silts	
<b>HIGHLY ORGANIC SOILS</b>		Pt 	Peat and other highly organic soils	



PACIFIC ENVIRONMENTAL GROUP, INC.

# Unified Soil Classification System

LOCATION MAP



**PACIFIC ENVIRONMENTAL GROUP, INC.**

BORING NO. P-1  
PAGE 1 OF 1

PROJECT NO. 320-162.1A  
 LOGGED BY: D.A.  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEOPROBE  
 SAMPLING METHOD: GEOPROBE  
 CASING TYPE: NA  
 SLOT SIZE: NA  
 WELL PACK: NA

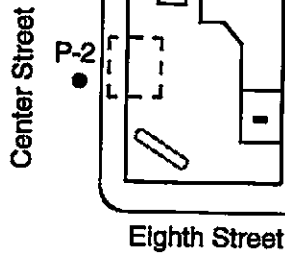
CLIENT: CHEVRON  
 DATE DRILLED: 3-22-96  
 LOCATION: 800 Center Street  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 18'  
 WELL DIAMETER: NA  
 WELL DEPTH: NA  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout		0		2		[Pattern: Dotted]	SP	FILL SAND: dark brown; 10% fines; 90% fine sand; medium dense; no product odor.
		0		4		[Pattern: Horizontal Dotted]	SM	SILTY SAND: yellowish brown; 10% clay; 35% silt; 55% fine sand; rootlets; no product odor.
		0		6		[Pattern: Horizontal Dotted]		
				8		[Pattern: Diagonal Hatched]	CL	SILTY CLAY: dark brown with dark gray staining along rootholes; caliche; 60% clay; 25% silt; 15% fine sand; strong product odor.
		3,722		10		[Pattern: Dotted]	SM	SILTY SAND: dark yellowish brown; 25% silt; 75% fine sand; moderate to strong product odor.
		1,217		12		[Pattern: Dotted]		
		272		14		[Pattern: Dotted]		
		0		16		[Pattern: Dotted]		@16': as above; faint to moderate product odor.
				18		[Pattern: Dotted]		@18': as above; no product odor.
				20				
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

BOTTOM OF BORING AT 18'



LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. P-2  
PAGE 1 OF 1

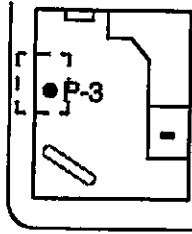
PROJECT NO. 320-162.1A  
 LOGGED BY: D.A.  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEOPROBE  
 SAMPLING METHOD: GEOPROBE  
 CASING TYPE: NA  
 SLOT SIZE: NA  
 WELL PACK: NA

CLIENT: CHEVRON  
 DATE DRILLED: 3-22-96  
 LOCATION: 800 Center Street  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 12'  
 WELL DIAMETER: NA  
 WELL DEPTH: NA  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout	Mst 0	0		2			SM	ASPHALT FILL
	Wt 3,770			4				SILTY SAND: dark brown; 25% silt; 75% fine sand; trace medium sand; no product odor.
				6				@6': as above; strong product odor.
				8				@8': 35% silt; 65% fine sand; trace medium sand; moderate product odor.
	Wt 922			10				@12': as above; 10% clay; 35% silt; 60% fine sand; moderate product odor.
				12				BOTTOM OF BORING AT 12'
				14				
				16				
				18				
				20				
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP

Center Street



Eighth Street



**PACIFIC ENVIRONMENTAL GROUP, INC.**

BORING NO. P-3

PAGE 1 OF 1

PROJECT NO. 320-162.1A  
 LOGGED BY: D.A.  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEOPROBE  
 SAMPLING METHOD: GEOPROBE  
 CASING TYPE: NA  
 SLOT SIZE: NA  
 WELL PACK: NA

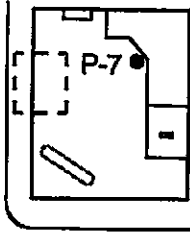
CLIENT: CHEVRON  
 DATE DRILLED: 3-22-96  
 LOCATION: 800 Center Street  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 20'  
 WELL DIAMETER: NA  
 WELL DEPTH: NA  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout	Mst	0		2			SM	TANK BACKFILL: natural material.
	Wt-Sat	3,217		4				SILTY SAND - FILL: no product odor.
				6				@6': as above; moderate product odor.
				8				@8': as above; strong product odor.
	Wt	2,375		10			SM	SILTY SAND: dark olive gray; 30% silt; 70% fine sand; hydrocarbon staining; strong product odor.
				12				
	Mst	1,087		14			SC	CLAYEY SAND: light brown; 30% clay; trace silt; 70% fine sand; saturated rootholes; moderate product odor.
		527		16				
	Mst	0		18				@19': as above; no product odor.
				20				
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

