

# CAMBRIA

PROTECTION  
February 26, 1998

50 MAR -3 PM b/t b/t

Mr. Larry Seto  
Alameda County  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room #250  
Alameda, California 94502-6577

Re: **Subsurface Investigation**  
Former Shell Service Station  
2300 Santa Clara Avenue  
Alameda, California  
WIC #204-0072-0908  
Cambria Project #240-0477-6

Dear Mr. Seto:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is pleased to present the results of the subsurface investigation conducted on January 26, 1998, at the site referenced above. The investigation objective was to assess whether the Shell station that formerly operated at this location is the source of hydrocarbons detected in Bill Chun Service Station well MW-8 immediately adjacent to the site. A site background, investigation procedures, investigation results, and conclusions are presented below.

## SITE BACKGROUND

**Site Description:** The site is located on the southern corner of the intersection of Santa Clara Avenue and Oak Street in Alameda, California (Figure 1). The site is currently a section of a parking lot for Longs Drugs. It was an operating Shell Service Station from 1922 to 1950. Since that time it has been a paved parking lot. The Longs Drugs building is located immediately to the southeast of the site. Adjacent properties are both commercial and residential. The former Bill Chun Service Station is located to the northeast directly across Santa Clara Avenue. The groundwater flow direction in the area is north to northeast according to the Fugro West, Inc. (Fugro) January 1996 *Results of Free Product Recovery, Additional Ground Water Assessment, and Quarterly Ground Water Monitoring Activities* for the former Bill Chun Service Station.

**Previous Investigations:** Weiss Associates (WA) submitted a *Phase I Environmental Site Assessment Report* dated July 15, 1996. WA found that four underground storage tanks were installed at the site in August 1922. They were removed in January 1939 and replaced by five others. These five were subsequently removed in November 1950 when the station was abandoned.

CAMBRIA  
ENVIRONMENTAL  
TECHNOLOGY, INC.  
1144 65TH STREET,  
SUITE B

OAKLAND,  
CA 94608  
Ph: (510) 420-0700  
Fax: (510) 420-9170

Fugro performed the previous subsurface investigations at the former Bill Chun Service Station. Fugro has installed one vapor extraction well, thirteen soil borings, and eleven monitoring wells. Well MW-8, located at the northeastern edge of the former Shell site at Santa Clara Avenue, has contained detectable concentrations of benzene, toluene, ethylbenzene, xylenes, (BTEX) and petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd).

## **INVESTIGATION PROCEDURES**

Cambria obtained an Agreement for Right of Entry between Shell and Longs Drugs. Cambria based the proposed boring locations on a historical review which provided the approximate location of station buildings and canopies circa 1950 (Figure 1). Cambria's standard field procedures for GeoProbe® borings are included as Attachment A.

During the boring installation, Cambria noted an Oil Storage Tank Fill pipe near the northwestern corner of the Longs Drugs building.

### **Soil Borings**

**Personnel Present:** Geologists Christina Empedocles and Aubrey Coot directed the field sampling, working under the supervision of California Professional Engineer Owen Ratchye.

**Permit:** Cambria obtained Drilling Permit #98WRO31 for the eight borings from the Alameda County Public Works Agency. A copy of the permit is included as Attachment B.

**Drilling Company:** Gregg Drilling of Martinez, California (C-57 License #485-165).

**Drilling Date:** January 26, 1998.

**Drilling Methods:** GeoProbe® (hydraulic push with roto-hammer).

**Number of Borings:** Eight (GP-A to GP-H).

**Boring Depths:** 11.0 to 13.0 ft. Boring logs are included as Attachment C.

**Ground Water Depths:** Ground water was encountered in each of the soil borings at approximately 8.0 to 9.5 ft depth (Attachment C).

**Sediment Lithology:** The site subsurface consists of fine sands with silt of moderate to high estimated permeability to the total explored depth of 13 ft (Attachment C).

**Chemical Analyses:** Selected samples were analyzed for total lead using EPA Method 6010, TPHd and TPHg using modified EPA Method 8015, methyl tert-butyl ether (MTBE) and BTEX using EPA Method 8020. Water and soil samples collected from GP-C, GP-D, GP-E, and GP-H were also analyzed for volatile organic compounds (VOCs) by EPA Method 8240. Additional soil samples from GP-A, GP-C, GP-E, and GP-G were analyzed for TPHd and TPHg. Laboratory analytical results are summarized in Tables 1 and 2, and the analytical report is presented as Attachment D.

**Soil Disposal:** Approximately 10 gallons of soil cuttings were enveloped in plastic sheeting and left on site for future disposal.

**Backfill Method:** Boring locations were backfilled with cement grout and capped with asphalt patch for the top six inches to match the existing grade.

## INVESTIGATION RESULTS

**Chemicals of Concern (COCs) Distribution in Soil:** No lead, TPHg, MTBE, BTEX, or VOCs were detected in soil from any of the borings. The only COC detected was low concentrations of TPHd. The highest TPHd concentration detected was only 6.9 mg/kg in sample GP-B-6.0'.

**COCS Distribution in Ground Water:** Lead and ~~TPHg~~ were detected in ground water from most of the boring locations, at maximum concentrations of  $400\mu\text{g/L}$  and  $1,500\mu\text{g/L}$ , respectively. Toluene at  $0.58\mu\text{g/L}$  and acetone at  $56\mu\text{g/L}$  were detected in ground water from GP-H. Acetone is a common laboratory contaminant and easily degradable. Therefore, it is unlikely that the acetone would be from a service station at the site 48 years ago. No MTBE, BTEX, or VOCs were detected in water at any other boring locations.

Mr. Larry Seto  
February 26, 1998

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## CONCLUSIONS

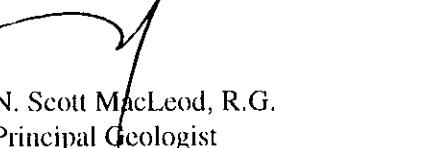
Bill Chun Service Station monitoring well MW-8 contained 7,400 µg/L TPHg, 200 µg/L benzene, 40 µg/L toluene, 140 µg/L ethylbenzene, and 190 µg/L xylenes. However, no TPHg, benzene, ethylbenzene, or xylenes were detected in any of the ground water samples collected beneath the former Shell site. In addition, no TPHg, BTEX, or VOCs were detected in any of the soil samples. Therefore, it cannot be concluded that a Shell station that was removed 48 years ago is the source of the hydrocarbons detected in well MW-8.

## CLOSING

We appreciate the opportunity to work with you on this project. If you have any questions or require additional information, please contact us at (510) 420-0700.

Sincerely,  
**Cambria Environmental Technology, Inc.**

  
Owen Ratchye, P.E.  
Project Engineer

  
N. Scott MacLeod, R.G.  
Principal Geologist



Attachments: A - Standard Field Procedures for GeoProbe®  
B - Drilling Permit  
C - Soil Boring Logs  
D - Laboratory Analytical Results

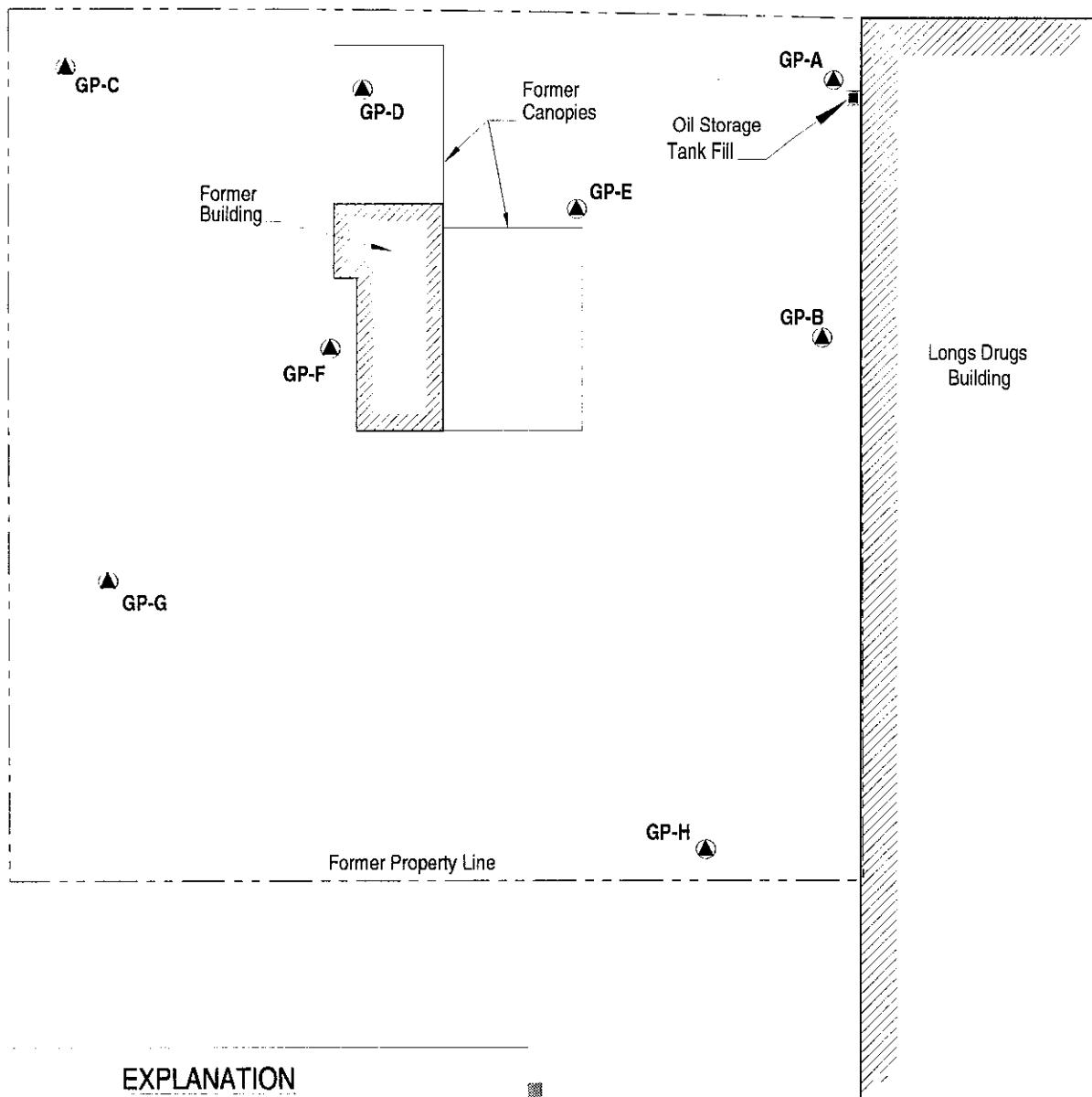
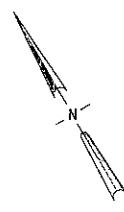
cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553  
Rebecca Powlan, Long's Drug Stores California, Inc., P.O. Box 5222, Walnut Creek,  
California 94596

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OAK STREET

MW-8

SANTA CLARA AVE.



### EXPLANATION

- GP-A ▲ GeoProbe Boring Location
- MW-8 ● Existing Ground Water Monitoring Well Location -  
Former Bill Chun Service Station

0 10 20  
Scale (ft)



**CAMBRIA**  
Environmental Technology, Inc.

Former Shell Service Station  
2300 Santa Clara Avenue  
Alameda, California

F:\PROJECTS\SHELL\ALA2300\FIGURES\1GEO-BOR.DWG

Site Map With  
GeoProbe Boring Locations

FIGURE  
**1**

# CAMBRIA

**Table 1. Soil Analytical Data - Former Shell Service Station WIC# 204-0072-0908, 2300 Santa Clara Avenue, Alameda, California**

Sample ID and Depth	Date Sampled	Lead	TPHd	TPHg	MTBE	Benzene (mg/kg)	Toluene	Ethylbenzene	Xylenes	VOCs (µg/kg)
GP-A-5.0'	1/26/98	<5.0	5.7 <sup>d</sup>	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-A-9.0'	1/26/98	---	1.9	<1.0	---	---	---	---	---	---
GP-B-6.0'	1/26/98	<5.0	6.9	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-C-6.0'	1/26/98	<0.25	2.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-C-10.0'	1/26/98	---	1.7	<1.0	---	---	---	---	---	---
GP-D-6.0'	1/26/98	<5.0	4.5	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-E-6.0 <sup>a</sup>	1/26/98	<5.0	1.0	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-E-10.0'	1/26/98	---	<1.0	<1.0	---	---	---	---	---	---
GP-F-5.0'	1/26/98	<5.0	2.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-G-7.0 <sup>b</sup>	1/26/98	<5.0	6.0	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-H-6.0'	1/26/98	<5.0	3.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-H-9.5'	1/26/98	---	5.4, 1.6 <sup>c</sup>	<1.0	---	---	---	---	---	ND <sup>d</sup>

**Abbreviations and Notes:**

Lead by EPA Method 6010

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

MTBE = Methyl tert-butyl ether by EPA Method 8020

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020

VOCs = Volatile organic compounds by EPA Method 8240

mg/kg = Milligrams per kilogram

µg/kg = Micrograms per kilogram

<n = Below detection limit of n mg/kg

--- = Not analyzed

ND = No VOCs were detected; see laboratory analytical report for specific detection limits

a = This sample ID is incorrectly reported as GPE-E-6.0' in the laboratory analytical report

b = This sample matrix is incorrectly reported as liquid in the laboratory analytical report

c = This sample was analyzed for TPHd twice; both results are presented

d = Sample analyzed out of hold time

**Table 2. Ground Water Analytical Data - Former Shell Service Station WIC# 204-0072-0908, 2300 Santa Clara Avenue, Alameda, California**

Sample ID	Date Sampled	Lead	TPHd	TPHg	MTBE	Benzene ( $\mu\text{g/L}$ )	Toluene	Ethylbenzene	Xylenes	VOCs
GP-A	1/26/98	16	120	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP-B	1/26/98	120	50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP-C	1/26/98	20	<50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-D	1/26/98	15	220 ✓	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-E	1/26/98	400	320	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-F	1/26/98	44	150 ✓	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-G	1/26/98	20	<50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP-H	1/26/98	40	1,500	<50	<2.5	<0.50	0.58	<0.50	<0.50	a

**Abbreviations and Notes:**

Lead by EPA Method 6010

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

MTBE = Methyl tert-butyl ether by EPA Method 8020

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020

VOCs = Volatile organic compounds by EPA Method 8240

mg/L = Milligrams per liter

 $\mu\text{g/L}$  = Micrograms per liter<n = Below detection limit of n  $\mu\text{g/L}$ 

--- = Not analyzed

ND = No VOCs were detected; see laboratory analytical report for specific detection limits

a = No VOCs were detected with the exception of acetone at 56  $\mu\text{g/L}$ .

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**ATTACHMENT A**

Standard Field Procedures for GeoProbe® Sampling

# CAMBRIA

## STANDARD FIELD PROCEDURES FOR GEOPROBE® SAMPLING

This document describes Cambria Environmental Technology's standard field methods for GeoProbe® soil and ground water sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality and to submit samples for chemical analysis.

### **Soil Classification/Logging**

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e., sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color,
- Approximate water or separate-phase hydrocarbon saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e., cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

### **Soil Sampling**

GeoProbe® soil samples are collected from borings driven using hydraulic push technologies. A minimum of one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples can be collected near the water table and at lithologic changes. Samples are collected using samplers lined with polyethylene or brass tubes driven into undisturbed sediments at the bottom of the borehole. The ground surface immediately adjacent to the boring is used as a datum to measure sample depth. The horizontal location of each boring is measured in the field relative to a permanent on-site reference using a measuring wheel or tape measure.

