

CAMBRIA

PCR BARNEY
DO NOT REMOVE!
RELATED TO
2301 SITE d-24-04
EA PRACTITIONER
58 MAR-3 PH L: L.

February 26, 1998

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.

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

OAKLAND,
CA 94608
PH: (510) 420-0700
FAX: (510) 420-9170

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.

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 Cool 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 μ g/L and 1,500 μ g/L, respectively.⁴ Toluene at 0.58 μ g/L and acetone at 56 μ 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

CAMBRIA

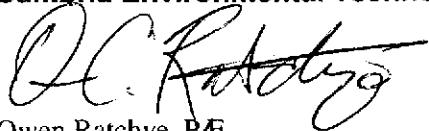
CONCLUSIONS

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

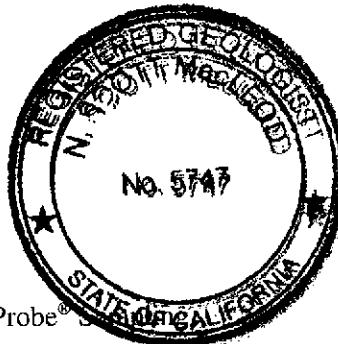
We appreciate the opportunity to work with you on this project. If you have any questions or require additional information, please contact us at (510) 420-0700.

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

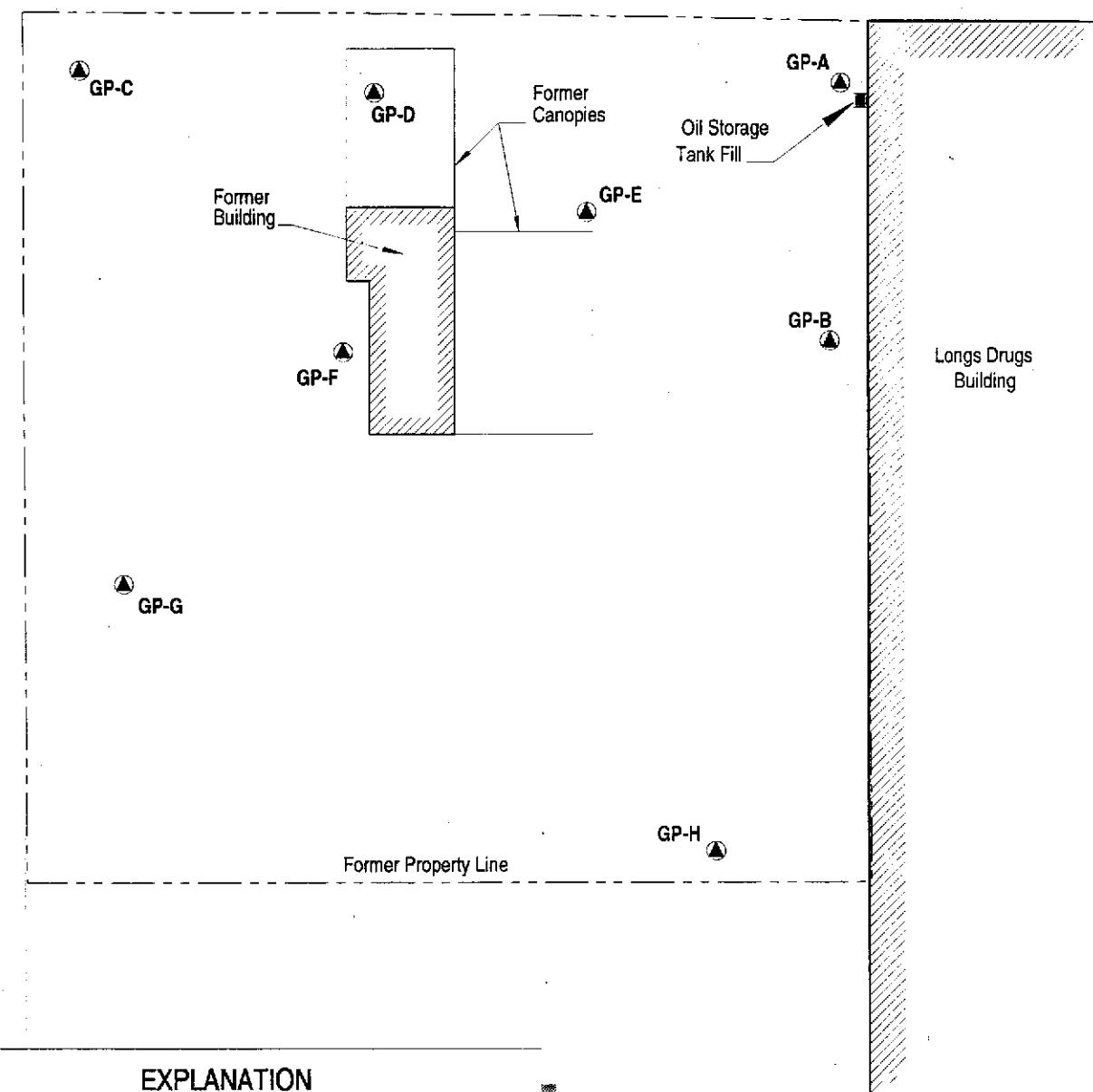
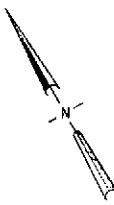
cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553
Rebecca Powlan, Long's Drug Stores California, Inc., P.O. Box 5222, Walnut Creek,
California 94596

F:\PROJECTS\HELL\ALA2300\Reports\InvRpt.wpd

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\SHELLAVALA2300\FIGURES\GEO-BOR.DWG

Site Map With
GeoProbe Boring Locations

FIGURE

1

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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 ^d	<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 ^a	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 ^b	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 ^c	<1.0	---	---	---	---	---	ND ^d

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

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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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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.