BOTTOM OF BORING AT 20'

LOCATION MAP

Center Street



Eighth Street



**PACIFIC ENVIRONMENTAL GROUP, INC.**

BORING NO. P-7  
PAGE 1 OF 1

PROJECT NO. 320-162.1A  
 LOGGED BY: D.A.  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEOPROBE  
 SAMPLING METHOD: GEOPROBE  
 CASING TYPE: NA  
 SLOT SIZE: NA  
 WELL PACK: NA

CLIENT: CHEVRON  
 DATE DRILLED: 3-22-96  
 LOCATION: 800 Center Street  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 16'  
 WELL DIAMETER: NA  
 WELL DEPTH: NA  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout	Mst	32		2			SM	TANK BACKFILL: natural material.
				4				SILTY SAND: reddish brown; iron oxide staining; trace clay; 25% silt; 75% fine sand; trace medium sand; massive; no to faint product odor.
	Wt	157		6				@6': as above; faint product odor.
	Wt	1,127		8				@10': 35% silt; 65% fine to very fine sand; moderate product odor.
	Sat	971		10				@14': as above; moderate product odor.
				12				@16': 10% clay; 25% silt; 65% fine sand; trace medium sand; moderate product odor.
				14				
				16				BOTTOM OF BORING AT 16'
				18				
				20				
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

**ATTACHMENT B**

**CERTIFIED ANALYTICAL REPORTS AND  
CHAIN-OF-CUSTODY DOCUMENTATION**



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95833

(415) 364-9600

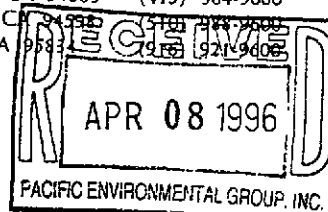
(510) 988-9600

(916) 921-0100

FAX (415) 364-9233

FAX (510) 988-9673

FAX (916) 921-0100



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-1 (6') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-01	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/01/96 Reported: 04/05/96
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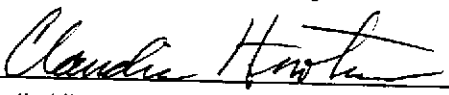
QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	95

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Claudia Hirotsu  
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-1 (10 <sup>3</sup> ) Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-02	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/01/96 Reported: 04/05/96
Attention: Rhonda DeJung		

QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	510
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	18
Ethyl Benzene	0.50	9.7
Xylenes (Total)	0.50	46
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	152 Q

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-1 (17') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-03	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/01/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.0080
Xylenes (Total)	0.0050	0.0090
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
		87

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager





Pacific Environmental Group	Client Proj. ID: 320-162.1A/0800,Oakland	Sampled: 03/22/96
2025 Gateway Place, Suite 440	Sample Descript: P-2 (6')	Received: 03/27/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 04/01/96
Attention: Rhonda DeJung	Analysis Method: 8015Mod/8020	Analyzed: 04/02/96
	Lab Number: 9603J45-04	Reported: 04/05/96

QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	800	4000
Methyl t-Butyl Ether	20	N.D.
Benzene	4.0	N.D.
Toluene	4.0	120
Ethyl Benzene	4.0	71
Xylenes (Total)	4.0	330
Chromatogram Pattern:		W-Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	123

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Claudia Hirotsu  
Project Manager







Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Rhonda DeJung	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-3 (10') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-05	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/02/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2000	13000
Methyl t-Butyl Ether	50	N.D.
Benzene	10	38
Toluene	10	780
Ethyl Benzene	10	280
Xylenes (Total)	10	1400
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	148 Q

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Claudia Hirotsu  
Project Manager





Pacific Environmental Group Client Proj. ID: 320-162.1A/0800,Oakland Sampled: 03/22/96
2025 Gateway Place, Suite 440 Sample Descript: P-3 (16') Received: 03/27/96
San Jose, CA 95110 Matrix: SOLID Extracted: 04/01/96
Attention: Rhonda DeJung Analysis Method: 8015Mod/8020 Analyzed: 04/02/96
Lab Number: 9603J45-06 Reported: 04/05/96

QC Batch Number: GC040196BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Table with 3 columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPPH as Gas (5400), Methyl t-Butyl Ether (N.D.), Benzene (41), Toluene (310), Ethyl Benzene (110), Xylenes (Total) (1400), Chromatogram Pattern: Gas, Surrogates (Control Limits % 70, 130; % Recovery 150 Q).