Drilling and sampling equipment is steam-cleaned or washed prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

### **Sample Storage, Handling and Transport**

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon® tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

# CAMBRIA

## **Field Screening**

After a soil sample has been collected, soil from the remaining tubing is placed inside a sealed plastic bag and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable GasTech® or photoionization detector measures volatile hydrocarbon vapor concentrations in the bag's headspace, extracting the vapor through a slit in the plastic bag. The measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

## **Grab Ground Water Sampling**

Ground water samples are collected from the open borehole using bailers, advancing disposable Tygon® tubing into the borehole and extracting ground water using a diaphragm pump, or using a hydro-punch style sampler with a bailer or tubing. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4° C, and transported under chain-of-custody to the laboratory.

## **Duplicates and Blanks**

Blind duplicate water samples are usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory quality assurance/quality control (QA/QC) blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

## **Grouting**

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

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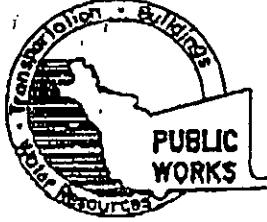
**ATTACHMENT B**

Drilling Permit

JAN-21-1998 14:55

CAMBRIA

510 420 9170 P.01/01



## ALAMEDA COUNTY PUBLIC WORKS AGENCY

## WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651  
 PHONE (510) 670-5975 ANDREAS GODFREY FAX (510) 670-5262  
 (510) 670-5248 ALVIN KAN

## DRILLING PERMIT APPLICATION

## FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2500 SANTA CLARA  
ALAMEDA, CA

California Coordinates Source FL CCE R. Accuracy ± ft.  
 JCN        APN       

CLIENT  
 Name SHELL OIL PRODUCTS, CO MN: ALEX (A.G.) PÉREZ  
 Address PO Box 8680 Phone 883-5017  
 City MARTINIQUE, CA Zip 94583

APPLICANT  
 Name                                  - CAMBRIA ENVIRON-  
 MENTAL, INC. Fax 429-7170  
 Address 1144 65th ST. SUITE C Phone 429-8900  
 City OAKLAND Zip 94623

## TYPE OF PROJECT

Well Construction	Geotechnical Investigation
Cathodic Protection	<input type="checkbox"/> General
Water Supply	<input type="checkbox"/> Contamination
Monitoring	<input checked="" type="checkbox"/> Well Destruction

## PROPOSED WATER SUPPLY WELL USE

New Domestic <input type="checkbox"/>	Replacement Domestic <input type="checkbox"/>
Municipal <input type="checkbox"/>	Irrigation <input type="checkbox"/>
Industrial <input type="checkbox"/>	Other <u>160 PEOPLE</u> <input checked="" type="checkbox"/>

## DRILLING METHOD:

Mud Rotary <input type="checkbox"/>	Air Rotary <input type="checkbox"/>	Auger <input type="checkbox"/>
Cable <input type="checkbox"/>	Other <input checked="" type="checkbox"/> <u>GEOPROBE</u>	

DRILLER'S LICENSE NO. CST-485165

## WELL PROJECTS

Drill Hole Diameter <u>4</u> in.	Maximum Depth <u>40</u> ft.
Casing Diameter <u>2</u> in.	Number <u>1</u>
Surface Seal Depth <u>4</u> ft.	

## GEOTECHNICAL PROJECTS

Number of Borings <u>6-8</u>	Maximum Depth <u>20</u> ft.
Hole Diameter <u>2</u> in.	

ESTIMATED STARTING DATE 1/26/98  
 ESTIMATED COMPLETION DATE 1/26/98

I hereby agree to comply with all requirements of this permit and  
 Alameda County Ordinance No. 73-98

APPLICANT'S  
 SIGNATURE                                 

DATE 1/21/98

## FOR OFFICE USE

PERMIT NUMBER 98WR031  
 WELL NUMBER         
 APN       

## PERMIT CONDITIONS

Circled Permit Requirements Apply

## A. GENERAL

- ① A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
- ② Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
- ③ Permit is void if project not begun within 90 days of approval date.

## B. WATER SUPPLY WELLS

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS  
 INCLUDING PIEZOMETERS

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

## D. GEOTECHNICAL

Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material.  
 In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

## E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

## F. WELL DESTRUCTION

See attached.

## G. SPECIAL CONDITIONS

APPROVED                                 DATE

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**ATTACHMENT C**

Soil Boring Logs

## BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

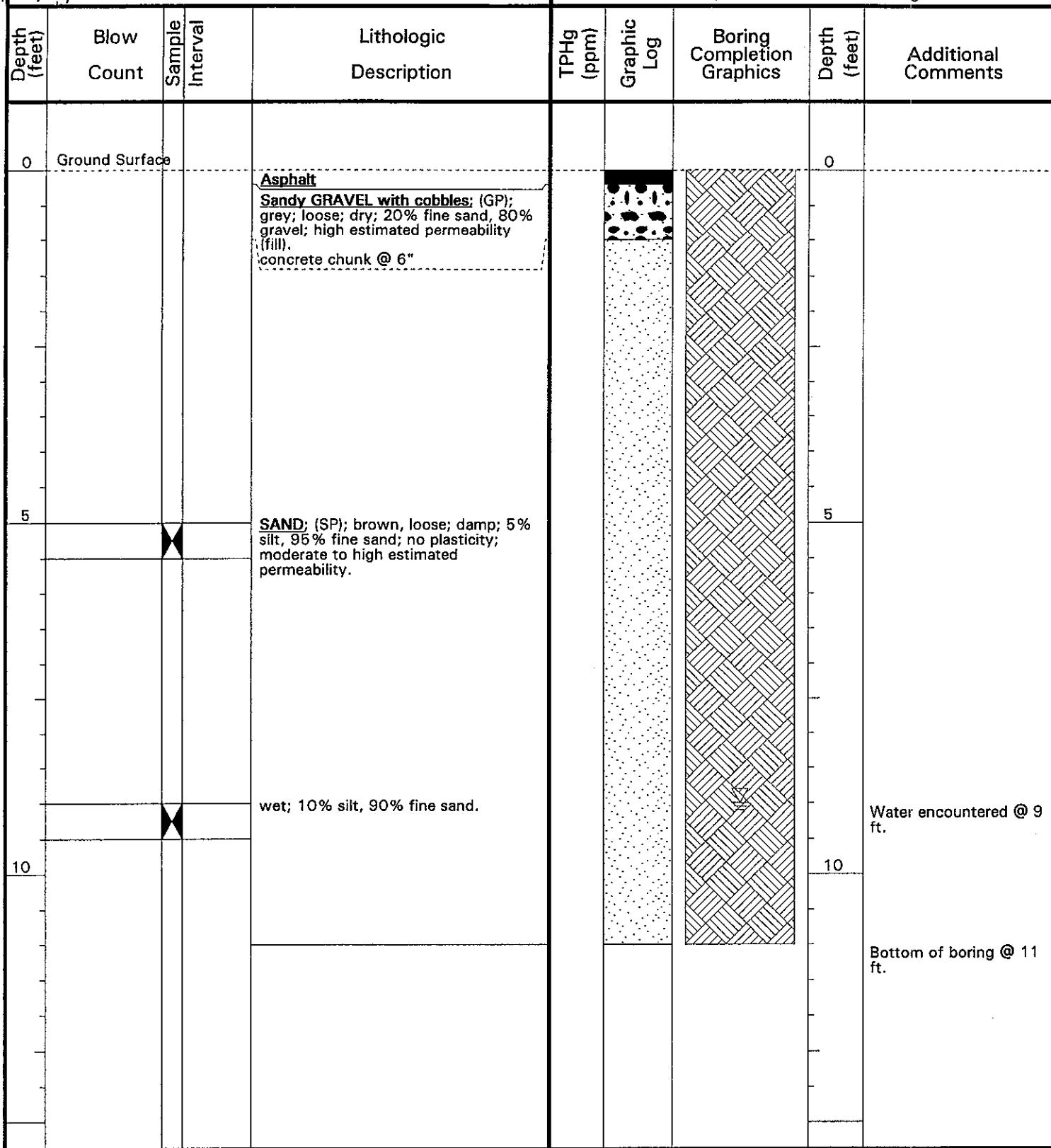
Phase

Task 5

Boring ID GP-A  
Location 2300 Santa Clara Avenue, Alameda

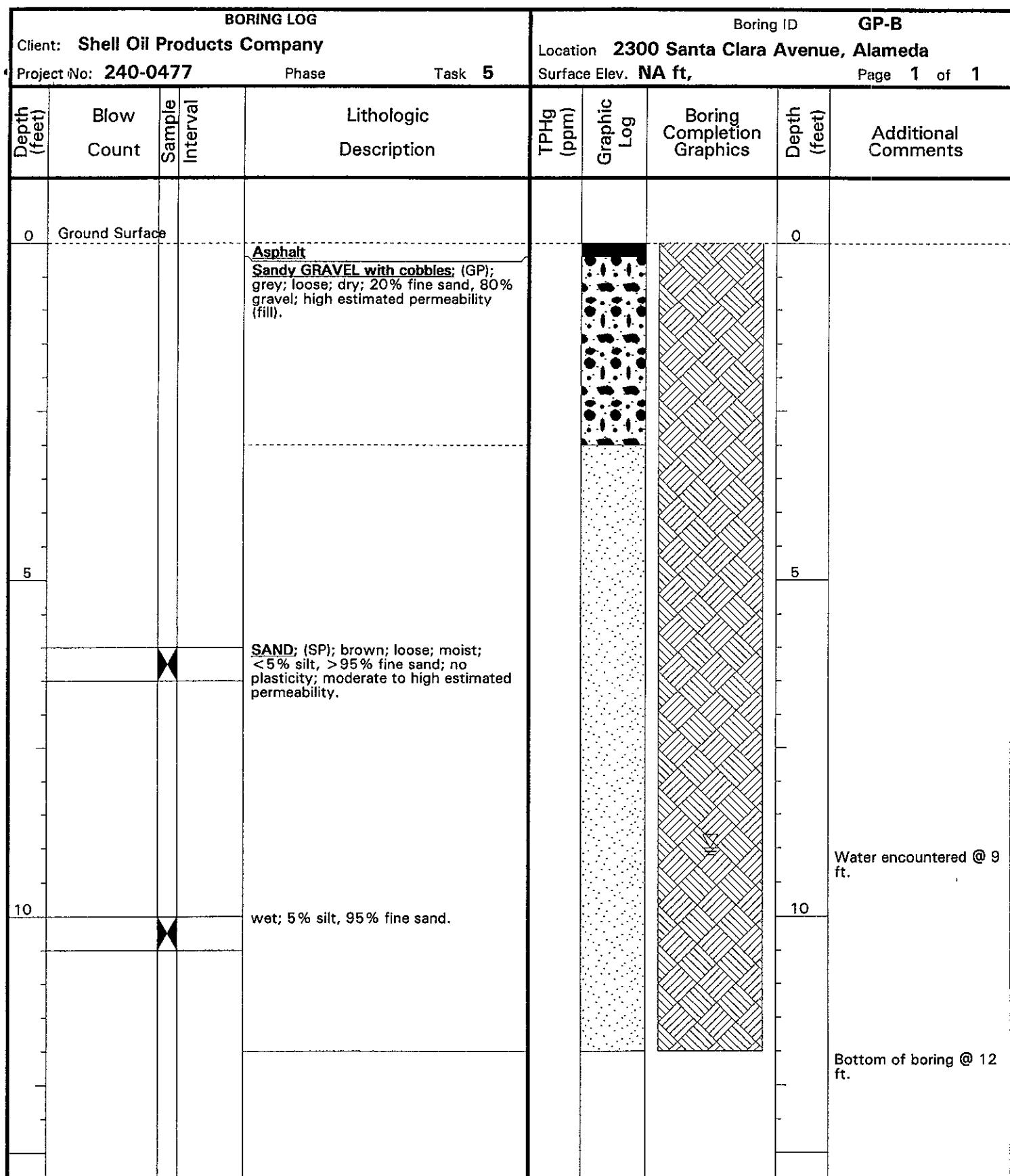
Surface Elev. NA ft,

Page 1 of 1



Driller <u>Gregg</u>	Drilling Started <u>1/26/98</u>	Notes: <u>See site map. 2"</u>
Logged By <u>Christina Empedocles</u>	Drilling Completed <u>1/26/98</u>	<u>diameter Geoprobe boring.</u>
Water-Bearing Zones <u>NA</u>	Grout Type <u>Portland Type I/II</u>	

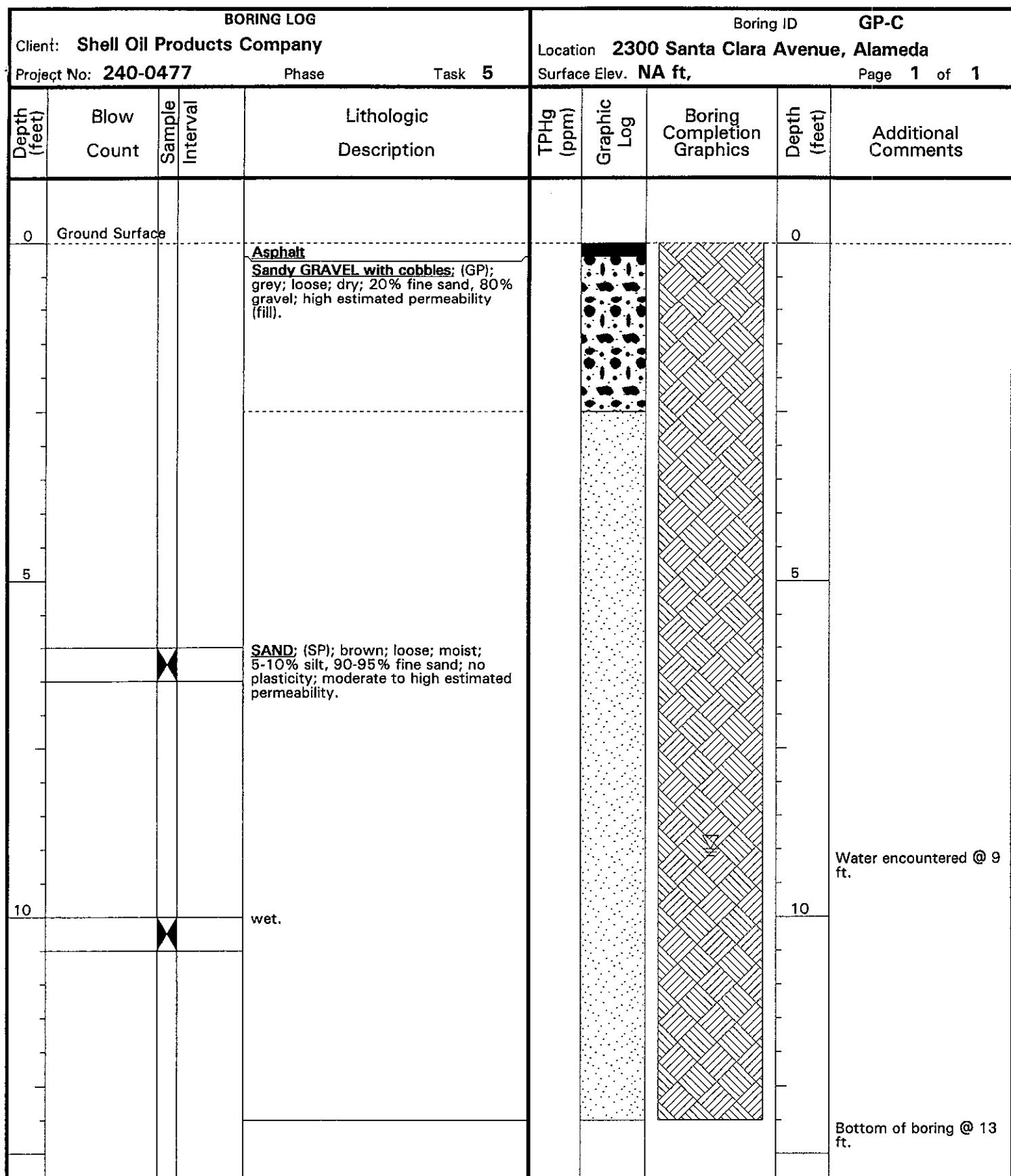
BOR 24477 2/18/98



Driller <u>Gregg</u>	Drilling Started <u>1/26/98</u>	Notes: <u>See site map. 2"</u>
Logged By <u>Christina Empedocles</u>	Drilling Completed <u>1/26/98</u>	<u>diameter Geoprobe boring.</u>
Water-Bearing Zones <u>NA</u>	Grout Type <u>Portland Type I/II</u>	