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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

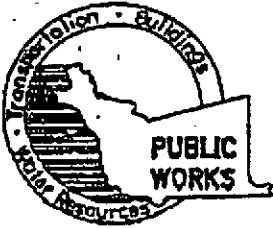
If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

G:\TEMPLATE\SOPS\GEOPROBE.WPD

CAMBRIA

ATTACHMENT B

Drilling Permit



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
 PHONE (510) 670-5575 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 _____ R. Accuracy ± _____ ft.
 DGN _____ RL CCB _____ ft.
 APN _____

CLIENT
 Name SHELL OIL PRODUCTS, CO Attn: ALEX (A.G.) PEREZ
 Address PO Box 8180 Phone 283-5017
 City MARTINIQUE Zip 97503

APPLICANT
 Name CAMBRIA ENVIRON -
 AGENT TECH INC Fax 422-9170
 Address 1104 63rd St. Suite C Phone 422-8300
 City OAKLAND Zip 94603

TYPE OF PROJECT

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

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>GEOPROBE</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"/>	GEOPROBE	

DRILLER'S LICENSE NO. C87-485165

WELL PROJECTS

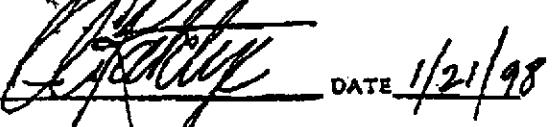
Drill Hole Diameter	<u>4</u>	in.	Maximum Depth	<u>100</u>	ft.
Casing Diameter	<u>2</u>	in.	Number	<u>1</u>	
Surface Seal Depth	<u>4</u>	ft.			

GEOTECHNICAL PROJECTS

Number of Borings	<u>6-0</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. 73-88

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 1/21/98

CAMBRIA

ATTACHMENT C

Soil Boring Logs

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

Phase

Task 5

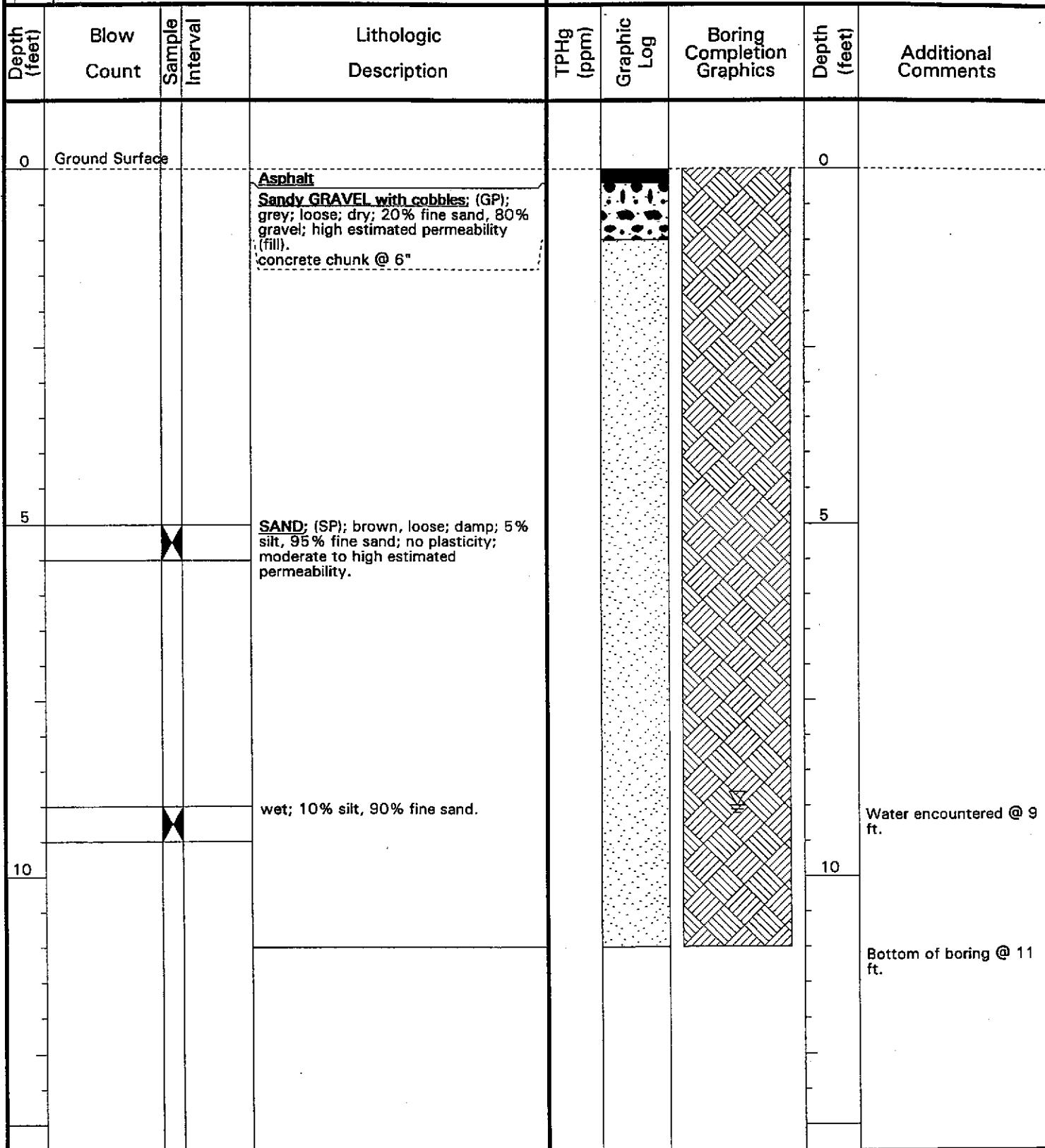
Boring ID

GP-A

Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1



Driller 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.