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu (handwritten signature)

Claudia Hirotsu
Project Manager





Pacific Environmental Group Client Proj. ID: 320-162.1A/0800, Oakland Sampled: 03/22/96
2025 Gateway Place, Suite 440 Sample Descript: P-3 (20') Received: 03/27/96
San Jose, CA 95110 Matrix: SOLID Extracted: 04/01/96
Attention: Rhonda DeJung Analysis Method: 8015Mod/8020 Analyzed: 04/02/96
Lab Number: 9603J45-07 Reported: 04/05/96

QC Batch Number: GC040196BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Table with columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPPH as Gas (25), Methyl t-Butyl Ether (0.62), Benzene (0.12), Toluene (0.12), Ethyl Benzene (0.12), Xylenes (Total) (0.12), Chromatogram Pattern (Gas), Surrogates (Control Limits % 70, 130; % Recovery 206 Q).

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu (handwritten signature)

Claudia Hirotsu
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-7 (6') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-08	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/02/96 Reported: 04/05/96
Attention: Rhonda DeJung		

QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	92

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-7 (10") Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-09	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/02/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
<b>TPPH as Gas</b>	<b>1.0</b>	<b>1.0</b>
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	97

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Claudia Hirotsu  
Project Manager





Pacific Environmental Group	Client Proj. ID: 320-162.1A/0800,Oakland	Sampled: 03/22/96
2025 Gateway Place, Suite 440	Sample Descript: P-7 (15')	Received: 03/27/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 04/01/96
Attention: Rhonda DeJung	Analysis Method: 8015Mod/8020	Analyzed: 04/02/96
	Lab Number: 9603J45-10	Reported: 04/05/96

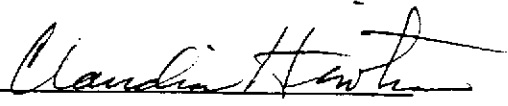
QC Batch Number: GC040196BTEXEXA  
 Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	13
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	0.31
Ethyl Benzene	0.0050	0.15
Xylenes (Total)	0.0050	0.71
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	180 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

  
 Claudia Hirotsu  
 Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Rhonda DeJung	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-8 (6') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-11	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/01/96 Reported: 04/05/96
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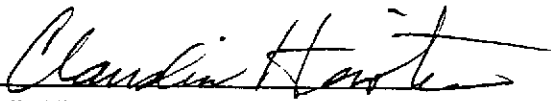
QC Batch Number: GC040196BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	92

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
 Claudia Hirotsu  
 Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800,Oakland Sample Descript: P-8 (12') Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-12	Sampled: 03/22/96 Received: 03/27/96 Extracted: 04/01/96 Analyzed: 04/02/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
<b>Toluene</b>	<b>0.0050</b>	<b>0.0068</b>
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	92

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager







Pacific Environmental Group Client Proj. ID: 320-162.1A/0800,Oakland Sampled: 03/22/96
2025 Gateway Place, Suite 440 Sample Descript: P-1 Received: 03/27/96
San Jose, CA 95110 Matrix: LIQUID
Attention: Rhonda DeJung Analysis Method: 8015Mod/8020 Analyzed: 04/01/96
Lab Number: 9603J45-13 Reported: 04/05/96

QC Batch Number: GC040196BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Table with 3 columns: Analyte, Detection Limit ug/L, Sample Results ug/L. Rows include TPPH as Gas (320000), Methyl t-Butyl Ether (N.D.), Benzene (7700), Toluene (52000), Ethyl Benzene (7300), Xylenes (Total) (31000), and Chromatogram Pattern (Gas). Includes a sub-table for Surrogates with Control Limits % and % Recovery.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110

Client Proj. ID: 320-162.1A/0800, Oakland  
Sample Descript: P-2  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9603J45-14

Sampled: 03/22/96  
Received: 03/27/96  
Analyzed: 04/02/96  
Reported: 04/05/96

QC Batch Number: GC040296BTEX03A  
Instrument ID: GCHP3

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100000	80000
Methyl t-Butyl Ether	5000	8900
Benzene	1000	13000
Toluene	1000	72000
Ethyl Benzene	1000	15000
Xylenes (Total)	1000	76000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	126