BOR 24477 2/18/98

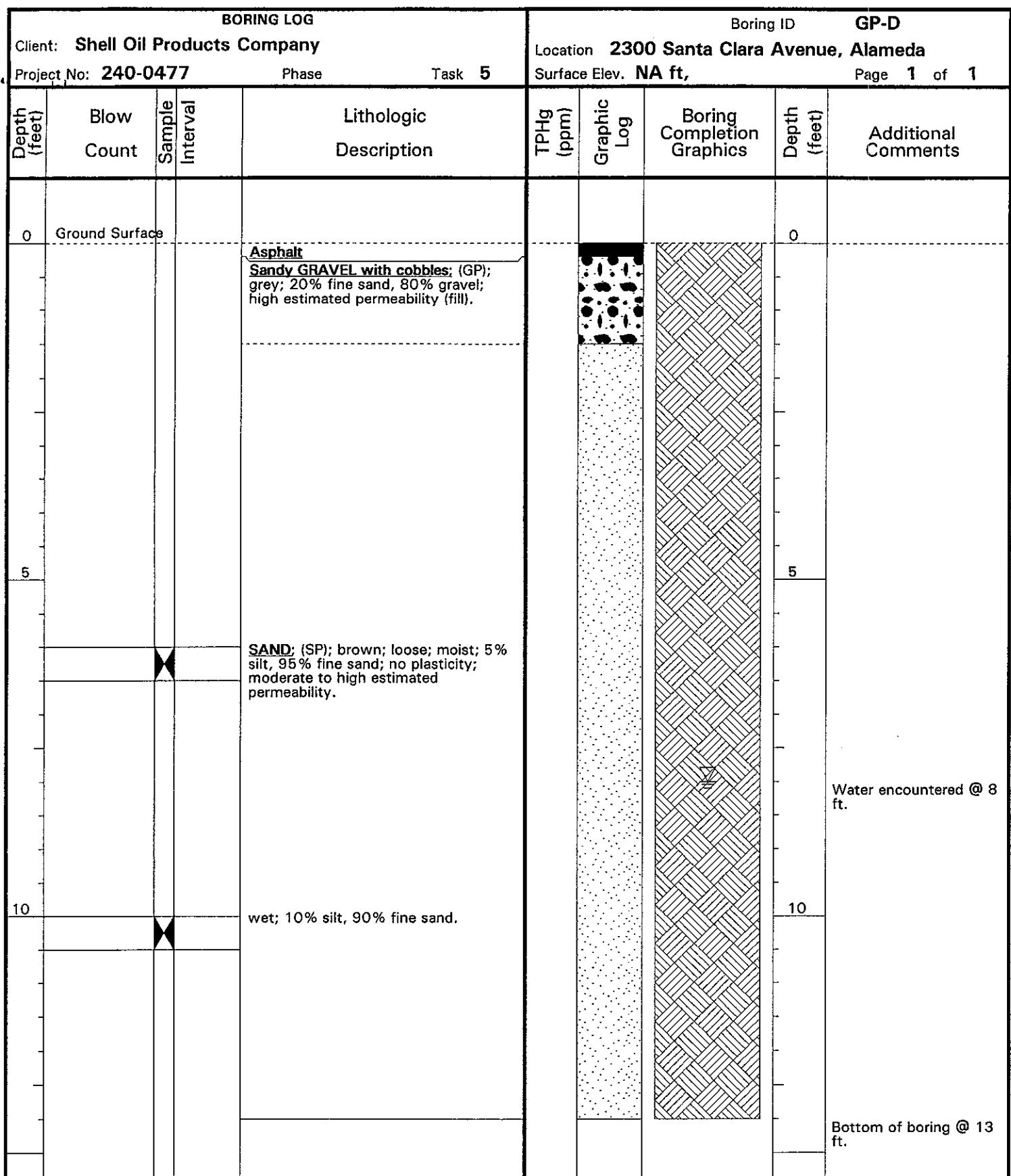
Cambria Environmental Technology, Inc.



Driller Gregg	Drilling Started 1/26/98	Notes: See site map. 2"
Logged By Christina Empedocles	Drilling Completed 1/26/98	diameter Geoprobe boring.
Water-Bearing Zones NA	Grout Type Portland Type I/II	

BOR 24477 2/18/98

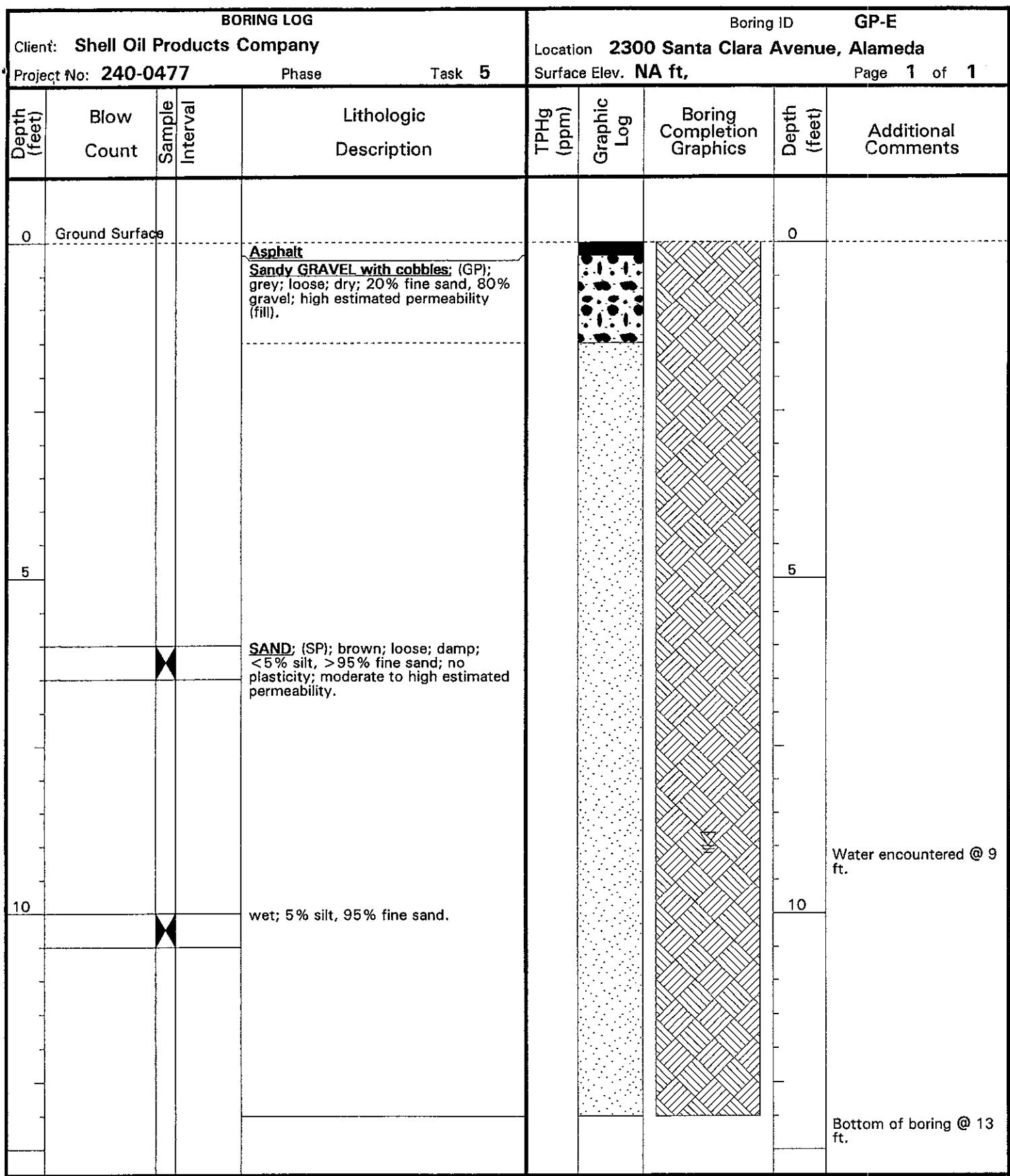
Cambria Environmental Technology, Inc.



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Water-Bearing Zones <u>NA</u>	Grout Type <u>Portland Type I/II</u>	

BOR 24477 2/18/98

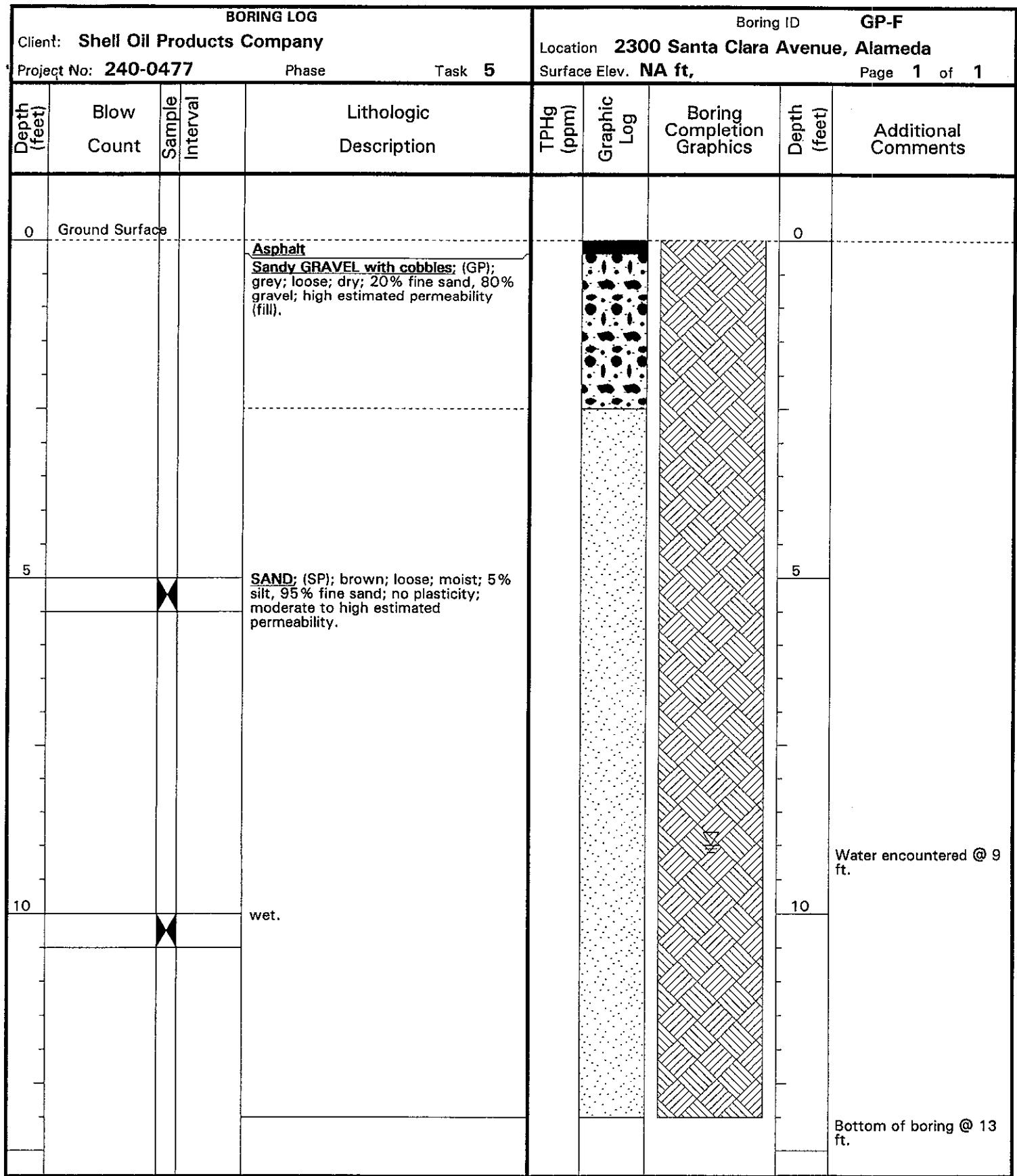
Cambria Environmental Technology, Inc.



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BOR 24477 2/18/98

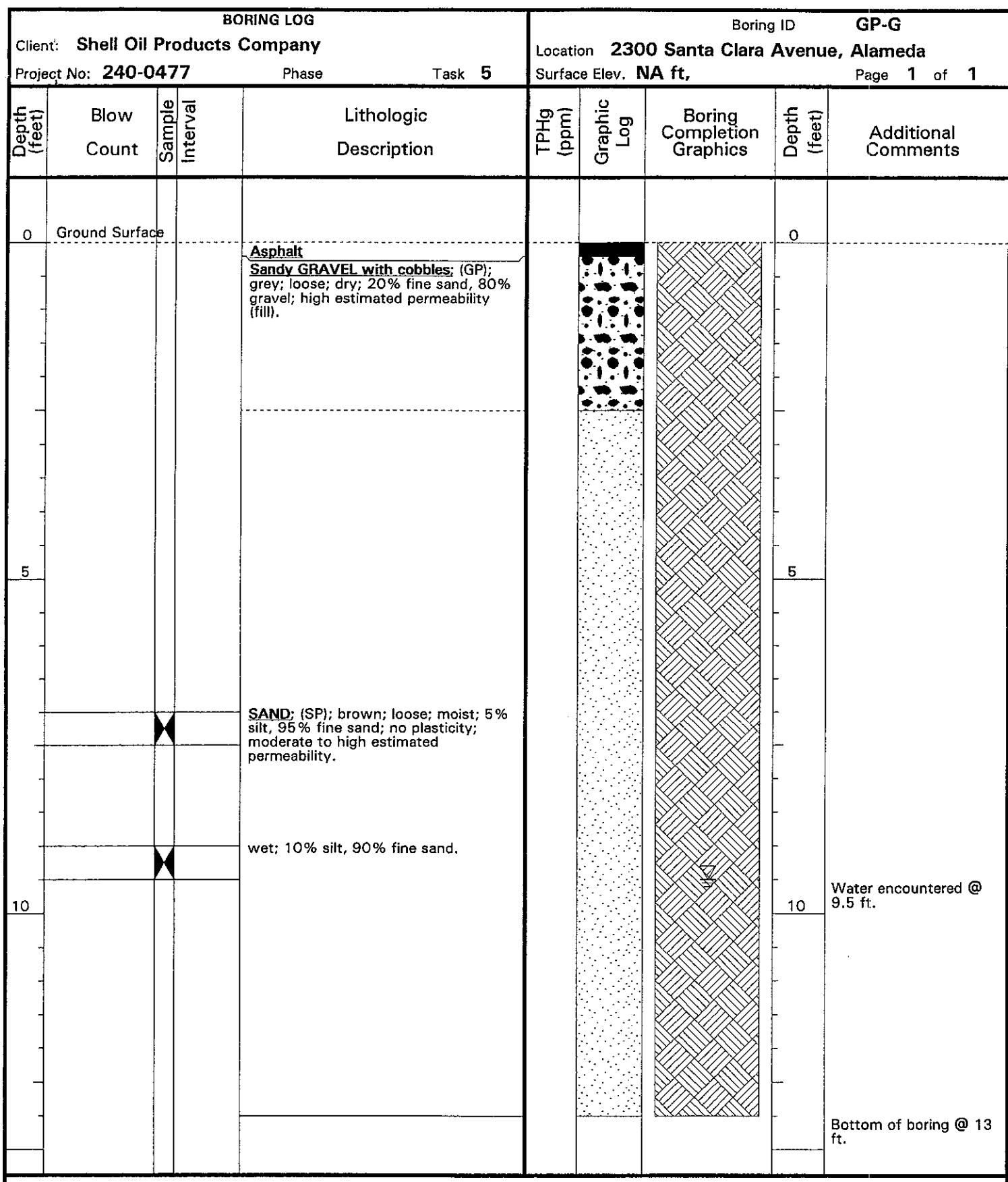
Cambria Environmental Technology, Inc.