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

Phase

Task 5

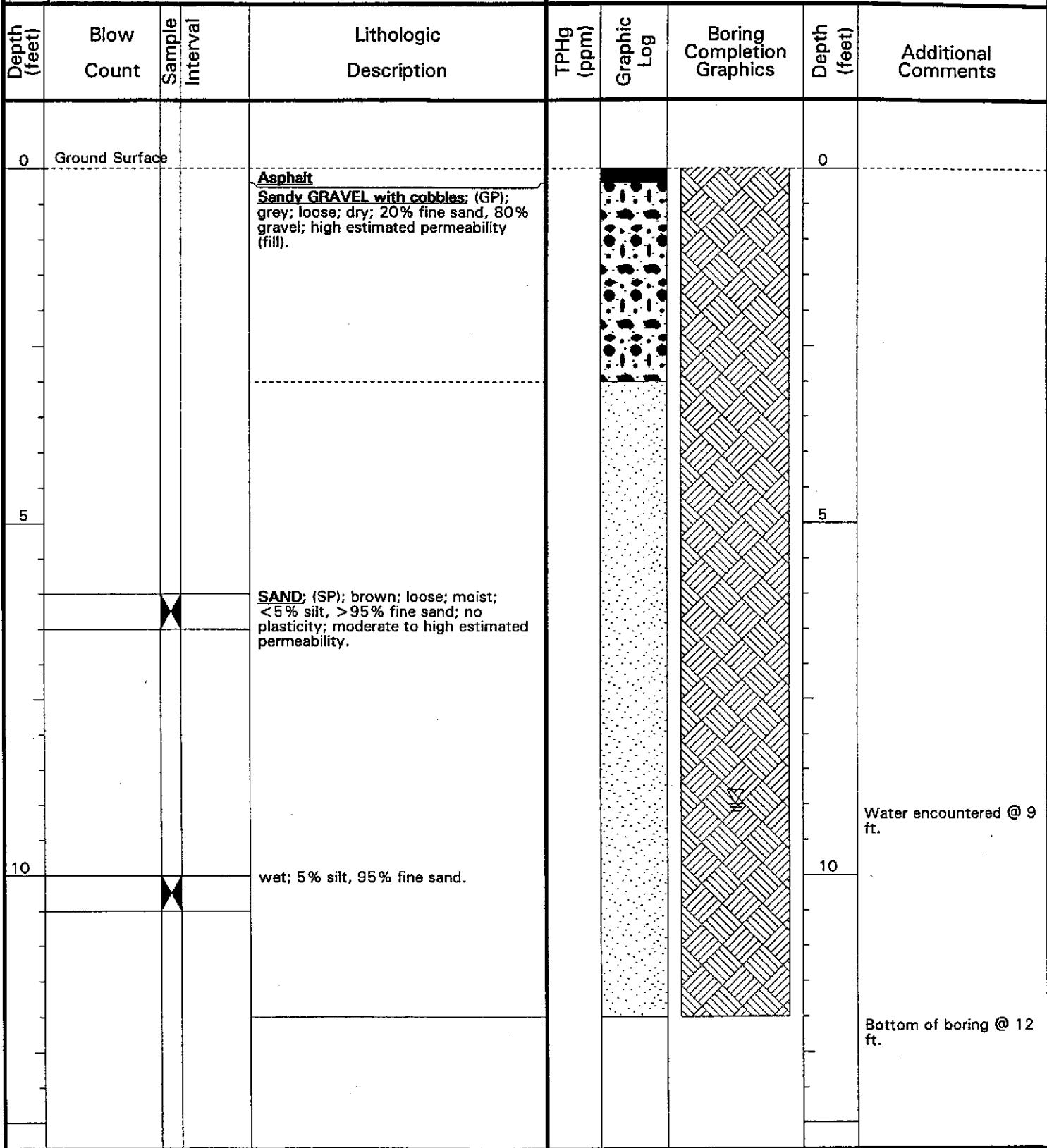
Boring ID

GP-B

Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1



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.