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-15	Sampled: 03/26/96 Received: 03/27/96 Analyzed: 04/01/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEX20A  
Instrument ID: GCHP20

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	12000
Methyl t-Butyl Ether	2500	N.D.
Benzene	500	6900
Toluene	500	16000
Ethyl Benzene	500	2700
Xylenes (Total)	500	11000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	102

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

*Claudia Hirotsu*  
\_\_\_\_\_  
Claudia Hirotsu  
Project Manager





Pacific Environmental Group Client Proj. ID: 320-162.1A/0800, Oakland Sampled: 03/26/96
2025 Gateway Place, Suite 440 Sample Descript: P-5 Received: 03/27/96
San Jose, CA 95110 Matrix: LIQUID
Attention: Rhonda DeJung Analysis Method: 8015Mod/8020 Analyzed: 04/03/96
Lab Number: 9603J45-16 Reported: 04/05/96

QC Batch Number: GC040396BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Table with columns: Analyte, Detection Limit ug/L, Sample Results ug/L. Rows include TPPH as Gas (1900), Methyl t-Butyl Ether (N.D.), Benzene (470), Toluene (N.D.), Ethyl Benzene (N.D.), Xylenes (Total) (N.D.), Discrete Peaks (C6-C7), and Surrogates (Control Limits % 70-130, % Recovery 91).

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu (signature)
Claudia Hirotsu
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-6 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-17	Sampled: 03/26/96 Received: 03/27/96 Analyzed: 04/03/96 Reported: 04/05/96
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QC Batch Number: GC040396BTEX02A  
Instrument ID: GCHP2

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2100
Methyl t-Butyl Ether	50	N.D.
Benzene	10	530
Toluene	10	N.D.
Ethyl Benzene	10	N.D.
Xylenes (Total)	10	N.D.
Discrete Peaks		C6-C7
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	86

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-18	Sampled: 03/22/96 Received: 03/27/96  Analyzed: 04/01/96 Reported: 04/05/96
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QC Batch Number: GC040196BTEX20A  
Instrument ID: GCHP20

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	160000
Methyl t-Butyl Ether	2500	N.D.
Benzene	500	8400
Toluene	500	28000
Ethyl Benzene	500	3200
Xylenes (Total)	500	16000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	103

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 Claudia Hirotsu  
 Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-8 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-19	Sampled: 03/22/96 Received: 03/27/96 Analyzed: 04/03/96 Reported: 04/05/96
Attention: Rhonda DeJung		

QC Batch Number: GC040396BTEX02A  
Instrument ID: GCHP2

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	58
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	4.1
Ethyl Benzene	0.50	0.55
Xylenes (Total)	0.50	2.9
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	95

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603J45-20	Sampled: 03/26/96 Received: 03/27/96 Analyzed: 04/03/96 Reported: 04/05/96
Attention: Rhonda DeJung		

QC Batch Number: GC040396BTEX02A  
Instrument ID: GCHP2

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu  
Project Manager







Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Proj. ID: 320-162.1A/0800,Oakland

Received: 03/27/96

Lab Proj. ID: 9603J45

Reported: 04/05/96

### LABORATORY NARRATIVE

Q - High surrogate recovery due to coelution.

Fraction	Dilutions
02	1:100
04,06	1:800
05,13,14	1:2000
07	1:25
15,18	1:1000
16	1:20

Please note: (04/12/96) 8260 analysis was performed on sample 9603J45-14 to confirm the presence of MTBE. GC/MS analysis did not confirm MTBE in the sample. GC results should be regarded as a coelution of another compound(s) in the retention window for MTBE.

*refers to 8020 analysis*

SEQUOIA ANALYTICAL

Claudia Hirotsu  
Project Manager



Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Project ID: 320-162.1A/0800, Oakland  
Matrix: Solid

Work Order #: 9603J45 -01 - 10

Reported: Apr 5, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040196BTEXEXA	GC040196BTEXEXA	GC040196BTEXEXA	GC040196BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9603H11-05	9603H11-05	9603H11-05	9603H11-05
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
Result:	0.15	0.16	0.16	0.46
MS % Recovery:	75	80	80	77
Dup. Result:	0.15	0.16	0.16	0.47
MSD % Recov.:	75	80	80	78
RPD:	0.0	0.0	0.0	2.2
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040196BSA	BLK040196BSA	LK040196BSA	BLK040196BSA
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
LCS Result:	0.18	0.18	0.19	0.53
LCS % Recov.:	90	90	95	88