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BOR 24477 2/18/98

Cambria Environmental Technology, Inc.



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Water-Bearing Zones <u>NA</u>	Grout Type <u>Portland Type I/II</u>	

BOR 24477 2/18/98

**Cambria Environmental Technology, Inc.**

BORING LOG					Boring ID	GP-H		
Client: Shell Oil Products Company Project No: 240-0477			Phase	Task 5	Location 2300 Santa Clara Avenue, Alameda	Page 1 of 1		
Depth (feet)	Blow Count	Sample Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth (feet)	Additional Comments
0	Ground Surface		<b>Asphalt</b> <b>Sandy GRAVEL with cobbles;</b> (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).				0	
5			<b>SAND;</b> (SP); brown; medium dense; wet; 10% silt, 90% fine sand; no plasticity; moderate to high estimated permeability.				5	
8.5								Water encountered @ 8.5 ft.
10							10	
13								Bottom of boring @ 13 ft.

Driller <u>Gregg</u>	Drilling Started <u>1/26/98</u>	Notes: <u>See site map, 2"</u>
Logged By <u>Christina Empedocles</u>	Drilling Completed <u>1/26/98</u>	<u>diameter Geoprobe boring.</u>
Water-Bearing Zones <u>NA</u>	Grout Type <u>Portland Type I/II</u>	

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

CAMBRIA

**ATTACHMENT D**

Laboratory Analytical Results



# Sequoia Analytical

680 Chesapeake Drive  
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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Project: Shell 2300 Santa Clara

Enclosed are the results from samples received at Sequoia Analytical on January 28, 1998.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9801F42 -01	SOLID, GP-A 5.0'	01/26/98	Lead
9801F42 -01	SOLID, GP-A 5.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -02	LIQUID, GP-A	01/26/98	Lead
9801F42 -02	LIQUID, GP-A	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -03	SOLID, GP-B 6.0'	01/26/98	Lead
9801F42 -03	SOLID, GP-B 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -04	LIQUID, GP-B	01/26/98	Lead
9801F42 -04	LIQUID, GP-B	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -05	SOLID, GP-C 6.0'	01/26/98	8240 Volatile Organic Co
9801F42 -05	SOLID, GP-C 6.0'	01/26/98	Lead
9801F42 -05	SOLID, GP-C 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -05	SOLID, GP-C 6.0'	01/26/98	TPHD_S Extractable TPH
9801F42 -06	LIQUID, GP-C	01/26/98	Lead
9801F42 -06	LIQUID, GP-C	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -06	LIQUID, GP-C	01/26/98	8240 Volatile Organic Co
9801F42 -07	SOLID, GP-D 6.0'	01/26/98	8240 Volatile Organic Co
9801F42 -07	SOLID, GP-D 6.0'	01/26/98	Lead
9801F42 -07	SOLID, GP-D 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -07	SOLID, GP-D 6.0'	01/26/98	TPHD_S Extractable TPH
9801F42 -08	LIQUID, GP-D	01/26/98	8240 Volatile Organic Co
9801F42 -08	LIQUID, GP-D	01/26/98	TPHD_W Extractable TPH

**SEQUOIA ANALYTICAL**





# Sequoia Analytical

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FAX (916) 921-0100

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9801F42 -08	LIQUID, GP-D	01/26/98	Lead
9801F42 -08	LIQUID, GP-D	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -09	SOLID, GPE-E 6.0'	01/26/98	8240 Volatile Organic Co
9801F42 -09	SOLID, GPE-E 6.0'	01/26/98	Lead
9801F42 -09	SOLID, GPE-E 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -09	SOLID, GPE-E 6.0'	01/26/98	TPHD_S Extractable TPH
9801F42 -10	LIQUID, GP-E	01/26/98	8240 Volatile Organic Co
9801F42 -10	LIQUID, GP-E	01/26/98	TPHD_W Extractable TPH
9801F42 -10	LIQUID, GP-E	01/26/98	Lead
9801F42 -10	LIQUID, GP-E	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -11	LIQUID, GP-H	01/26/98	8240 Volatile Organic Co
9801F42 -11	LIQUID, GP-H	01/26/98	TPHD_W Extractable TPH
9801F42 -11	LIQUID, GP-H	01/26/98	Lead
9801F42 -11	LIQUID, GP-H	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F42 -12	SOLID, GP-F 5.0'	01/26/98	8240 Volatile Organic Co
9801F42 -12	SOLID, GP-F 5.0'	01/26/98	Lead
9801F42 -12	SOLID, GP-F 5.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F42 -12	SOLID, GP-F 5.0'	01/26/98	TPHD_S Extractable TPH

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Project Manager





# Sequoia Analytical

680 Chesapeake Drive      Redwood City, CA 94063      (650) 364-9600  
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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Project: Shell 2300 Santa Clara

Enclosed are the results from samples received at Sequoia Analytical on January 28, 1998.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9801F43 -13	LIQUID, GP-F	01/26/98	8240 Volatile Organic Co
9801F43 -13	LIQUID, GP-F	01/26/98	TPHD_W Extractable TPH
9801F43 -13	LIQUID, GP-F	01/26/98	Lead
9801F43 -13	LIQUID, GP-F	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F43 -14	LIQUID, GP-G	01/26/98	Lead
9801F43 -14	LIQUID, GP-G	01/26/98	TPGBMW Purgeable TPH/BTEX
9801F43 -15	SOLID, GP-G 7.0'	01/26/98	Lead
9801F43 -15	SOLID, GP-G 7.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
9801F43 -16	SOLID, GP-H 6.0'	01/26/98	Lead
9801F43 -16	SOLID, GP-H 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Project Manager





**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Client Proj. ID: Shell 2300 Santa Clara  
Lab Proj. ID: 9801F42

Sampled: 01/26/98  
Received: 01/28/98  
Analyzed: see below

Attention: Aubrey Cool

Reported: 02/04/98

### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9801F42-01 Sample Desc : SOLID,GP-A 5.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.
Lab No: 9801F42-02 Sample Desc : LIQUID,GP-A				
Lead	mg/L	02/02/98	0.0050	0.016
Lab No: 9801F42-03 Sample Desc : SOLID,GP-B 6.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.
Lab No: 9801F42-04 Sample Desc : LIQUID,GP-B				
Lead	mg/L	02/02/98	0.010	.12
Lab No: 9801F42-05 Sample Desc : SOLID,GP-C 6.0'				
Lead	mg/Kg	01/30/98	0.25	N.D.
Lab No: 9801F42-06 Sample Desc : LIQUID,GP-C				
Lead	mg/L	02/02/98	0.0050	0.020
Lab No: 9801F42-07 Sample Desc : SOLID,GP-D 6.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager





Sequoia  
Analytical

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819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 2300 Santa Clara Lab Proj. ID: 9801F42	Sampled: 01/26/98 Received: 01/28/98 Analyzed: see below
Attention: Aubrey Cool		Reported: 02/04/98

### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9801F42-08 Sample Desc : LIQUID,GP-D				
Lead	mg/L	02/02/98	0.0050	0.015
Lab No: 9801F42-09 Sample Desc : SOLID,GPE-E 6.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.
Lab No: 9801F42-10 Sample Desc : LIQUID,GP-E				
Lead	mg/L	02/02/98	0.050	0.40
Lab No: 9801F42-11 Sample Desc : LIQUID,GP-H				
Lead	mg/L	02/02/98	0.0050	0.040
Lab No: 9801F42-12 Sample Desc : SOLID,GP-F 5.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager





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Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A 5.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-01

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager

Page:

3



Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-02

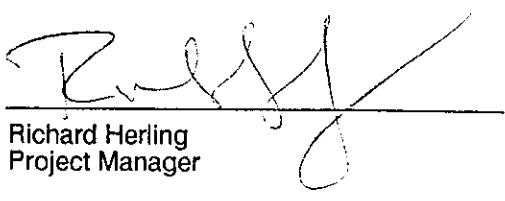
Sampled: 01/26/98  
Received: 01/28/98  
Analyzed: 01/29/98  
Reported: 02/04/98

### 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.
Chromatogram Pattern:		N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                  130	93

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-B 6.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-03

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

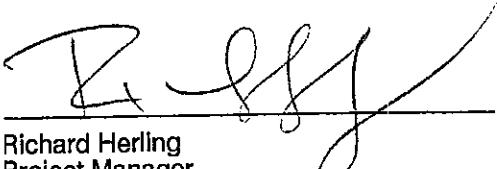
QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager

Page:

5





**Sequoia  
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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-B  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-04

Sampled: 01/26/98  
Received: 01/28/98

Analyzed: 01/29/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEX02A  
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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	95

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121
		120
		115
		109

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C 6.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

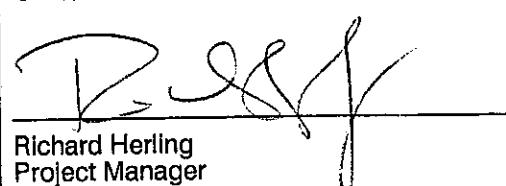
QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

**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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Richard Herling  
Project Manager





Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/31/98  
Reported: 02/04/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0 .....	..... 2.1 ..... C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 78

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive  
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FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-06

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 01/29/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	93

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-06

Sampled: 01/26/98  
Received: 01/28/98

Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-06

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	113
Toluene-d8	88	103
4-Bromofluorobenzene	86	100

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Richard Herling  
Project Manager





**Sequoia  
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--	--	--	--

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-07

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	100	N.D.
Carbon disulfide	500	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	100	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	250	N.D.
Styrene	500	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-07

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

**Analyte**

**Detection Limit**  
ug/Kg

**Sample Results**  
ug/Kg

**Surrogates**

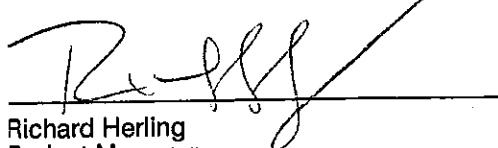
1,2-Dichloroethane-d4  
Toluene-d8  
4-Bromofluorobenzene

**Control Limits %**  
70                    121  
81                    117  
74                    121

**% Recovery**  
107  
100  
96

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D 6.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-07

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### 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.
Chromatogram Pattern:		N.D.

#### Surrogates

Trifluorotoluene  
4-Bromofluorobenzene

Control Limits %

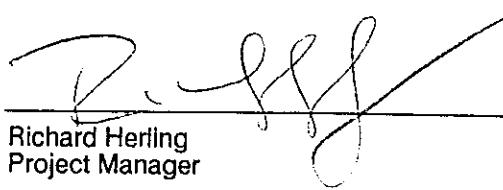
70	130
60	140

% Recovery

76
90

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-07

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/31/98  
Reported: 02/04/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0 .....	4.5 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 79

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-08

Sampled: 01/26/98  
Received: 01/28/98

Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	2.0	N.D.
Carbon disulfide	10	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	2.0	N.D.
Chloroform	10	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-08

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-08

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC0129980HBPEXB  
Instrument ID: GCHP5B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	50
Chromatogram Pattern:	.....	220
Discrete Peak	.....	C9-C24
	.....	@C16
Surrogates		
n-Pentacosane (C25)	Control Limits % 50      150	% Recovery 90

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-D  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-08

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 01/29/98  
Reported: 02/04/98

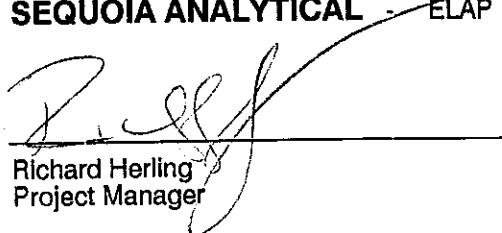
QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

**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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	82

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GPE-E 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-09

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GPE-E 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-09

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
<b>Surrogates</b>		
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121
	<b>Control Limits %</b>	<b>% Recovery</b>

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager

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Analytical

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404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600      FAX (510) 988-9673  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600      FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GPE-E 6.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-09

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

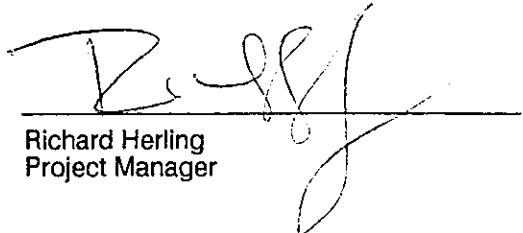
QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GPE-E 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-09

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/31/98  
Reported: 02/04/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0	..... 1.0 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	% Recovery 150 71

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-10

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.



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FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-10

Sampled: 01/26/98  
Received: 01/28/98

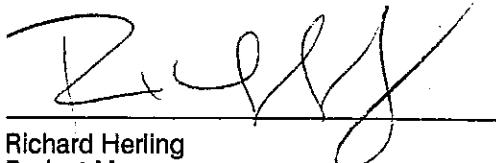
Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
<b>Surrogates</b>		
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115
	<b>Control Limits %</b>	<b>% Recovery</b>

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-10

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC0129980HBPEXB  
Instrument ID: GCHP5B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	50
Chromatogram Pattern:	.....	.....
Discrete Peak	.....	.....
Surrogates		Control Limits %
n-Pentacosane (C25)		50      150
		% Recovery
		95

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-10

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 01/29/98  
Reported: 02/04/98

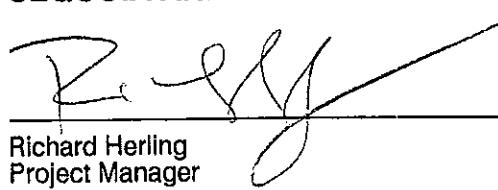
QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

**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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	92

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-11

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 02/03/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	56
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-11

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 02/03/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F3A  
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
<b>Surrogates</b>		
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115
	<b>Control Limits %</b>	<b>% Recovery</b>

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-11

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC0129980HBPEXB  
Instrument ID: GCHP5B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	..... 50	..... 1500 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 111

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambrria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-11

Sampled: 01/26/98  
Received: 01/28/98  
Analyzed: 01/29/98  
Reported: 02/04/98

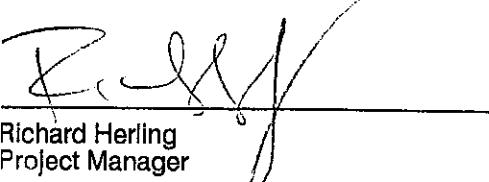
### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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	0.58
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:	.....	.....