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

Phase

Task 5

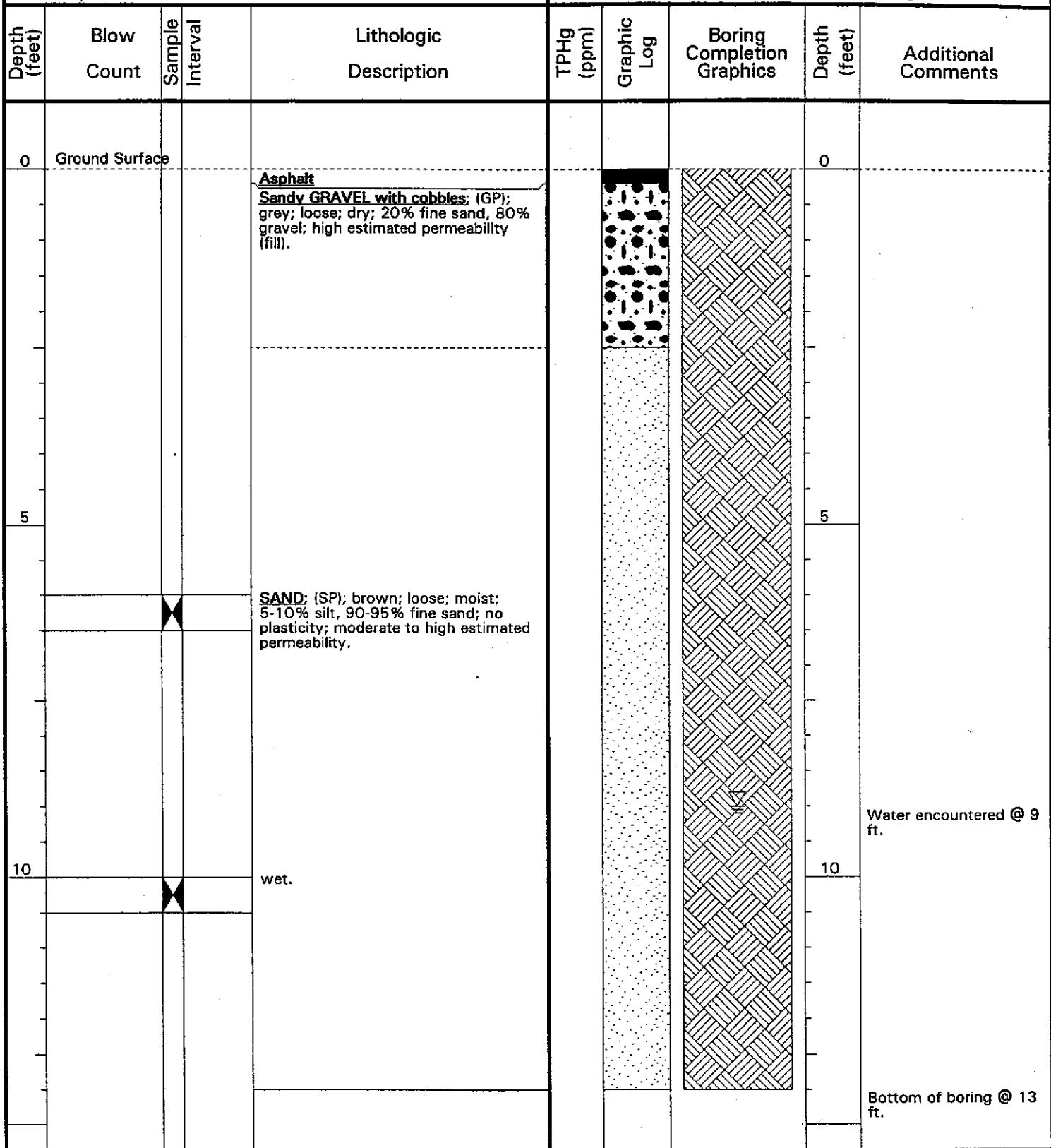
Boring ID

GP-C

Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1



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.