MS/MSD LCS Control Limits	50-150	50-150	50-150	50-150
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*

Claudia Hirotsu  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9603J45.PPP <1>





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Project ID: 320-162.1A/0800, Oakland  
Matrix: Solid

Work Order #: 9603J45 -11, 12

Reported: Apr 5, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040196BTEXEXB	GC040196BTEXEXB	GC040196BTEXEXB	GC040196BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD #:	9603H11-04	9603H11-04	9603H11-04	9603H11-04
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
Result:	0.18	0.19	0.19	0.56
MS % Recovery:	90	95	95	93
Dup. Result:	0.18	0.18	0.19	0.56
MSD % Recov.:	90	90	95	93
RPD:	0.0	5.4	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040196BSB	BLK040196BSB	LK040196BSB	BLK040196BSB
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
LCS Result:	0.19	0.19	0.20	0.57
LCS % Recov.:	95	95	100	95

MS/MSD LCS Control Limits	50-150	50-150	50-150	50-150
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*

Claudia Hirotsu  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9603J45.PPP <2>





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Project ID: 320-162.1A/0800, Oakland  
Matrix: Liquid

Work Order #: 9603J45 -13, 15, 18

Reported: Apr 5, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040196BTEX20A	GC040196BTEX20A	GC040196BTEX20A	GC040196BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9603F82-06	9603F82-06	9603F82-06	9603F82-06
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	10	11	32
MS % Recovery:	100	100	110	107
Dup. Result:	10	10	10	30
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	9.5	6.5
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040196A	BLK040196A	BLK040196A	BLK040196A
Prepared Date:	4/1/96	4/1/96	4/1/96	4/1/96
Analyzed Date:	4/1/96	4/1/96	4/1/96	4/1/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	8.5	8.3	9.0	26
LCS % Recov.:	85	83	90	87

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9603J45.PPP <3>





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Project ID: 320-162.1A/0800, Oakland  
Matrix: Liquid

Work Order #: 9603J45 -14

Reported: Apr 5, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040296BTEX03A	GC040296BTEX03A	GC040296BTEX03A	GC040296BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9603E46-02	9603E46-02	9603E46-02	9603E46-02
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/2/96	4/2/96	4/2/96	4/2/96
Analyzed Date:	4/2/96	4/2/96	4/2/96	4/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	10	10	31
MS % Recovery:	100	100	100	103
Dup. Result:	10	10	10	31
MSD % Recov.:	100	100	100	103
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040296A	BLK040296A	BLK040296A	BLK040296A
Prepared Date:	4/2/96	4/2/96	4/2/96	4/2/96
Analyzed Date:	4/2/96	4/2/96	4/2/96	4/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	10	9.9	9.8	30
LCS % Recov.:	100	99	98	100

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110

Attention: Rhonda DeJung

Client Project ID: 320-162.1A/0800, Oakland  
Matrix: Liquid

Work Order #: 9603J45 -16, 17, 19, 20

Reported: Apr 5, 1996

### QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040396BTEX02A	GC040396BTEX02A	GC040396BTEX02A	GC040396BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9603F56-02	9603F56-02	9603F56-02	9603F56-02
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/3/96	4/3/96	4/3/96	4/3/96
Analyzed Date:	4/3/96	4/3/96	4/3/96	4/3/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	10	10	29
MS % Recovery:	100	100	100	97
Dup. Result:	11	9.9	9.4	31
MSD % Recov.:	110	99	94	103
RPD:	9.5	1.0	6.2	6.7
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040396A	BLK040396A	BLK040396A	BLK040396A
Prepared Date:	4/3/96	4/3/96	4/3/96	4/3/96
Analyzed Date:	4/3/96	4/3/96	4/3/96	4/3/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	10	9.7	9.4	29
LCS % Recov.:	100	97	94	97

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9603J45.PPP <5>



SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Chevron / PEG  
 REC. BY (PRINT): SR