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	83

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F 5.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-12

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F 5.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9801F42-12

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/30/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
<b>Surrogates</b>		
1,2-Dichloroethane-d4		
Toluene-d8		
4-Bromofluorobenzene		
	<b>Control Limits %</b>	<b>% Recovery</b>
	70	107
	81	99
	74	97

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F 5.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F42-12

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



**Sequoia  
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FAX (916) 921-0100 \*

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F 5.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F42-12

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/31/98  
Reported: 02/04/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0	..... 2.1 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 69

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Client Proj. ID: Shell 2300 Santa Clara  
Lab Proj. ID: 9801F43

Sampled: 01/26/98  
Received: 01/28/98  
Analyzed: see below

Attention: Aubrey Cool

Reported: 02/04/98

### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9801F43-13 Sample Desc : LIQUID,GP-F				
Lead	mg/L	02/02/98	0.0050	0.044
Lab No: 9801F43-14 Sample Desc : LIQUID,GP-G				
Lead	mg/L	02/02/98	0.0050	0.020
Lab No: 9801F43-15 Sample Desc : SOLID,GP-G 7.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.
Lab No: 9801F43-16 Sample Desc : SOLID,GP-H 6.0'				
Lead	mg/Kg	01/30/98	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F43-13

Sampled: 01/26/98  
Received: 01/28/98  
  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F2A  
Instrument ID: F2

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.



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FAX (510) 988-9673  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F  
Matrix: LIQUID  
Analysis Method: EPA 8240  
Lab Number: 9801F43-13

Sampled: 01/26/98  
Received: 01/28/98

Attention: Aubrey Cool

Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: MS0130988240F2A  
Instrument ID: F2

Analyte	Detection Limit ug/L	Sample Results ug/L
<b>Surrogates</b>		
1,2-Dichloroethane-d4	Control Limits %	% Recovery
Toluene-d8	76	114
4-Bromofluorobenzene	88	110
	86	115

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
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Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F43-13

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC0129980HBPEXB  
Instrument ID: GCHP5B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	150
Chromatogram Pattern: Discrete Peaks	.....	C9-C24 @C16
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 88

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



Sequoia  
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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-F  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F43-13

Sampled: 01/26/98  
Received: 01/28/98

Analyzed: 01/29/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEX03A

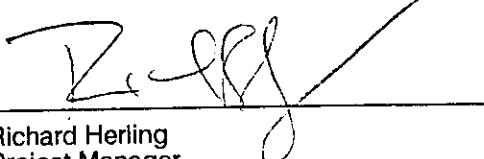
Instrument ID: GCHP3

### 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.
Chromatogram Pattern:		
<b>Surrogates</b>		
Trifluorotoluene	70                  130	% Recovery 93

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager

Page:

5



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEX03A  
Instrument ID: GCHP3

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-G  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F43-14

Sampled: 01/26/98  
Received: 01/28/98  
Analyzed: 01/29/98  
Reported: 02/04/98

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

**Analyte**

**Detection Limit**  
**ug/L**

**Sample Results**  
**ug/L**

TPPH as Gas  
Methyl t-Butyl Ether  
Benzene  
Toluene  
Ethyl Benzene  
Xylenes (Total)  
Chromatogram Pattern:

50	N.D.
2.5	N.D.
0.50	N.D.

**Surrogates**

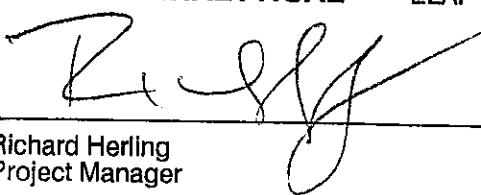
Trifluorotoluene

**Control Limits %**  
70                    130

**% Recovery**  
93

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-G 7.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F43-15

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/04/98

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP07

### 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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		84
		75

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H 6.0'  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9801F43-16

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/02/98  
Analyzed: 02/02/98  
Reported: 02/04/98

QC Batch Number: GC020298BTEXEXB  
Instrument ID: GCHP22

**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.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL** ELAP #1210

Richard Herling  
Project Manager



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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F42 01, 03, 07, 09, 12  
9801F43 15, 16

Reported: Feb 4, 1998

### QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0130986010MDE	ME0130986010MDE	ME0130986010MDE	ME0130986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	S. Lebaron	S. Lebaron	S. Lebaron	S. Lebaron
MS/MSD #:	9801F4201	9801F4201	9801F4201	9801F4201
Sample Conc.:	N.D.	N.D.	40	25
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	49	47	89	74
MS % Recovery:	98	94	98	98
Dup. Result:	49	48	90	74
MSD % Recov.:	98	96	100	98
RPD:	0.0	2.1	1.1	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK013098	BLK013098	BLK013098	BLK013098
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	50	47	48	48
LCS % Recov.:	100	94	96	96

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

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

9801F42.CCC <1>

**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager



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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F42 02, 04, 05, 06, 08, 10, 11 Reported: Feb 4, 1998  
9801F43 13, 14

## QUALITY CONTROL DATA REPORT

Analyte:	Arsenic	Lead
----------	---------	------

QC Batch#: ME0129977000MDA ME0129977000MDA  
Analy. Method: EPA 206.2 EPA 239.2  
Prep. Method: EPA 3020 EPA 3020

Analyst: J. Jencks J. Jencks  
MS/MSD #: 9801F4202 9801F4202  
Sample Conc.: N.D. 0.016  
Prepared Date: N.A. N.A.  
Analyzed Date: 2/2/98 2/2/98  
Instrument I.D.#: MTJA3 MTJA3  
Conc. Spiked: 0.050 mg/L 0.050 mg/L

Result: 0.050 0.056  
MS % Recovery: 100 80  
  
Dup. Result: 0.050 0.056  
MSD % Recov.: 100 84  
  
RPD: 0.0 3.5  
RPD Limit: 0-20 0-20

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LCS #: BLK012998 BLK012998

Prepared Date: 1/29/98 1/29/98  
Analyzed Date: 2/2/98 2/2/98  
Instrument I.D.#: MTJA3 MTJA3  
Conc. Spiked: 0.050 mg/L 0.050 mg/L

LCS Result: 0.050 0.050  
LCS % Recov.: 100 100

MS/MSD	75-125	75-125
LCS	80-120	80-120
Control Limits		

**SEQUOIA ANALYTICAL**

  
Richard Herling  
Project Manager

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.



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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F42 01, 03, 05, 07, 09, 12 Reported: Feb 4, 1998

9801F43 15, 16

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				
<b>Analyst:</b>	J. Minkel				
<b>MS/MSD #:</b>	9801F4201	9801F4201	9801F4201	9801F4201	9801F4201
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Analyzed Date:</b>	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
<b>Instrument I.D. #:</b>	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
<b>Conc. Spiked:</b>	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
<b>Result:</b>	0.18	0.18	0.19	0.56	1.1
<b>MS % Recovery:</b>	90	90	95	93	92
<b>Dup. Result:</b>	0.15	0.15	0.16	0.46	0.90
<b>MSD % Recov.:</b>	75	85	80	77	75
<b>RPD:</b>	18	18	17	20	20
<b>RPD Limit:</b>	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK012998	BLK012998	BLK012998	BLK012998	BLK012998
<b>Prepared Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Analyzed Date:</b>	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
<b>Instrument I.D. #:</b>	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
<b>Conc. Spiked:</b>	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
<b>LCS Result:</b>	0.20	0.20	0.21	0.61	1.2
<b>LCS % Recov.:</b>	100	100	105	102	100

<b>MS/MSD</b>	60-140	60-140	60-140	60-140	60-140
<b>LCS</b>	70-130	70-130	70-130	70-130	70-130
<b>Control Limits</b>					

**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**

Richard Herling  
Project Manager

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

9801F42.CCC <3>



**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	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
--	--	--	--

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F42 02, 06, 08, 10, 11  
9801F43 13, 14

Reported: Feb 4, 1998

### QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012998BTEX03A	GC012998BTEX03A	GC012998BTEX03A	GC012998BTEX03A	GC012998BTEX03A
Anal. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				

Analyst:	A. Mirafab				
MS/MSD #:	980197202	980197202	980197202	980197202	980197202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Analyzed Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Instrument I.D. #:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.5	8.5	8.7	26	52
MS % Recovery:	85	85	87	87	87
Dup. Result:	8.4	8.3	8.6	26	52
MSD % Recov.:	84	83	86	87	87
RPD:	1.2	2.4	1.2	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK012998	BLK012998	BLK012998	BLK012998	BLK012998
Prepared Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Analyzed Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Instrument I.D. #:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.2	9.2	9.5	29	57
LCS % Recov.:	92	92	95	97	95

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	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.

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

9801F42.CCC <4>

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager



**Sequoia  
Analytical**

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819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F42 04

Reported: Feb 4, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012998BTEX02A	GC012998BTEX02A	GC012998BTEX02A	GC012998BTEX02A	GC012998BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				

<b>Analyst:</b>	A. Mirafab				
<b>MS/MSD #:</b>	980197203	980197203	980197203	980197203	980197203
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Analyzed Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Instrument I.D. #:</b>	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
<b>Conc. Spiked:</b>	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
<b>Result:</b>	8.0	7.7	8.0	24	53
<b>MS % Recovery:</b>	80	77	80	80	88
<b>Dup. Result:</b>	9.5	8.8	9.1	28	61
<b>MSD % Recov.:</b>	95	88	91	93	102
<b>RPD:</b>	17	13	13	15	14
<b>RPD Limit:</b>	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK012998	BLK012998	BLK012998	BLK012998	BLK012998
<b>Prepared Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Analyzed Date:</b>	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
<b>Instrument I.D. #:</b>	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
<b>Conc. Spiked:</b>	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
<b>LCS Result:</b>	8.8	8.5	8.8	27	58
<b>LCS % Recov.:</b>	88	85	88	90	97

<b>MS/MSD</b>	60-140	60-140	60-140	60-140	60-140
<b>LCS</b>	70-130	70-130	70-130	70-130	70-130
<b>Control Limits</b>					

**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager

**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.

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9801F42.CCC <5>



Sequoia  
Analytical

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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F42 05, 07, 09, 12

Reported: Feb 4, 1998

## QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC0129980HBPEXC  
Analy. Method: EPA 8015M  
Prep. Method: EPA 3550/DHS

Analyst: A. Porter  
MS/MSD #: 9801F3503  
Sample Conc.: N.D.  
Prepared Date: 1/29/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 25 mg/Kg

Result: 20  
MS % Recovery: 80

Dup. Result: 19  
MSD % Recov.: 76

RPD: 5.1  
RPD Limit: 0-50

LCS #: BLK013098

Prepared Date: 1/29/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 25 mg/Kg

LCS Result: 20  
LCS % Recov.: 80

MS/MSD	50-150
LCS	60-140
Control Limits	

Please Note:

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

9801F42.CCC <6>

SEQUOIA ANALYTICAL

  
Richard Herling  
Project Manager





**Sequoia  
Analytical**

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Cambrria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F42 08, 10, 11  
9801F43 13

Reported: Feb 4, 1998

## QUALITY CONTROL DATA REPORT

**Analyte:** Diesel

**QC Batch#:** GC0129980HBPEXB  
**Anal. Method:** EPA 8015M  
**Prep. Method:** EPA 3510

**Analyst:** D. Lockhart  
**MS/MSD #:** BLK012998  
**Sample Conc.:** N.D.  
**Prepared Date:** 1/29/98  
**Analyzed Date:** 1/30/98  
**Instrument I.D. #:** GCHP4B  
**Conc. Spiked:** 1000 µg/L

**Result:** 7890  
**MS % Recovery:** 790

**Dup. Result:** 800  
**MSD % Recov.:** 80

**RPD:** 1.3  
**RPD Limit:** 0-50

**LCS #:**

**Prepared Date:**  
**Analyzed Date:**  
**Instrument I.D. #:**  
**Conc. Spiked:**

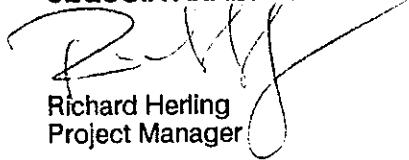
**LCS Result:**  
**LCS % Recov.:**

<b>MS/MSD</b>	50-150
<b>LCS</b>	60-140
<b>Control Limits</b>	

**Please Note:**

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**SEQUOIA ANALYTICAL**

  
Richard Herling  
Project Manager



**Sequoia  
Analytical**

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404 N. Wiget Lane  
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Redwood City, CA 94063  
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Sacramento, CA 95834

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FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F42 05.07.09, 12

Reported: Feb 4, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
QC Batch#:	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	L. Duong				
MS/MSD #:	9801F4205	9801F4205	9801F4205	9801F4205	9801F4205
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg				
Result:	1800	2100	2200	2300	2300
MS % Recovery:	72	84	88	92	92
Dup. Result:	1800	2000	2100	2200	2200
MSD % Recov.:	72	80	84	88	88
RPD:	0.0	4.9	4.7	4.4	4.4
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS013098	LCS013098	LCS013098	LCS013098	LCS013098
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg				
LCS Result:	2000	2200	2300	2300	2300
LCS % Recov.:	80	88	92	92	92

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

9801F42.CCC <8>



**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	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F42 06,08, 10, 11

Reported: Feb 4, 1998

### QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
QC Batch#:	MS0130988240F3A	MS0130988240F3A	MS0130988240F3A	MS0130988240F3A	MS0130988240F3A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	L. Duong				
MS/MSD #:	9801C2615	9801C2615	9801C2615	9801C2615	9801C2615
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/26/98	1/26/98	1/26/98	1/26/98	1/26/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	500 µg/L				
Result:	450	490	520	520	510
MS % Recovery:	90	98	104	104	102
Dup. Result:	450	490	530	520	520
MSD % Recov.:	90	98	106	104	104
RPD:	0.0	0.0	1.9	0.0	1.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS020298	LCS020298	LCS020298	LCS020298	LCS020298
Prepared Date:	2/2/98	1/26/98	1/26/98	1/26/98	1/26/98
Analyzed Date:	2/2/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	H6	F3	F3	F3	F3
Conc. Spiked:	50 µg/L				
LCS Result:	45	50	51	52	51
LCS % Recov.:	90	100	102	104	102

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

**SEQUOIA ANALYTICAL**

  
Richard Herling  
Project Manager

Please Note:

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9801F42.CCC <9>



**Sequoia  
Analytical**

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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F43 13

Reported: Feb 4, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	M. Williams				
MS/MSD #:	9801E6902	9801E6902	9801E6902	9801E6902	9801E6902
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	F2	F2	F2	F2	F2
Conc. Spiked:	50 µg/L				
Result:	36	44	48	44	45
MS % Recovery:	72	88	96	88	90
Dup. Result:	41	47	52	49	51
MSD % Recov.:	82	94	104	98	102
RPD:	13	6.6	8.0	11	13
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS013098	LCS013098	LCS013098	LCS013098	LCS013098
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	F2	F2	F2	F2	F2
Conc. Spiked:	50 µg/L				
LCS Result:	36	45	51	46	47
LCS % Recov.:	72	95	102	92	94

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

9801F42.CCC <10>



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No:

Date: 1-26-98

09861F42/13  
Page 1 of 3

Site Address: 2300 Santa Clara, Alameda

WICH: 204-0072-0908

Shell Engineer: Alex Perez  
Phone No.: 510 335 5027  
Fax #: 510 335 5027

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 510-9170

Comments: NOTE 5 D. TURNAROUND.