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

Phase

Task 5

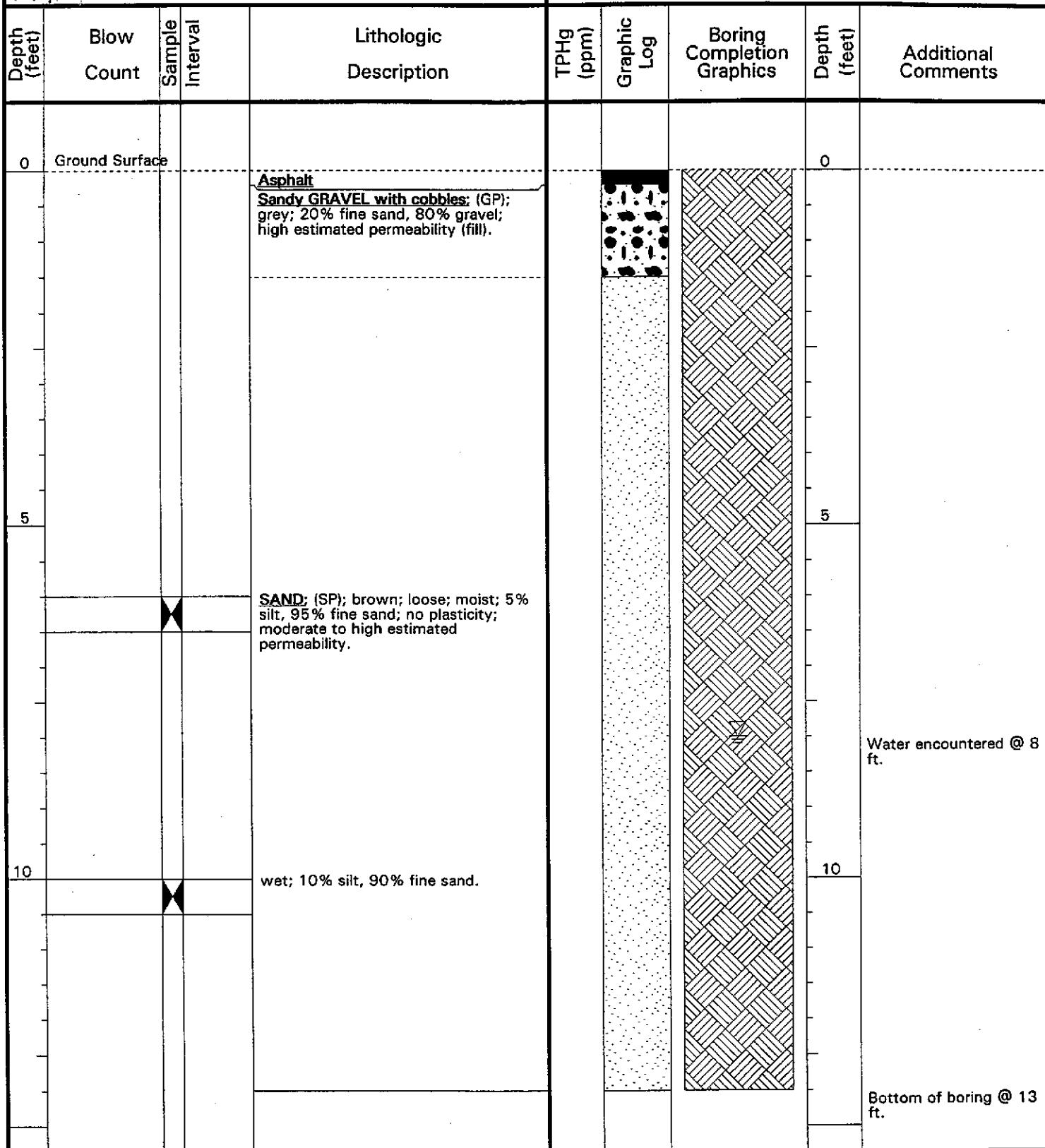
Boring ID

GP-D

Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1



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

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

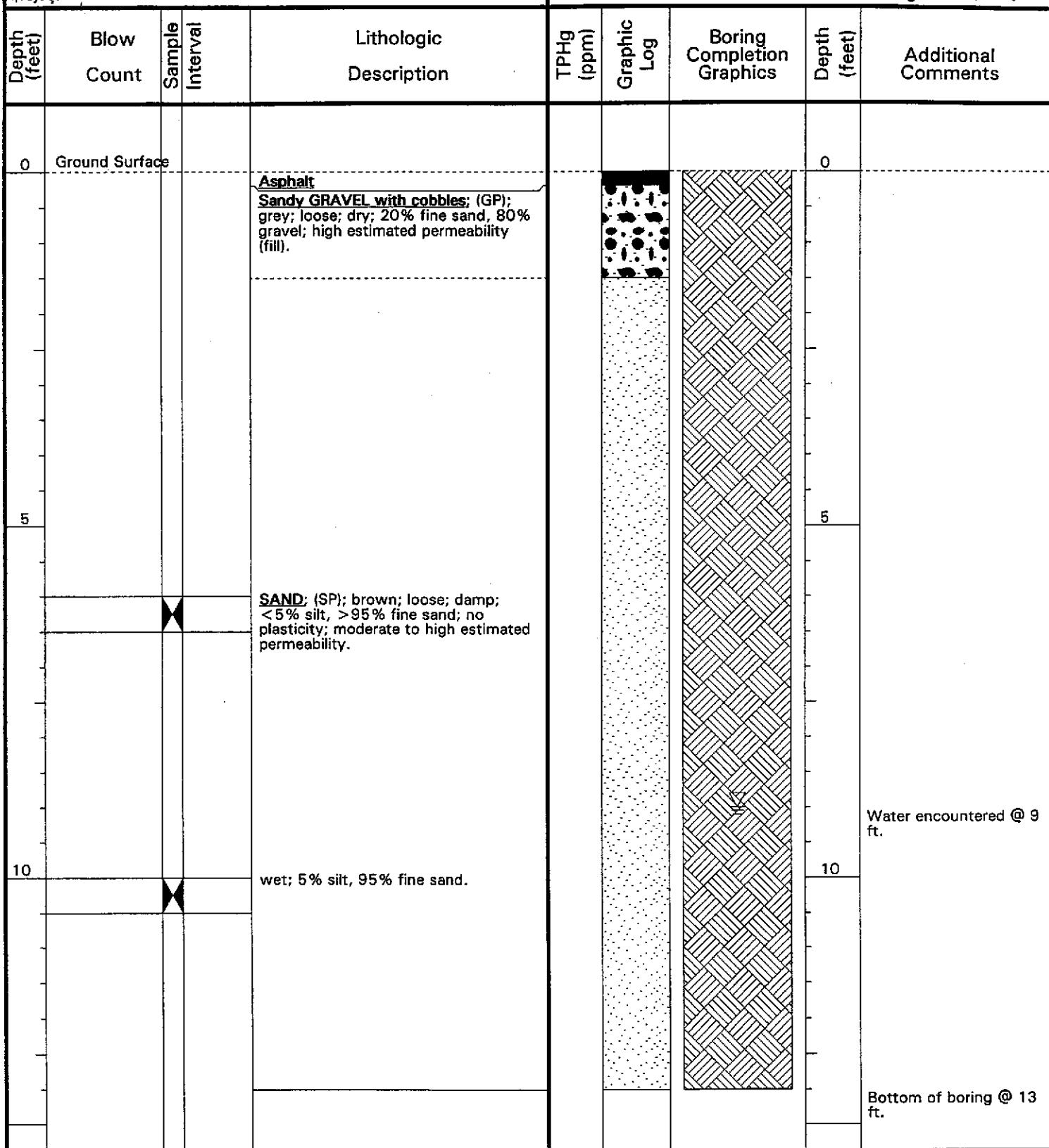
Phase

Task 5

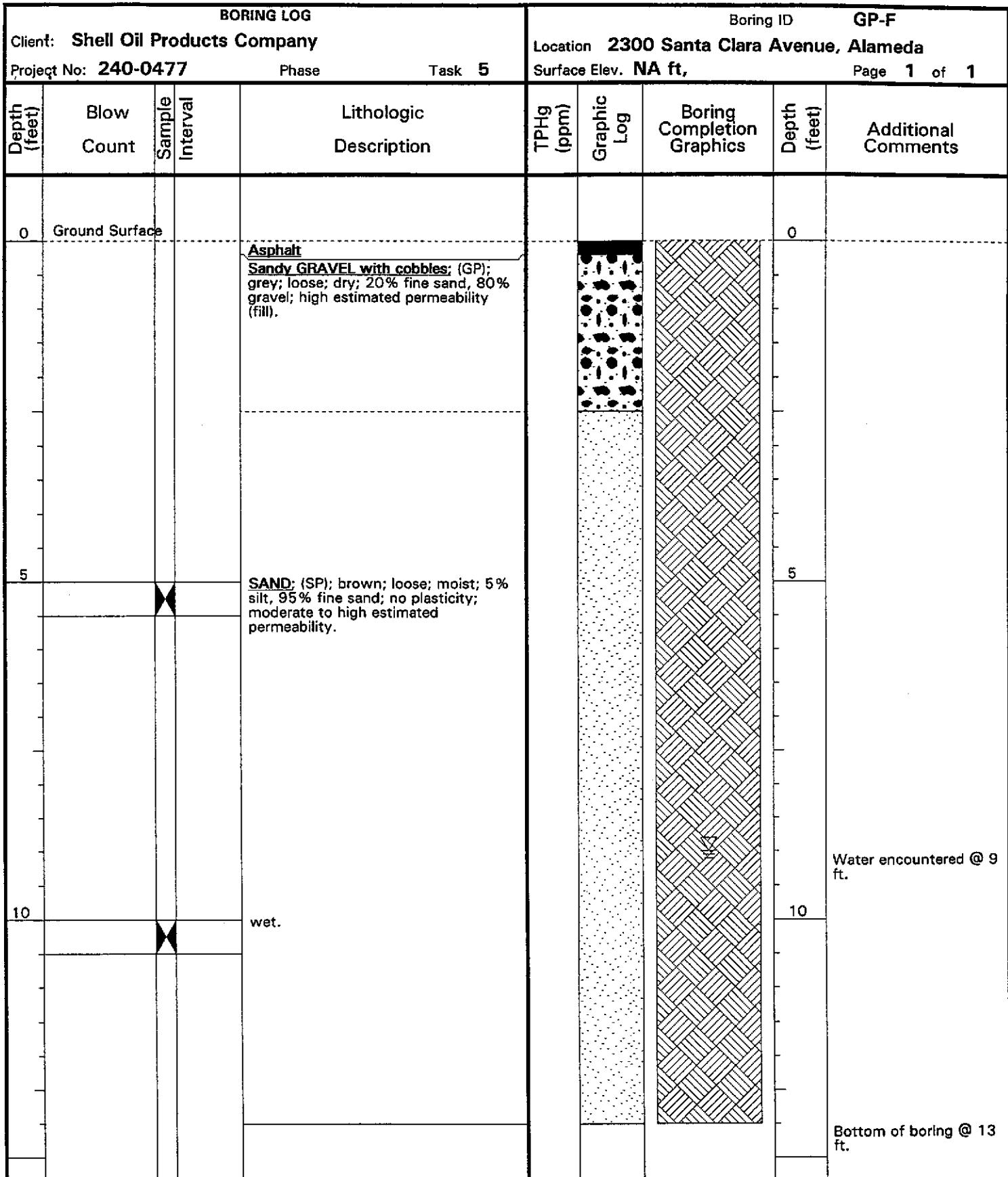
Boring ID GP-E
Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1

Driller GreggDrilling Started 1/26/98Notes: See site map. 2"Logged By Christina EmpedoclesDrilling Completed 1/26/98diameter Geoprobe boring.Water-Bearing Zones NAGrout Type Portland Type I/II

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.