WORKORDER: 9613 345  
 DATE OF LOG-IN: 3/30/96

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s) Present / <u>Absent</u> Intact / Broken*		17	a-b	P-6	VOA(2)	L1Q	3/26/96	
2. Custody Seal Nos.: Put in Remarks Section		18	a-d	P-7	VOA(4)		3/22/96	They say they got 4 but gave us 3
3. Chain-of-Custody Records: <u>Present</u> / Absent*		19	a-c	P-8	VOA(3)		↓	
4. Traffic Reports or Packing List: Present / <u>Absent</u>		20	b	P-9	↓	↓	3/20/96	
5. Airbill: Present / <u>Absent</u>								
6. Airbill No.:								
7. Sample Tags: <u>Present</u> / Absent* Sample Tag Nos.: <u>Listed</u> / Not Listed on Chain-of-Custody								
8. Sample Condition: <u>Intact</u> / Broken* / Leaking*								
9. Does information on custody reports, traffic reports and sample tags agree? <u>Yes</u> / No*								
10. Proper preservatives used: <u>Yes</u> / No*								
11. Date Rec. at Lab: <u>3-29-96</u>								
12. Temp. Rec. at Lab: <u>9°C</u>								
13. Time Rec. at Lab: <u>1700</u>								

SR  
3-29-96

\* If Circled, contact Project manager and attach record of resolution

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

9603549

Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 0890  
Facility Address 800 Center St, Oakland  
Consultant Project Number 320-162-1A  
Consultant Name Pacific Environmental Group  
Address 2025 Gateway Place Ste. 440 San Jose  
Project Contact (Name) Rhonda DeJong 95110  
(Phone) (408)441-7500 (Fax Number) 441-9102

Chevron Contact (Name) Mark Miller  
(Phone) \_\_\_\_\_  
Laboratory Name Sigorta  
Laboratory Release Number \_\_\_\_\_  
Samples Collected by (Name) Douglas Andrews  
Collection Date 3-22/26-96  
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Date	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed											Remarks				
								BTX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (8520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)								
P-8(6')	11	1	S	D	3/22/96	NP	Y	X															
P-8(12')	12	↓	↓	↓	↓	↓	↓	↓															
P-1	13	3	W	G		HCL																	
P-2	14	2																					
P-3		3																					
P-4	15				3/26/96																		
P-5	16																						
P-6	17	✓																					
P-7	18	4			3/29/96	HCL/NP																	
P-8	19	3																					
P-9	20	↓	↓	↓	3/24/96																		

NOTE:  
DO NOT BILL  
TB-LB SAMPLE

DA

PP → AMBER WAS broken in transport by sampler.

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Pacific</u>	Date/Time <u>3/27/96/4:50pm</u>	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. <u>5 Days</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	



Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

# Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 0800  
Facility Address 800 Center St., Oakland  
Consultant Project Number 320-162-1A  
Consultant Name Pacific Environmental Group  
Address 2025 Gateway Place Ste. 440 San Jose  
95110  
Project Contact (Name) Rhonda DeJury  
(Phone) (408)441-7500 (Number) 441-9102

Chevron Contact (Name) Mark Miller  
(Phone) \_\_\_\_\_  
Laboratory Name Sequora  
Laboratory Release Number Call 3140 per Rhonda  
Samples Collected by (Name) Douglas Andrews  
Collection Date 3/22/26/96  
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Date	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed <u>9603 J45</u>											Remarks						
								BTEX + TPH GAS (8020) + (8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)										
P-1(6')	1	1	S	D	3/22/96	NP	Y	X																	
P-1(10')	2																								
P-1(17')	3																								
P-2(6')	4																								
P-2(12')																									
P-3(3')																								→ HOLD	
P-3(6')																								→ HOLD	
P-3(10')	5																							→ HOLD	
P-3(16')	6																								
P-3(20')	7																								
P-7(6')	8																								
P-7(10')	9																								
P-7(12')																									
P-7(15')	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	→ HOLD

NOTE:  
DO NOT BILL  
TB-LB SAMPLE

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Pacific</u>	Date/Time <u>3-27-96/1:20pm</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 0880  
Facility Address 850 Center St, Oakland  
Consultant Project Number 320-162-1A  
Consultant Name Pacific Environmental Group  
Address 2025 Gateway Place Ste.440 San Jose  
95110  
Project Contact (Name) Rhonda Oetting  
(Phone) (408)441-7500 Number 441-9102

Chevron Contact (Name) Mark Miller  
(Phone) \_\_\_\_\_  
Laboratory Name Sigorta  
Laboratory Release Number 1013140, per Rhonda  
Samples Collected by (Name) Douglas Andrews  
Collection Date 3-22/26-96  
Signature Douglas Andrews