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.
1 GP-A - 5.0'	1/26	8:30	X				1
2 GP-A - 9.0'	1/26	8:35	X				1
3 GP-B - 6.0'	1/26	10:18	X				1
4 GP-B 10.0'	1/26	10:24	X				1
5 GP-B	1/26	10:35	X				6 vials 1 Liter 1 plastic
GP-C-6.0'	1/26	11:50	X				1
GP-C-10.0'	1/26	12:10	X				1

Relinquished By (signature):  
Aubrey K. Cool

Printed Name:  
Aubrey Cool

Relinquished By (signature):

Printed Name:

Relinquished By (signature):

Printed Name:

**Analysis Required**

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4461	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4461	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Clarity/Disposal	4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Clarity/Disposal	4443	Oilier <input checked="" type="checkbox"/> 50%
<input type="checkbox"/> Soil/Air Rem. or Sys. O & M	4452	
<input type="checkbox"/> Water Rem. or Sys. O & M	4453	NOTE: Hasty Lab as soon as Possible of 24/48 hrs. TAI.
<input type="checkbox"/> Other		

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	see attached Shell Protocol
	HOLD

Date: 1-28-98	Received (signature):	Printed Name:
Time: 10:16	<i>[Signature]</i>	EJKE ROMANU
Date:		
Time:		
Date:	Received (signature):	Printed Name:
Time:	<i>[Signature]</i>	JWD

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204-0072-0908

Shell Engineer: Alex Perez  
Phone No.: 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of confs.
GP-C	1/26	12:20		X			6 VOCAs 1 Liter 1 plastic
GP-D-6.0'	1/26	12:30	X				1
GP-D-10.0'	1/26	12:40	X				1
GP-D	1/26	13:00		X			6 VOCAs 2 Liters 1 plastic
GP-E-6.0'	1/26	13:05	X				1
GP-E-10.0'	1/26	13:30	X				1
GP-E	1/26	13:45		X			6 VOCAs 1 Liter 1 plastic
GP-H	1/26	16:50		X			6 VOCAs 1 Liter 1 plastic

Relinquished By (signature):  
Aubrey K. Cool

Printed Name: Aubrey Cool

Relinquished By (Signature):

Printed Name:

Relinquished By (Signature):

Printed Name:

Initials

**CHAIN OF CUSTODY RECORD**

Serial No:

96(1F42)43

Date: 1-26-98

Page 2 of 3

LAB: Sequoia

**Analysis Required**

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	Volatile Organics (EPA 8240)	Test for Disposal Shell 4B-2-S	Combination TPH 8015 & BTEX 8020 P MTBE	Pb
✓	✓	✓	✓	✓	✓

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4441	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Disposal	4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	4443	Other <input checked="" type="checkbox"/> 1/5 DAY
<input type="checkbox"/> Soil/Aq Resist or Sys. O&M	4452	
<input type="checkbox"/> Water Resist or Sys. O&M	4453	
<input type="checkbox"/> Other		

NOTE: Hally Lab is open at Possible of 24/48 hrs. TAI.

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	HOLD
	See attached Shell Protocol

Received (Signature):  
Aubrey Cool

Date: 1-26-98

Time: 10:10

Date:

Time:

Date:

Time:

Date:

Time:

Received (Signature):

Date:

Time:

Date:

Time:

Received (Signature):

Date:

Time:

Date:

Time:

Received (Signature):

Date:

Time:

Date:

Time:

Printed Name: EJKE EDOMON

Date: 1-26-98  
Time: 10:10

Date:

Time:

Date:

Time:

Date:

Time:

Date:

Time:

Received (Signature):

Date:

Time:

Date:

Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204 - 0072 - 0908

Shell Engineer: Alex Perez  
Phone No.: 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1114 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

							CHAIN OF CUSTODY RECORD							Date: 1-26-98				
							Serial No: 9801F42/43							Page 3 of 3				
							Analysis Required							LAB: Sequoia				
							TPH (EPA 8015 Mod. GC)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/8022)	Volatile Organics (EPA 8240)	Test for Disposed Shell 4B-28	Combination TPH 8015 & BTEX 8020 & MTBE			Composite Y/N	CHECK ONE (1) BOX ONLY	C/D	TURN AROUND TIME
1.	GP-F-5.0'	1-26 98	14:20	X			✓	✓		✓	✓			G.W. Monitoring	<input type="checkbox"/>	4441	24 hours <input type="checkbox"/>	
2.	GP-F-10.0'	1-26 98	14:30	X										Site Investigation	<input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>	
3.	GP-F	1-26 98	14:35		X									Soil Classify/Deposit	<input type="checkbox"/>	4442	15 days <input type="checkbox"/> , maximum	
4.	GP-G	1-26 98	16:35		X		6 VOCAs 2 Liters 1 Plastic	6 VOCAs 1 Liter 1 plastic						Water Classify/Deposit	<input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/> 5 DAY	
5.	GP-G-7.0'	1-26 98	1600	X										Soil/Air Reinf. or Sys. O & M	<input type="checkbox"/>	4452		
6.	GP-G-9.5'	1-26 98	1605	X										Water Reinf. or Sys. O & M	<input type="checkbox"/>	4453	HOLD	
7.	GP-H-6.0'	1-26 98	1630	X										Other	<input type="checkbox"/>			
8.	GP-H-9.5'	1-26 98	1640	X										MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS		
							Date: 1-28-98	Received (Signature):							See attached Shell protocol			
							Time: 10:10	Signed: [Signature]							Printed Name: EIKE FISCHER		Date: 1-28-98	
							Date:	Received (Signature):							Printed Name: ABN		Time: 1600	
							Time:								Printed Name:		Date:	
							Date:	Received (Signature):							Printed Name:		Time:	
							Time:								Printed Name:		Date: 1/27/98	
							Date:	Received (Signature):							Printed Name:		Time: 12:10	
							Time:								Printed Name:			
							Date:	Received (Signature):							Printed Name:			
							Time:								Printed Name:			
							Date:	Received (Signature):							Printed Name:			
							Time:								Printed Name:			
							Date:	Received (Signature):							Printed Name:			
							Time:								Printed Name:			
							Date:	Received (Signature):							Printed Name:			
							Time:								Printed Name:			

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



**Sequoia  
Analytical**

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(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara

Received: 01/28/98

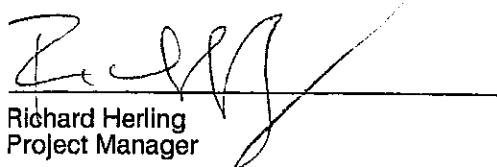
Lab Proj. ID: 9801F42

Reported: 02/04/98

## LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 162 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

**SEQUOIA ANALYTICAL**

  
Richard Herling  
Project Manager





# Sequoia Analytical

680 Chesapeake Drive      Redwood City, CA 94063      (650) 364-9600  
404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600  
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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Project: Shell 2300 Santa Clara

Enclosed are the results from samples received at Sequoia Analytical on January 28, 1998.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9802318 -01	SOLID, GP-A 5.0'	01/26/98	TPHD_S Extractable TPH
9802318 -02	LIQUID, GP-A	01/26/98	TPHD_W Extractable TPH
9802318 -03	SOLID, GP-B 6.0'	01/26/98	TPHD_S Extractable TPH
9802318 -04	LIQUID, GP-B	01/26/98	TPHD_W Extractable TPH
9802318 -05	LIQUID, GP-C	01/26/98	TPHD_W Extractable TPH
9802318 -06	LIQUID, GP-G	01/26/98	TPHD_W Extractable TPH
9802318 -07	LIQUID, GP-G 7.0'	01/26/98	TPHD_S Extractable TPH
9802318 -08	SOLID, GP-H 6.0'	01/26/98	8240 Volatile Organic Co
9802318 -08	SOLID, GP-H 6.0'	01/26/98	TPHD_S Extractable TPH
9802318 -09	SOLID, GP-H-9.5'	01/26/98	8240 Volatile Organic Co
9802318 -09	SOLID, GP-H-9.5'	01/26/98	TPHD_S Extractable TPH

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Project Manager





Sequoia  
Analytical

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Cambrilia  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A 5.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-01

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/10/98  
Analyzed: 02/10/98  
Reported: 02/11/98

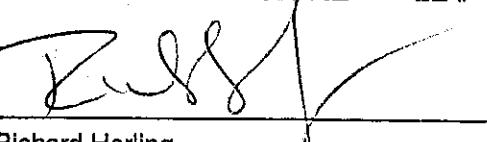
QC Batch Number: GC0205980HBPEXB  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	.....	.....
Chromatogram Pattern:	1.0	5.7
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	81

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

SEQUOIA ANALYTICAL - ELAP #1210



Richard Herling  
Project Manager





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-02

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

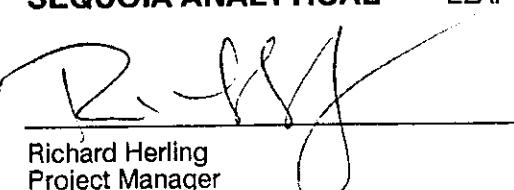
QC Batch Number: GC0209980HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	50
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	120
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	92

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Richard Herling  
Project Manager

Page:

2



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-B 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-03

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0205980HBPEXB  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	.....	6.9
Chromatogram Pattern:		
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-B  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-04

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0209980HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	50
Chromatogram Pattern:		.....
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	83

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0209980HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 84

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager





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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-G  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-06

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0209980HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50                  150	% Recovery 80

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager





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Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-G 7.0'  
Matrix: LIQUID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-07

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0205980HBPEXB  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	.....	1.0
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	80

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager





**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9802318-08

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/08/98  
Analyzed: 02/08/98  
Reported: 02/11/98

QC Batch Number: MS0208988240EXA  
Instrument ID: F2

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





# Sequoia Analytical

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FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9802318-08

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/08/98  
Analyzed: 02/08/98  
Reported: 02/11/98

QC Batch Number: MS0208988240EXA  
Instrument ID: F2

## Analyte

Detection Limit  
ug/Kg

Sample Results  
ug/Kg

## Surrogates

1,2-Dichloroethane-d4  
Toluene-d8  
4-Bromofluorobenzene

Control Limits %

% Recovery

70	121	111
81	117	110
74	121	102

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H 6.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-08

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: GC0205980HBPEXB  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	.....	1.0
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	.....
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	78

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H-9.5'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9802318-09

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/10/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: MS0208988240EXA  
Instrument ID: F2

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





# 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

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H-9.5'  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9802318-09

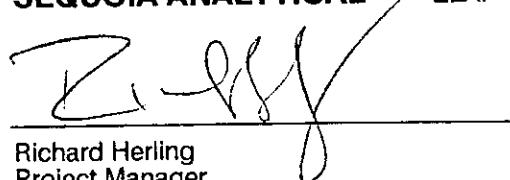
Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/10/98  
Analyzed: 02/10/98  
Reported: 02/11/98

QC Batch Number: MS0208988240EXA  
Instrument ID: F2

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
	Control Limits %	% Recovery
<b>Surrogates</b>		
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Richard Herling  
Project Manager

Page:

12



**Sequoia  
Analytical**

680 Chesapeake Drive      Redwood City, CA 94063      (650) 364-9600      FAX (650) 364-9233  
404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600      FAX (510) 988-9673  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600      FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC0205980HBPEXB  
Instrument ID: GCHP4B

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H-9.5'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9802318-09

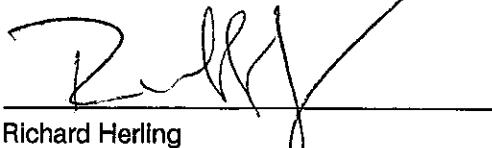
Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 02/09/98  
Analyzed: 02/10/98  
Reported: 02/11/98

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	.....	1.0
Chromatogram Pattern:	.....	.....
Unidentified HC	.....	C9-C24
<b>Surrogates</b>		
n-Pentacosane (C25)	Control Limits % 50      150	% Recovery 101

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Richard Herling  
Project Manager

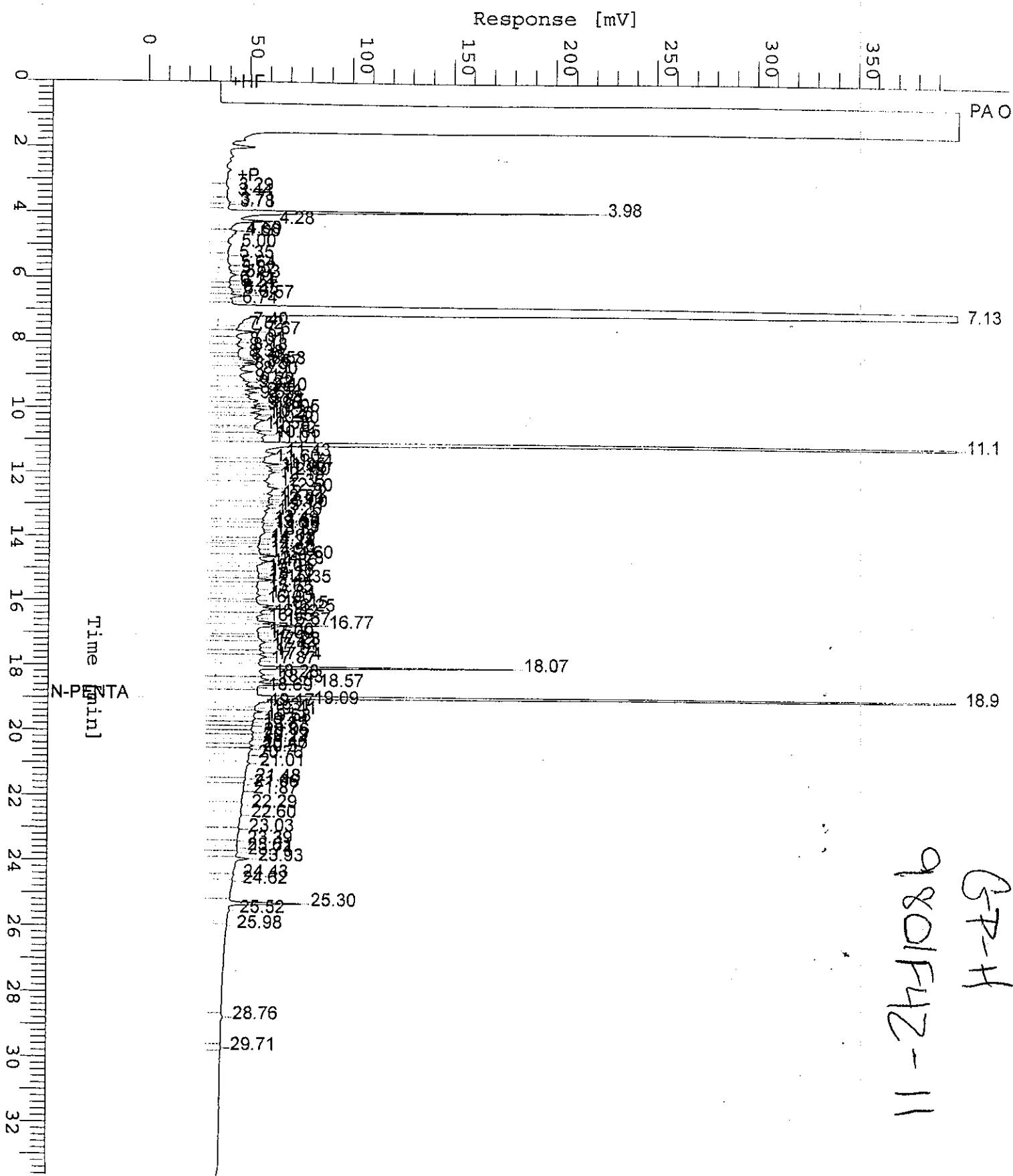
# Chromatogram

Sample Name : DW9801F42-11 (500:1)  
FileName : S:\GHP\_05\0201\129B028.raw  
Method : TPH05A  
Start Time : 0.00 min  
Scale Factor: 0.0