BORING LOG

Client: Shell Oil Products Company

Project No: 240-0477

Phase

Task 5

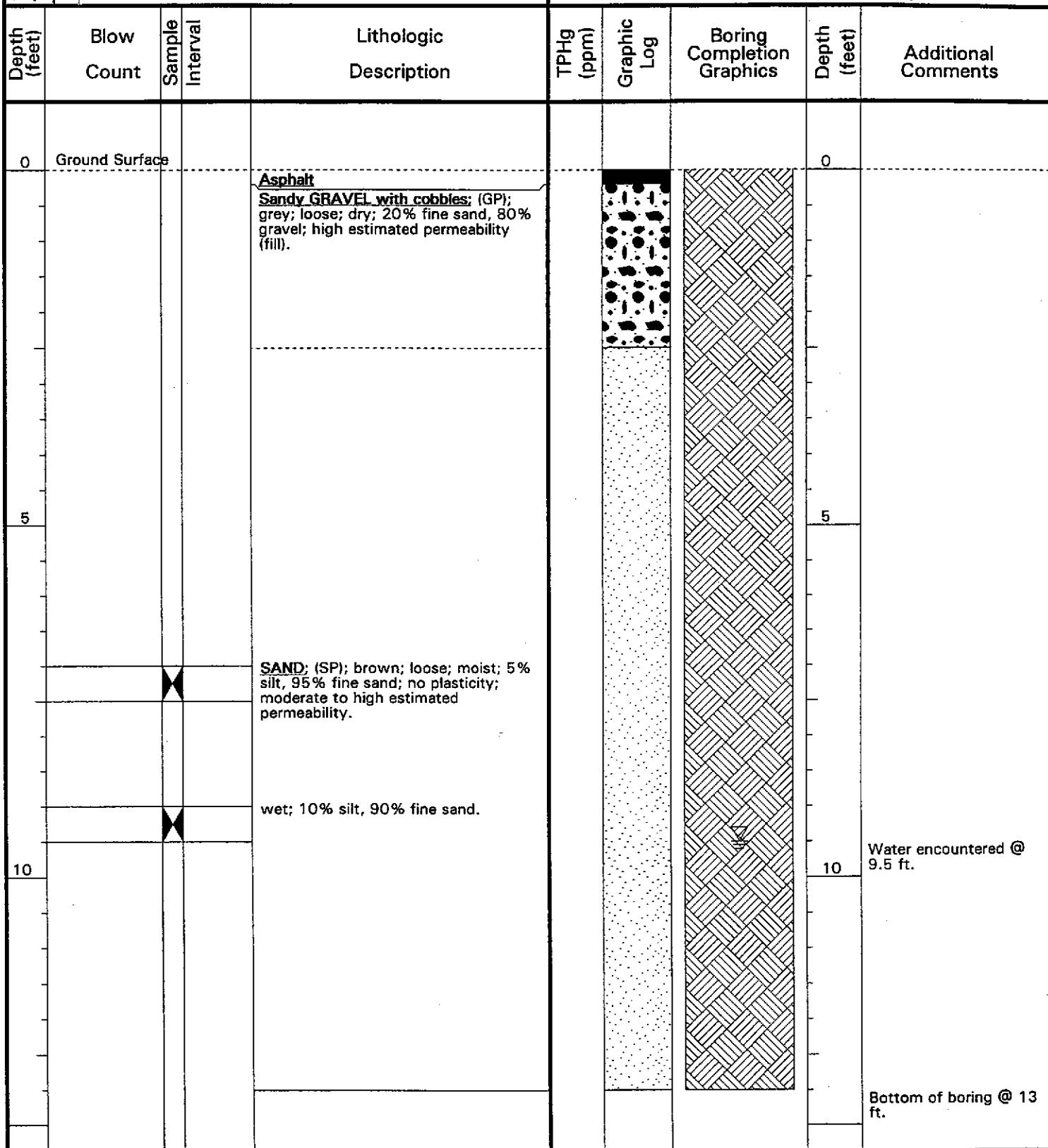
Boring ID

GP-G

Location 2300 Santa Clara Avenue, Alameda

Surface Elev. NA ft,

Page 1 of 1



Driller Gregg

Drilling Started 1/26/98

Notes: See site map. 2"