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Date	Sample Preservation	Lead (Yes or No)	Analyses To Be Performed											Remarks																				
								BTX + TPH GAS (8020 + 8015) <b>SAMPLE 2A</b>	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)	9603545																							
P-8(6')	11	1	S	D	3/22/96	NP	Y	X																															
P-8(12')	12	↓	↓	↓																																			
P-1	13	3	W	G		HCL																																	
P-2	14	2																																					
P-3		3																																					
P-4	15				3/26/96																																		
P-5	16																																						
P-6	17	✓																																					
P-7	18	4			3/22/96	HCL/NP																																	
P-8	19	3																																					
P-9	20	↓	↓	↓	3/24/96																																		

NOTE:  
DO NOT BILL  
TB-LB SAMPL

DA

PP → <sup>10</sup>  
APRIL NUMBER was  
broken in transp.  
by sampler.

Relinquished By (Signature) <u>Douglas Andrews</u>	Organization <u>PPG</u>	Date/Time <u>3/27/96/4:50pm</u>	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

# Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 0800  
Facility Address 800 Center St., Oakland  
Consultant Project Number 320-162-1A  
Consultant Name Pacific Environmental Group  
Address 2025 Gateway Place Ste. 440 San Jose  
Project Contact (Name) Khonda DeJoy 95110  
(Phone) (408)441-7500 (Number) 441-9102

Chevron Contact (Name) Mark Miller  
(Phone) \_\_\_\_\_  
Laboratory Name Sequora  
Laboratory Release Number \_\_\_\_\_  
Sample Collected by (Name) Douglas Andrews  
Collection Date 3/22/96  
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Date	Sample Preservation	Iced (Yes or No)	9603J49 Analyses To Be Performed										Remarks						
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)									
P-1(6')	01	1	S	D	3/24/96	NP	Y	X																
P-1(10')	02																							
P-1(17')	03																							
P-2(6')	04																							
P-2(18')																								
P-3(3')																							→ HOLD	
P-3(6')																							→ HOLD	
P-3(10')	05																						→ HOLD	
P-3(16')	06																							
P-3(20')	07																							
P-7(6')	08																							
P-7(10')	09																							
P-7(12')																								
P-7(15')	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	→ HOLD

NOTE:  
DO NOT BILL  
TB-LB SAMPLE

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>DeJoy</u>	Date/Time <u>3-27-96/H:DP</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	



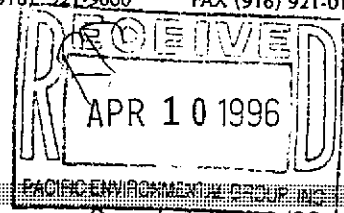
**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800,Oakland	PACIFIC ENVIRONMENTAL GROUP, INC. Sampled: 03/29/96 Received: 03/29/96 Analyzed: see below Reported: 04/09/96
Attention: Rhonda DeJung	Lab Proj. ID: 9603K41	

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9603K41-02 Sample Desc : LIQUID,P-7				
TRPH (SM 5520 B&F Mod)	mg/L	04/05/96	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Claudia Hirotsu  
Project Manager





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 320-162.1A/0800, Oakland Sample Descript: P-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603K41-01	Sampled: 03/28/96 Received: 03/29/96 Analyzed: 04/05/96 Reported: 04/09/96
--	--	---

QC Batch Number: GC040596BTEX03A  
Instrument ID: GCHP3

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	69000
Benzene	100	460
Toluene	100	9500
Ethyl Benzene	100	2000
Xylenes (Total)	100	9000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	115

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu  
Project Manager





Sequoia  
Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

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FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Proj. ID: 320-162.1A/0800, Oakland

Received: 03/29/96

Lab Proj. ID: 9603K41

Reported: 04/09/96

### LABORATORY NARRATIVE

GAS/BTEX: The sample P-3 was diluted 1:200.

SEQUOIA ANALYTICAL

Claudia Hirotsu  
Project Manager





Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Rhonda DeJung

Client Project ID: 320-162.1A / 0800, Oakland  
Matrix: LIQUID

Work Order #: 9603K41 02

Reported: Apr 9, 1996

### QUALITY CONTROL DATA REPORT

<b>Analyte:</b>	TRPH
<b>QC Batch#:</b>	OP0404965520EXB
<b>Analy. Method:</b>	SM 5520BF Mod.
<b>Prep. Method:</b>	SPE

**Analyst:** Garde-Alcayde  
**MS/MSD #:** BLK040496  
**Sample Conc.:** N.D.  
**Prepared Date:** 4/4/96  
**Analyzed Date:** 4/5/96  
**Instrument I.D.#:** MANUAL  
**Conc. Spiked:** 10 mg/L