End Time : 33.65 min  
Plot Offset: 0 mV

Sample #: GP-H  
Date : 1/30/98 03:57  
Time of Injection: 1/30/98 03:23  
Low Point : 0.00 mV  
High Point : 400.00 mV  
Plot Scale: 400.0 mV

Page 1 of 1





**Sequoia  
Analytical**

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FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9802318 08

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
QC Batch#:	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	L. Zhu				
MS/MSD #:	980231808	980231808	980231808	980231808	980231808
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Analyzed Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg				
Result:	1650	1980	2010	2160	2150
MS % Recovery:	66	79	80	86	86
Dup. Result:	1630	2000	2020	2160	2180
MSD % Recov.:	65	80	81	86	87
RPD:	1.2	1.0	0.50	0.0	1.4
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS020898	LCS020898	LCS020898	LCS020898	LCS020898
Prepared Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Analyzed Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg				
LCS Result:	1800	2180	2140	2280	2240
LCS % Recov.:	72	87	86	91	90

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

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

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

9802318.CCC <1>



**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	(650) 364-9600 (510) 988-9600 (916) 921-9600	FAX (650) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
--	--	--	--

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9802318 09

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA	MS0208988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	L. Zhu				
MS/MSD #:	980231808	980231808	980231808	980231808	980231808
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Analyzed Date:	2/8/98	2/8/98	2/8/98	2/8/98	2/8/98
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg				
Result:	1650	1980	2010	2160	2150
MS % Recovery:	66	79	80	86	86
Dup. Result:	1630	2000	2020	2160	2180
MSD % Recov.:	65	80	81	86	87
RPD:	1.2	1.0	0.5	0.0	1.4
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS021098	LCS021098	LCS021098	LCS021098	LCS021098
Prepared Date:	2/10/98	2/10/98	2/10/98	2/10/98	2/10/98
Analyzed Date:	2/10/98	2/10/98	2/10/98	2/10/98	2/10/98
Instrument I.D. #:	F2	F2	F2	F2	F2
Conc. Spiked:	2500 µg/Kg				
LCS Result:	1700	2100	2500	2300	2200
LCS % Recov.:	68	84	100	92	88

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

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

**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager

9802318.CCC <2>



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
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FAX (510) 988-9673  
FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9802318 01

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

**Analyte:** Diesel

**QC Batch#:** GC0205980HBPEXB  
**Analy. Method:** EPA 8015M  
**Prep. Method:** EPA 3550

**Analyst:** A. Kaushanskaya  
**MS/MSD #:** BLK020598  
**Sample Conc.:** N.D.  
**Prepared Date:** 2/5/98  
**Analyzed Date:** 2/5/98  
**Instrument I.D. #:** GCHP19B  
**Conc. Spiked:** 25 mg/Kg

**Result:** 18  
**MS % Recovery:** 72

**Dup. Result:** 20  
**MSD % Recov.:** 80

**RPD:** 11  
**RPD Limit:** 0-50

**LCS #:** BLK021098

**Prepared Date:** 2/10/98  
**Analyzed Date:** 2/10/98  
**Instrument I.D. #:** GCHP4A  
**Conc. Spiked:** 25 mg/Kg

**LCS Result:** 18  
**LCS % Recov.:** 72

<b>MS/MSD</b>	50-150
<b>LCS</b>	60-140
<b>Control Limits</b>	

**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**

Richard Herling  
Project Manager



Sequoia  
Analytical

680 Chesapeake Drive  
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FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 982318 03, 07, 08, 09

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC0206980HBPEXB  
Analy. Method: EPA 8015M  
Prep. Method: EPA 3550

Analyst: A. Porter  
MS/MSD #: BLK020698  
Sample Conc.: N.D.  
Prepared Date: 2/6/98  
Analyzed Date: 2/6/98  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 25 mg/Kg

Result: 18  
MS % Recovery: 72

Dup. Result: 15  
MSD % Recov.: 60

RPD: 11  
RPD Limit: 0-50

LCS #: BLK021098

Prepared Date: 2/10/98  
Analyzed Date: 2/10/98  
Instrument I.D.#: GCHP4A  
Conc. Spiked: 25 mg/Kg

LCS Result: 19  
LCS % Recov.: 76

MS/MSD 50-150  
LCS 60-140  
Control Limits

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

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.

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

9802318.CCC <4>



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204-0072-0908

Shell Engineer: Alex Perez  
Phone No.: 510-335-5027  
Fax #: 510-335-5022

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Aubrey Cool  
Phone No.: 510-420-0700  
Fax #: 510-420-9170

Comments: NOTE 5 D. TURNAROUND.

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.	TPH (EPA 8015 Mod. GES)	TPH (EPA 8015 Mod. Diesel)	STEX (EPA 8020/8022 M/T 3.5)	Volatile Organics (EPA 8240)	Test for Disposal	Shell 4B-28	Combination TPH, S015 & STEX 8020 PHTBE	Pb	Asbestos	Container Size	Preparation Used	Composite Y/N	UST AGENCY: Alameda County	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
1 GP-A - 5.0'	1/26	8:30	X				1						✓	✓							Y		see attached shell protocol
2 GP-A - 9.0'	1/26	8:35	X				1						✓										
2 GP-A	1/26	8:45		X			6 vials 1 Liter 10 ml							✓	✓								
3 GP-B - 6.0'	1/26	10:18	X				1							✓	✓								
4 GP-B 10.0'	1/26	10:24	X				1																
5 GP-B	1/26	10:35		X			6 vials 1 Liter 10 ml							✓	✓								
5 GP-C-6.0'	1/26	11:50	X				1							✓	✓	✓							
GP-C-100	1/26	12:10	X				1							✓							Y		

Authorized By (signature):  
Aubrey K. Cool

Printed Name: Aubrey Cool

Date: 1-26-98

Time: 10:16

Received (Signature):

EJKE ROMAN

Printed Name:

EJKE ROMAN

Authorized By (signature):

Printed Name:

Date:

Time:

Received (Signature):

EJKE

Printed Name:

EJKE

Authorized By (signature):

Printed Name:

Date:

Time:

Received (Signature):

EJKE

Printed Name:

EJKE

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Date: 1-26-98

Page 1 of 3

9801P42/HB

CHECK ONE (1) BOX ONLY	CF/DI	TURNAROUND TIME
<input type="checkbox"/> G.W. Monitoring	<input type="checkbox"/> 4441	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	<input checked="" type="checkbox"/> 4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Disposal	<input type="checkbox"/> 4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	<input type="checkbox"/> 4443	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/> Soil/Air Rem. or Sys. O & M	<input type="checkbox"/> 4452	
<input type="checkbox"/> Water Rem. or Sys. O & M	<input type="checkbox"/> 4453	NOTE: Turnaround time is based on possible of 24/48 hrs. (ATL)
<input type="checkbox"/> Other	<input type="checkbox"/>	

3 DAY TAT

see attached shell protocol

see attached shell protocol





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204-0072-0908

Shell Engineer: Alex Perez Phone No.:<sup>5</sup> 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Aubrey Cool Phone No.: 510 420-0700  
Fax #: 510-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Line	Sample ID	Date	TIME	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/6020)	Volatile Organics (EPA 8240)	Test for Disposed Shell 4B-28	Combination TPH 8015 & BTEX 8020 & MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N	Analysis Required			LAB: Sequoia	Serial No: Q801F42/43	Date: 1-26-98	Page: 3 of 3
																			Method	Method	Method				
1	GP-F-5.0'	1-26 98	14-20	X				1		✓		✓													
2	GP-F-10.0'	1-26 98	14-30	X				1																	HOLD
3	GP-F	1-26 98	14-35	X					6 VOCs: 2 Litter 1 Plastic	✓	✓	✓	✓	✓	✓										
4	GP-G	1-26 98	16:35	X					6 VOCs: 1 Litter 1 Plastic	✓				✓	✓										
5	GP-G-7.0'	1-26 98	1600	X				1							✓	✓									
6	GP-G-9.5'	1-26 98	1605	X				1																HOLD	
7	GP-H-6.0'	1-26 98	1630	X				1							✓	✓									
8	GP-H-9.5'	1-26 98	1640	X				1							✓									See attached Shell protocol	
Relinquished By (signature): <u>Aubrey K Cool</u>								Printed Name: <u>Aubrey Cool</u>		Date: 1-28-98		Received (signature): <u>EBC</u>				Printed Name: <u>ENKE EMMONI</u>		Date: 1-28-98							
								Printed Name:		Date: 10/10		Received (signature): <u>EBC</u>				Printed Name:		Date: 10/10							
								Printed Name:		Date:		Received (signature):				Printed Name:		Date:							
								Printed Name:		Time:		Received (signature): <u>ME</u>				Printed Name:		Time:							
								Printed Name:		Date:		Received (signature): <u>ME</u>				Printed Name:		Date: 11/17/98							
								Printed Name:		Time:		Received (signature):				Printed Name:		Time: 11/17/98							

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH#: 204-0072-0908

Shell Engineer:

Alex Perez

Phone No.:

510 335 5027  
Fax #: 510 335 5027Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact:

Aubrey Cool

Phone No.: 510

420-0700  
Fax #: 420-9170

Comments:

NOTE 5 D. TURNAROUND.

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of comts.
GPA - 5.0'	1/26	8:30	X				1
GPA - 9.0'	1/26	8:35	X				1
GP-A	1/26	8:45		X			5 vials 1 liter 1 Pint
GP-B - 6.0'	1/26	10:18	X				1
GP-B 10.0'	1/26	10:24	X				1
GP-B	1/26	10:35		X			6 vials 1 Liter 1 Pint
GP-C - 6.0'	1/26	11:50	X				1
GP-C - 100'	1/26	12:10	X				1

Released/Qualified By (Signature):  
Aubrey K. Cool

Released/Qualified By (Signature):

Released/Qualified By (Signature):

Printed Name: Aubrey Cool

Printed Name:

Printed Name:

## CHAIN OF CUSTODY RECORD

Serial No.: 9801P424B

Date: 1-26-98

Page 1 of 3

## Analysis Required

LAB: Segura

CHECK ONE (1) BOX ONLY	CL/DP	TURB AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4481	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4481	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Clarity/Deposit	4482	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Clarity/Deposit	4483	Other <input checked="" type="checkbox"/> 50 AM
<input type="checkbox"/> Soil/Air Rmn of Sys. O&M	4482	
<input type="checkbox"/> Water Rmn. of Sys. O&M	4483	NOTE: Hold tub in sun or Possible of 24/48 hrs. TAT.
<input type="checkbox"/> Other		

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	see attached Shell Protocol

3 DAY TAT

See attached  
Shell Printout

Date: 1-26-98

Printed Name: ERIKE ROMAN

Printed Name:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN OF CUSTODY WITH THE RESULTS.



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WIC#:  
204-COTZ-0908

Shell Engineer:  
Alex Perez  
Phone No.:  
510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact:  
Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTX (EPA 8020/8021)	Vehicle Organics (EPA 8240)	Test for Disposed Shell 4B-28	Combination TPH 8015 & BTX 8020 & MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N	UST AGENCY: Alameda County	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
								6VCA5 1 Liter 1 plastic	6VCA5 1 Liter 1 plastic											
GP-C	1/26	12:20		X			1		✓		✓		✓	✓	P6					
GP-D-6.0'	1/26	12:30	X				1			✓		✓	✓	✓						
GP-D-10.0'	1/26	12:40	X				1				✓								HOLD	
GP-D	1/26	13:00	X				1	6VCA5 2 Liter 1 plastic	✓		✓		✓	✓						
GP-E-6.0'	1/26	13:05	X				1		✓		✓		✓	✓						
GP-E-10.0'	1/26	13:30	X				1			✓		✓						See attached Shell Protocol		
GP-E	1/26	13:45	X				1	6VCA5 1 Liter 1 plastic	✓		✓		✓	✓						
GP-H	1/26	16:50	X				1	6VCA5 1 Liter 1 plastic	✓		✓		✓	✓						

Relinquished By (signature):  
Aubrey K. Cool

Relinquished By (signature):

Relinquished By (signature):

Printed Name:  
Aubrey Cool

Printed Name:

Printed Name:

Date: 1-28-98

Time: 10:10

Date:

Time:

Date:

Time:

Received (signature):

Received (signature):

Received (signature):

Received (signature):

Received (signature):

Received (signature):

Printed Name:  
E.JIKE ESOMON

Printed Name:

Printed Name:

Printed Name:

Printed Name:

Date: 1-28-98

Time: 16:40

Date:

Time:

Date:

Time:

CHECK ONE (1) BOX ONLY	CD/DI	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4441	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Dispose	4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Dispose	4443	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/> Soil/Alt Rmn. or Sys. O & M	4452	
<input type="checkbox"/> Water Rmn. or Sys. O & M	4453	NOTE: Hold Lab as soon as possible of 24/48 hrs. IAT.
<input type="checkbox"/> Other		



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204 - 0072 - 0908

Shell Engineer:

Alex Perez

Phone No.: 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact:

Aubrey Cool

Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.	Analysis Required							Composite Y/N	Preparation Used	Container Size	Asbestos	Check Off (1) Box Only	C/I/DI	Turn Around Date
								TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	STEX (EPA 8020/8022)	Volatile Organics (EPA 8240)	Test for Disposed Shell 4B - 28	Combination TPH 8015 & STEX 8020 & MTBE	Pb							
GP-F-5.0'	1-26 98	14:20	X				1	✓		✓	✓	✓	✓	✓							
GP-F-10.0'	1-26 98	14:30	X				1														
GP-F	1-26 98	14:35		X				6 VOCs 2 Liters 1 Plastic	✓	✓	✓	✓	✓	✓							
GP-G	1-26 98	16:35		X				6 VOCs 1 Liter 1 plastic													
GP-G-7.0'	1-26 98	16:00	X				1														
GP-G-9.5'	1-26 98	16:05	X				1														HOLD
GP-H-6.0'	1-26 98	16:30	X				1														
GP-H-9.5'	1-26 98	16:40	X				1														HOLD

Relinquished By (Signature):  
Aubrey K. Cool

Printed Name:  
Aubrey Cool

Date: 1-28-98

Time: 10:10

Date:

Time:

Date:

Time:

Received (Signature):

Received (Signature):

Received (Signature):

Received (Signature):

Received (Signature):

Received (Signature):

Printed Name:  
ETIKE ECONOMY

Date: 1-28-98

Time: 16:00

Date:

Time:

Date:

Time:

Printed Name:  
ANB

Date: 1-28-98

Time: 11:10

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITHIN ONE AND RESULTS

Date: 1-26-98

Page 3 of 3

Printed Name:



**Sequoia  
Analytical**

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FAX (510) 988-9673,  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Lab Proj. ID: 9802318

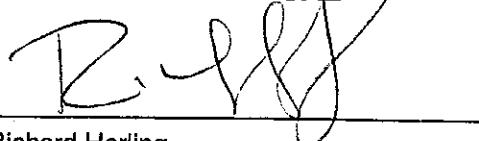
Received: 01/28/98  
Reported: 02/11/98

## **LABORATORY NARRATIVE**

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 23 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8240 Note: The sample GP-H was analyzed one day past hold time. For this reason, the results should be considered estimates.