Logged By Christina Empedocles

Drilling Completed 1/26/98

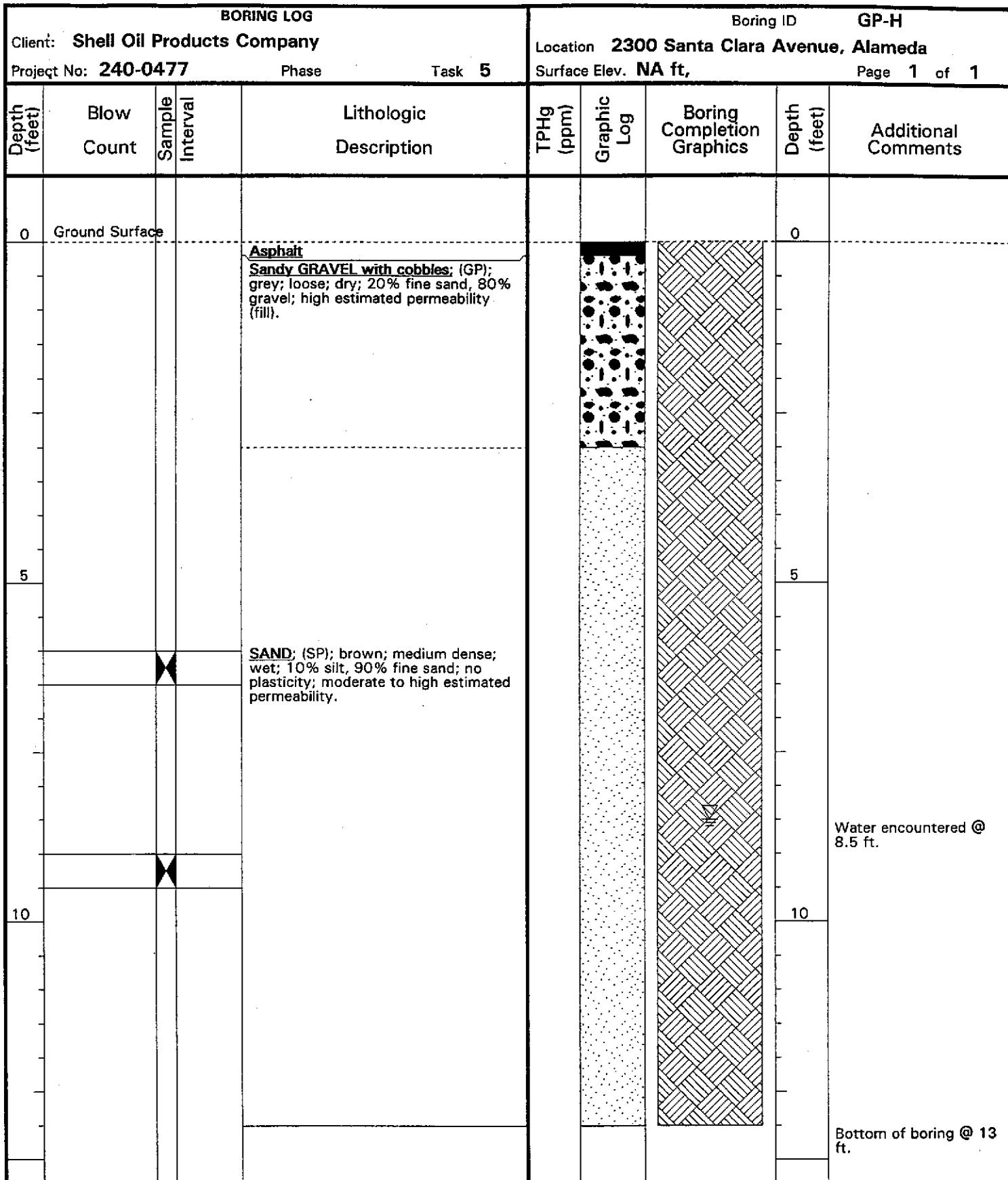
diameter Geoprobe boring.

Water-Bearing Zones NA

Grout Type Portland Type I/II

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.



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

ATTACHMENT D

Laboratory Analytical Results



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>
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

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<u>AMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
301F42 -08	LIQUID, GP-D	01/26/98	Lead
301F42 -08	LIQUID, GP-D	01/26/98	TPGBMW Purgeable TPH/BTEX
301F42 -09	SOLID, GPE-E 6.0'	01/26/98	8240 Volatile Organic Co
301F42 -09	SOLID, GPE-E 6.0'	01/26/98	Lead
301F42 -09	SOLID, GPE-E 6.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
301F42 -09	SOLID, GPE-E 6.0'	01/26/98	TPHD_S Extractable TPH
301F42 -10	LIQUID, GP-E	01/26/98	8240 Volatile Organic Co
301F42 -10	LIQUID, GP-E	01/26/98	TPHD_W Extractable TPH
301F42 -10	LIQUID, GP-E	01/26/98	Lead
301F42 -10	LIQUID, GP-E	01/26/98	TPGBMW Purgeable TPH/BTEX
301F42 -11	LIQUID, GP-H	01/26/98	8240 Volatile Organic Co
301F42 -11	LIQUID, GP-H	01/26/98	TPHD_W Extractable TPH
301F42 -11	LIQUID, GP-H	01/26/98	Lead
301F42 -11	LIQUID, GP-H	01/26/98	TPGBMW Purgeable TPH/BTEX
301F42 -12	SOLID, GP-F 5.0'	01/26/98	8240 Volatile Organic Co
301F42 -12	SOLID, GP-F 5.0'	01/26/98	Lead
301F42 -12	SOLID, GP-F 5.0'	01/26/98	TPGBMS Purgeable TPH/BTEX
301F42 -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,

EQUOIA ANALYTICAL

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>
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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Sambria 144 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
ab No: 9801F42-01 ample Desc : SOLID,GP-A 5.0'	Lead mg/Kg	01/30/98	5.0	N.D.
ab No: 9801F42-02 ample Desc : LIQUID,GP-A	Lead mg/L	02/02/98	0.0050	0.016
ab No: 9801F42-03 ample Desc : SOLID,GP-B 6.0'	Lead mg/Kg	01/30/98	5.0	N.D.
ab No: 9801F42-04 ample Desc : LIQUID,GP-B	Lead mg/L	02/02/98	0.010	.12
ab No: 9801F42-05 ample Desc : SOLID,GP-C 6.0'	Lead mg/Kg	01/30/98	0.25	N.D.
ab No: 9801F42-06 ample Desc : LIQUID,GP-C	Lead mg/L	02/02/98	0.0050	0.020
ab No: 9801F42-07 ample Desc : SOLID,GP-D 6.0'	Lead mg/Kg	01/30/98	5.0	N.D.

alytes 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

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

Attention: Aubrey Cool

Lab Proj. ID: 9801F42

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.