**Result:** 8.8  
**MS % Recovery:** 88

**Dup. Result:** 12  
**MSD % Recov.:** 120

**RPD:** 31  
**RPD Limit:** 0-50

**LCS #:** BLK040596  
**Prepared Date:** 4/5/96  
**Analyzed Date:** 4/8/96  
**Instrument I.D.#:** MANUAL  
**Conc. Spiked:** 10 mg/L  
**LCS Result:** 8.1  
**LCS % Recov.:** 81

<b>MS/MSD LCS Control Limits</b>	60-140
--	--------

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9603K41.PPP <1>





Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Rhonda DeJung	Client Project ID: 320-162.1A / 0800, Oakland Matrix: LIQUID Work Order #: 9603K41 01	Reported: Apr 9, 1996
--	---	-----------------------

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC040596BTEX03A	GC040596BTEX03A	GC040596BTEX03A	GC040596BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9603F9702	9603F9702	9603F9702	9603F9702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/5/96	4/5/96	4/5/96	4/5/96
Analyzed Date:	4/5/96	4/5/96	4/5/96	4/5/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.2	9.8	29
MS % Recovery:	100	92	98	97
Dup. Result:	10	9.0	9.3	28
MSD % Recov.:	100	90	93	93
RPD:	0.0	2.2	5.2	3.5
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK040596	BLK040596	BLK040596	BLK040596
Prepared Date:	4/5/96	4/5/96	4/5/96	4/5/96
Analyzed Date:	4/5/96	4/5/96	4/5/96	4/5/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.5	10	29
LCS % Recov.:	100	95	100	97

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130

**Please Note:**  
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

*Claudia Hirotsu*  
Claudia Hirotsu  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9603K41.PPP <2>





SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME:  
REC. BY (PRINT):

PEG  
PH

WORKORDER:  
DATE OF LOG-IN:

9603K41  
A2100

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*	1	AC	P-3	3 vials	L	9/26	
2. Custody Seal Nos.:	Put in Remarks Section	2	AB	P-7	2 CG jar	J	d	
3. Chain-of-Custody Records:	Present / <u>Absent</u> *							
4. Traffic Reports or Packing List:	Present / <u>Absent</u> *							
5. Airbill:	Airbill / Sticker Present / <u>Absent</u> *							
6. Airbill No.:								
7. Sample Tags:	<u>Present</u> / Absent*							
Sample Tag Nos.:	<u>Listed</u> / Not Listed on Chain-of-Custody							
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*							
9. Does Information on custody reports, traffic reports and sample tags agree?	<u>Yes</u> / No*							
10. Proper preservatives used:	<u>Yes</u> / No*							
11. Date Rec. at Lab:	3/27/96							
12. Temp. Rec. at Lab:	9°C							
13. Time Rec. at Lab:	1630							

*Handwritten:* 3/29/96

\* If Circled, contact Project manager and attach record of resolution

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

# Chain-of-Custody-Record

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591		Chevron Facility Number <u>0800</u> Facility Address <u>800 Center St., Oakland, CA</u> Consultant Project Number <u>320-162.WA</u> Consultant Name <u>Pacific Environmental Group</u> Address <u>2025 Gateway Place Ste.440 San Jose</u> Project Contact (Name) <u>Chonda De Jung</u> 95110 (Phone) <u>(408)441-7500</u> Number <u>441-9102</u>	Chevron Contact (Name) <u>Mark Miller</u> (Phone) _____ Laboratory Name <u>Sequora</u> Laboratory Release Number <u>6113140</u> Samples Collected by (Name) <u>Douglas Andrew</u> Collection Date <u>3-28-96</u> Signature <u>Doug</u>
--	--	--	--

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Diatomic	Time	Sample Preservation	Lead (Yes or No)	Analyses To Be Performed													Remarks																	
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Hf (ICAP or AA)																							
P-3	1	3	W	G	3-28-96	HCL	Y	X																														
P-7	2	2	W	G	↓	↓	↓				X																											

NOTE: DO NOT BILL TB-LB SAMPLE

9603K41

Remarks

Relinquished By (Signature) <u>Doug</u>	Organization <u>Pacific</u>	Date/Time <u>3/29/96/4:30</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days <input checked="" type="checkbox"/> 10 Days As Contracted
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) _____	Organization _____	Date/Time <u>16:30</u>	