**SEQUOIA ANALYTICAL**

  
Richard Herling  
Project Manager





# Sequoia Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Project: Shell 2300 Santa Clara

Enclosed are the results from samples received at Sequoia Analytical on January 28, 1998.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9801F35 -01	SOLID, GP-A-9.0'	01/26/98	TPHD_S Extractable TPH
9801F35 -01	SOLID, GP-A-9.0'	01/26/98	TPHG_S Purgeable TPH
9801F35 -02	SOLID, GP-C-10.0'	01/26/98	TPHD_S Extractable TPH
9801F35 -02	SOLID, GP-C-10.0'	01/26/98	TPHG_S Purgeable TPH
9801F35 -03	SOLID, GP-E-10.0'	01/26/98	TPHD_S Extractable TPH
9801F35 -03	SOLID, GP-E-10.0'	01/26/98	TPHG_S Purgeable TPH
9801F35 -04	SOLID, GP-H-9.5'	01/26/98	TPHD_S Extractable TPH
9801F35 -04	SOLID, GP-H-9.5'	01/26/98	TPHG_S Purgeable TPH
9801F35 -05	SOLID, GP-(A-9,C-10,E-10,H-9)Comp	01/26/98	BTEX_S Distinction
9801F35 -05	SOLID, GP-(A-9,C-10,E-10,H-9)Comp	01/26/98	Lead: STLC Extraction
9801F35 -05	SOLID, GP-(A-9,C-10,E-10,H-9)Comp	01/26/98	Lead
9801F35 -05	SOLID, GP-(A-9,C-10,E-10,H-9)Comp	01/26/98	Organic Lead

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Project Manager





Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara

Lab Proj. ID: 9801F35

Sampled: 01/26/98

Received: 01/28/98

Analyzed: see below

Reported: 02/12/98

## LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No:	9801F35-05			
Sample Desc :	SOLID,GP-(A-9,C-10,E-10,H-9)Comp			
Lead	mg/Kg	01/30/98	5.0	14
Lead: STLC Extraction	mg/L	02/02/98	0.10	N.D.
Organic Lead	mg/Kg	01/30/98	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager





Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A-9.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-01

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	1.9 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50      150	% Recovery 78

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-A-9.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-01

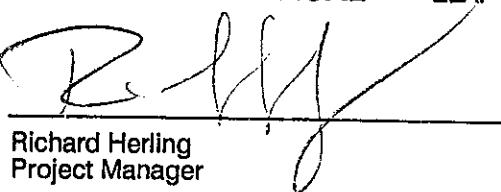
Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

### Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>		
Trifluorotoluene	Control Limits %	% Recovery
4-Bromofluorobenzene	70      130	88
	60      140	88

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C-10.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-02

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 02/01/98  
Reported: 02/12/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... ..... .....	1.0 ..... .....
Surrogates n-Pentacosane (C25)	Control Limits % 50	% Recovery 150 82

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



Sequoia  
Analytical

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-C-10.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-02

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

### Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E-10.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-03

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 70

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager

Page:

6



**Sequoia  
Analytical**

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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-E-10.0'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-03

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

### Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>		
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
	<b>Control Limits %</b>	<b>% Recovery</b>
		89
		85

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Richard Herling  
Project Manager



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Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H-9.5'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-04

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 02/01/98  
Reported: 02/12/98

QC Batch Number: GC012998OHBPEXC  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... .....	1.6 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	% Recovery 150 76

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



Sequoia  
Analytical

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Camibia  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-H-9.5'  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9801F35-04

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

### Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>		
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		% Recovery
		89
		90

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager



Sequoia  
Analytical

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FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Sample Descript: GP-(A-9,C-10,E-10,H-9) Comp  
Matrix: SOLID  
Analysis Method: EPA 8020  
Lab Number: 9801F35-05

Sampled: 01/26/98  
Received: 01/28/98  
Extracted: 01/29/98  
Analyzed: 01/30/98  
Reported: 02/12/98

QC Batch Number: GC012998BTEXEXA  
Instrument ID: GCHP22

### BTEX Distinction

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling  
Project Manager

Page:

10



Sequoia  
Analytical

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FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F35 05

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte: Organic Lead

QC Batch#: ME0130987000MDB  
Analy. Method: LUFT  
Prep. Method: LUFT

Analyst: B. Taylor  
MS/MSD #: 9801F3505  
Sample Conc.: N.D.  
Prepared Date: 1/30/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: MV2  
Conc. Spiked: 4.0 mg/Kg

Result: 0.22  
MS % Recovery: 6.0

Dup. Result: 0.21  
MSD % Recov.: 5.0

RPD: 4.7  
RPD Limit: 0-30

LCS #: BLK013098

Prepared Date: 1/30/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: MV2  
Conc. Spiked: 4.0 mg/Kg

LCS Result: 3.6  
LCS % Recov.: 90

MS/MSD  
LCS  
Control Limits 75-125

### 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.

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

9801F35.CCC <1>

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager





**Sequoia  
Analytical**

680 Chesapeake Drive      Redwood City, CA 94063      (650) 364-9600  
404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F35 05

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0130986010MDE	ME0130986010MDE	ME0130986010MDE	ME0130986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	S. Lebaron	S. Lebaron	S. Lebaron	S. Lebaron
MS/MSD #:	9801F4201	9801F4201	9801F4201	9801F4201
Sample Conc.:	N.D.	N.D.	40	25
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	49	47	89	74
MS % Recovery:	98	94	98	98
Dup. Result:	49	48	90	74
MSD % Recov.:	98	96	100	98
RPD:	0.0	2.1	1.1	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK013098	BLK013098	BLK013098	BLK013098
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	50	47	48	48
LCS % Recov.:	100	94	96	96

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

Please Note:

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**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager

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

9801F35.CCC <2>



**Sequoia  
Analytical**

680 Chesapeake Drive  
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FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Liquid

Work Order #: 9801F35 05

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0202986010MDA	ME0202986010MDA	ME0202986010MDA	ME0202986010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	S. Lebaron	S. Lebaron	S. Lebaron	S. Lebaron
MS/MSD #:	9801G8201	9801G8201	9801G8201	9801G8201
Sample Conc.:	N.D.	N.D.	N.D.	0.11
Prepared Date:	2/2/98	2/2/98	2/2/98	2/2/98
Analyzed Date:	2/2/98	2/2/98	2/2/98	2/2/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.1	1.1	1.1	1.2
MS % Recovery:	110	110	110	120
Dup. Result:	1.1	1.0	1.1	1.2
MSD % Recov.:	110	100	110	120
RPD:	0.0	9.5	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK020298	BLK020298	BLK020298	BLK020298
Prepared Date:	2/2/98	2/2/98	2/2/98	2/2/98
Analyzed Date:	2/2/98	2/2/98	2/2/98	2/2/98
Instrument I.D. #:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

Please Note:

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

9801F35.CCC <3>

**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager





Sequoia  
Analytical

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819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F35 01-04

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC0129980HBPEXC  
Analy. Method: EPA 8015M  
Prep. Method: EPA 3550/DHS

Analyst: A. Porter  
MS/MSD #: 9801F3503  
Sample Conc.: N.D.  
Prepared Date: 1/29/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 25 mg/Kg

Result: 20  
MS % Recovery: 80

Dup. Result: 19  
MSD % Recov.: 76

RPD: 5.1  
RPD Limit: 0-50

LCS #: BLK013098

Prepared Date: 1/29/98  
Analyzed Date: 1/30/98  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 25 mg/Kg

LCS Result: 20  
LCS % Recov.: 80

MS/MSD	50-150
LCS	60-140
Control Limits	

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

Please Note:

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9801F35.CCC <4>



**Sequoia  
Analytical**

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Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Project ID: Shell 2300 Santa Clara  
Matrix: Solid

Work Order #: 9801F35 01-04

Reported: Feb 13, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA	GC012998BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				

Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9801F4201	9801F4201	9801F4201	9801F4201	9801F4201
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.18	0.18	0.19	0.56	1.1
MS % Recovery:	90	90	95	93	92
Dup. Result:	0.15	0.15	0.16	0.46	0.90
MSD % Recov.:	75	85	80	77	75
RPD:	18	18	17	20	20
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK012998	BLK012998	BLK012998	BLK012998	BLK012998
Prepared Date:	1/29/98	1/29/98	1/29/98	1/29/98	1/29/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D. #:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.20	0.20	0.21	0.61	1.2
LCS % Recov.:	100	100	105	102	100

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

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9801F35.CCC <5>

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WIC#:  
204-0072-0908

Shell Engineer:  
Alex Perez  
Phone No.: 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact:  
Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:  
NOTE 5 D. TURNAROUND.

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.	Analysis Required							Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
								TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/8022 M/T BE)	Volatile Organics (EPA 8240)	Test for Disposal	Shell 4B-28	Combination TPH 8015 & BTEX 8020 + MTBE	Asbestos	Container Size		
GP-A - 5.0'	1/26	8:30	X				1								✓	✓		
GP-A - 9.0'	1/26	8:35	X				1								✓		Y	see attached Shell Protocol
GP-A	1/26	8:45		X				6 vials 1 liter 1 plastic							✓	✓		
GP-B - 6.0'	1/26	10:18	X				1								✓	✓		
GP-B 10.0'	1/26	10:24	X				1											HOLD
GP-B	1/26	10:35		X				6 vials 1 liter 1 plastic							✓	✓		
GP-C-6.0'	1/26	11:50	X				1		✓		✓				✓	✓		
GP-C-10.0'	1/26	12:10	X				1								✓		Y	see attached Shell Protocol

Relinquished By (Signature):  
Aubrey K. Cool

Printed Name: Aubrey Cool

Date: 1-26-98  
Time: 10:10

Received (Signature):  
*[Signature]*

Printed Name: ERIKE ROMANU  
Date: 1-28-98  
Time: 1:56P

Relinquished By (Signature):

Printed Name:

Date:

Received (Signature):

Printed Name: PDB  
Date:

Relinquished By (Signature):

Printed Name:

Date:

Received (Signature):

Printed Name: PDB  
Date: 1/27/98  
Time: 12:10

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Date: 1-26-98  
Page 1 of 3

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CT/DI	TURB AROUND TIME
<input type="checkbox"/> G.W. Monitoring	<input checked="" type="checkbox"/> 4461	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	<input checked="" type="checkbox"/> 4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Disposal	<input checked="" type="checkbox"/> 4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	<input checked="" type="checkbox"/> 4443	Offsite <input checked="" type="checkbox"/> 50 day
<input type="checkbox"/> Soil/Air Reinf. or Sys. O&M	<input checked="" type="checkbox"/> 4452	NOTE: Hold lab until as soon as possible of 24/48 hrs. IAT.
<input type="checkbox"/> Water Reinf. or Sys. O&M	<input checked="" type="checkbox"/> 4453	
<input type="checkbox"/> Other	<input type="checkbox"/>	

UST AGENCY: Alameda County

MATERIAL DESCRIPTION  
CONDITION/ COMMENTS



SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WIC#:

204-0072-0908

Shell Engineer:

Alex Perez

Phone No.:  
510 335 5027  
Fax #: 510 335 5029Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1111 65th St. Suite C, Oakland, CA 94608

Consultant Contact:

Aubrey Cool

Phone No.: 510  
420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Medium	Soil	Water	Air	No. of contns.	TPH (EPA 8015 Mod. GCS)		TPH (EPA 8015 Mod. Diesel)		BTEX (EPA 8020/6022)		Volatile Organics (EPA 8240)		Test for Disposed Shell 4B-28		Combination TPH 8015 & BTEX 8020 P/M/T/B/E		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS	
								TPH	GCS	TPH	GCS	BTEX	6022	VOCs	EPA 8240	Test for Disposed	Shell 4B-28	Combination TPH 8015 & BTEX 8020 P/M/T/B/E									
GP-C	1/26	12:20		X			6 VOCs 1 Liter 1 plastic	✓		✓				✓		✓	✓	P6									
GP-D-6.0'	1/26	12:30	X				1			✓		✓		✓		✓	✓										
GP-D-10.0'	1/26	12:40	X				1																				
GP-D	1/26	13:00		X			6 VOCs 2 Liters 1 plastic		✓		✓		✓		✓	✓	✓										HOLD
GP-E-6.0'	1/26	13:05	X				1		✓		✓		✓		✓	✓	✓										
GP-E-10.0'	1/26	13:30	X				1					✓		✓		✓					Y					See attached Shell Protocol	
GP-E	1/26	13:45		X			6 VOCs 1 Liter 1 plastic		✓		✓		✓		✓	✓	✓										
GP-H	1/26	16:50		X			6 VOCs 1 Liter 1 plastic		✓		✓		✓		✓	✓	✓										

Relinquished By (signature):  
Aubrey K. Cool

Printed Name: Aubrey Cool

Date: 1-26-98

Time: 10:10

Received (signature):

Relinquished By (signature):

Printed Name:

Date:

Time:

Received (signature):

Relinquished By (signature):

Printed Name:

Date:

Time:

Received (signature):

Printed Name: EJKF EROMON

Date: 1-26-98

Time: 16:50

Printed Name:

Printed Name:

Date:

Time:

Printed Name:

Printed Name:

Date:

Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS.

Date: 1-26-98  
Page 2 of 3

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4461	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Disposal	4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	4443	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/> Soil/Air Rem. or Sys. O & M	4452	NOTE: Turn Lab as soon as Possible of 24/48 hrs. TAT.
<input type="checkbox"/> Water Rem. or Sys. O & M	4453	
<input type="checkbox"/> Other		

UST AGENCY: Alameda County

SAMPLE  
CONDITION/  
COMMENTS



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WIC#:  
204 - 0072 - 0908

Shell Engineer:  
Alex Perez  
Phone No.: 510 335 5027  
Fax #: 510 335 5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact:  
Aubrey Cool  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	TIME Sampled	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposed Shell 4B - 28	Combination TPH 8015 & BTEX 8020 & MTBE	Asbestos	Container Used	Preparation Used	Composite Y/N
GP-F-5.0'	1-26 98	14:20	X			1		✓		✓	✓	✓				
GP-F-10.0'	1-26 98	14:30	X			1										
GP-F	1-26 98	14:35		X			6 VOCs 2 Liters 1 Plastic		✓		✓	✓				
GP-G	1-26 98	16:35		X			6 VOCs 1 Liter 1 plastic				✓	✓				
GP-G-7.0'	1-26 98	16:00	X			1					✓	✓				
GP-G-9.5'	1-26 98	16:05	X			1										
GP-H-6.0'	1-26 98	16:30	X			1					✓	✓				
GP-H-9.5'	1-26 98	16:40	X			1										

Relinquished By (signature):  
Aubrey K. Cool  
Printed Name: Aubrey Cool

Relinquished By (signature):  
Printed Name:

Relinquished By (signature):  
Printed Name:

**CHAIN OF CUSTODY RECORD**

Serial No: 9801F35

Date: 1-26-98

Page 3 of 3

**Analysis Required**

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CF/DI	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	4461	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	4441	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Disposal	4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	4443	Oilier <input checked="" type="checkbox"/> 15 DAY
<input type="checkbox"/> Soil/Air Rens or Sys. O & M	4452	
<input type="checkbox"/> Water Rens. or Sys. O & M	4453	NOTE: Hold Lab as soon as Possible of 24/48 hrs. TAT.
<input type="checkbox"/> Oilier		

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	HOLD

HOLD

Date: 1-28-98 Received (Signature):

Printed Name: ETIKA EROMONY

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



Sequoia  
Analytical

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819 Striker Avenue, Suite 8

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Walnut Creek, CA 94598  
Sacramento, CA 95834

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(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0185

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Aubrey Cool

Client Proj. ID: Shell 2300 Santa Clara  
Lab Proj. ID: 9801F35

Received: 01/28/98  
Reported: 02/12/98

## LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 17 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Richard Herling  
Project Manager