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Richard Herling
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ambria
144 65th St. Suite C
akland, CA 94608

ttention: Aubrey Cool

Batch Number: GC012998BTEXEXA
trument ID: GCHP22

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

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

nalyte

Detection Limit
mg/Kg

Sample Results
mg/Kg

PPH as Gas
ethyl t-Butyl Ether
enzenene
luene
thyl Benzene
ylenes (Total)
chromatogram Pattern:

1.0
0.025
0.0050
0.0050
0.0050
0.0050
N.D.
N.D.
N.D.
N.D.
N.D.
N.D.

urrogates

fluorotoluene
Bromofluorobenzene

Control Limits %
70 130
60 140

% Recovery
75
89

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

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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: 8015Mod/8020
Lab Number: 9801F42-02

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

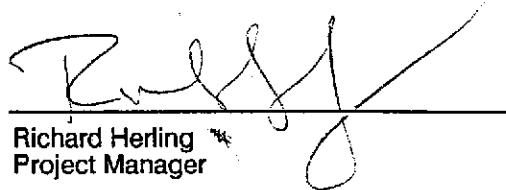
QC Batch Number: GC012998BTEX03A
Instrument ID: GCHP3

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


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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 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

GC Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

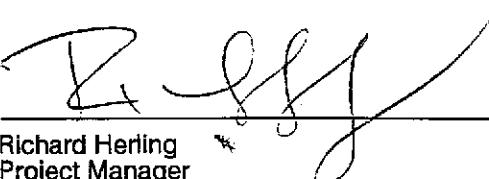
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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	75
4-Bromofluorobenzene	60 140	94

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

SEQUOIA ANALYTICAL - ELAP #1210


Richard Herling
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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-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

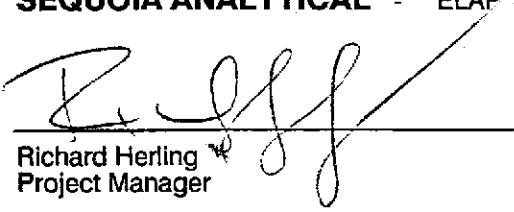
QC Batch Number: GC012998BTEX02A
Instrument ID: GCHP2

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.

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Richard Herling
Project Manager

Page:

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Cambria
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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

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

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Ambria
144 65th St. Suite C
Oakland, CA 94608

Attention: Aubrey Cool

Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

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

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.
Ethyl t-Butyl Ether	0.025	N.D.
benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Methyl Benzene	0.0050	N.D.
Olefins (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
Bromofluorobenzene	60	140

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

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Richard Herling
Project Manager



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Cambrria
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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

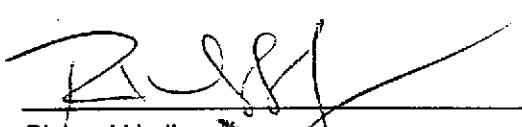
QC Batch Number: GC012998OHBPEXC
Instrument ID: GCHP4B

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

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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

QC Batch Number: GC012998BTEX03A
Instrument ID: GCHP3

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

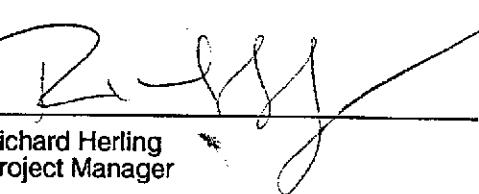
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

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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Cambrria
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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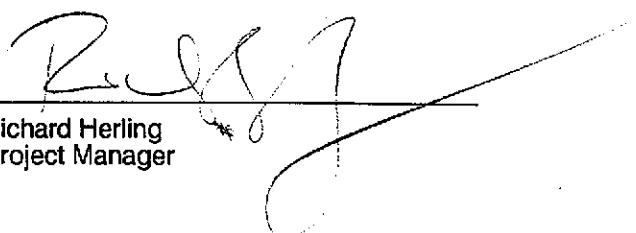
Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 2300 Santa Clara Sample Descript: GP-C Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9801F42-06	Sampled: 01/26/98 Received: 01/28/98 Analyzed: 02/02/98 Reported: 02/04/98
Attention: Aubrey Cool		

Batch Number: MS0130988240F3A
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates		
1,2-Dichloroethane-d4	Control Limits %	% Recovery
Toluene-d8	76	113
4-Bromofluorobenzene	88	103
	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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Camibia
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	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
144 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

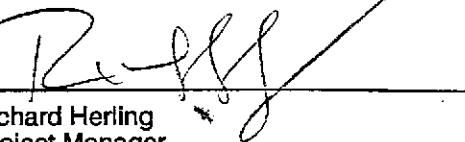
Sampled: 01/26/98
Received: 01/28/98
Extracted: 01/30/98
Analyzed: 01/30/98
Reported: 02/04/98

C Batch Number: MS0130988240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
,2-Dichloroethane-d4	70	107
Toluene-d8	81	100
-Bromofluorobenzene	74	96

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

EQUOIA ANALYTICAL - ELAP #1210


Richard Herling
Project Manager



**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
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

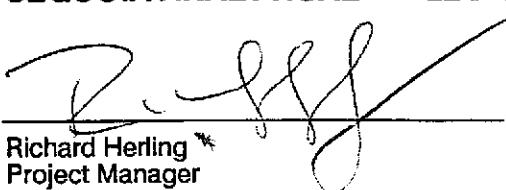
QC Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

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:		
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:

16



**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-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

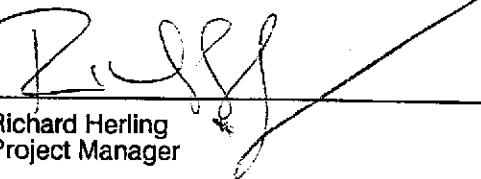
QC Batch Number: GC012998OHBPEXC
Instrument ID: GCHP4B

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

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 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	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-D
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9801F42-08

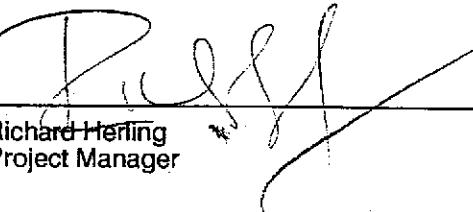
Sampled: 01/26/98
Received: 01/28/98
Analyzed: 02/02/98
Reported: 02/04/98

QC Batch Number: MS0130988240F3A
Instrument ID: F3

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates		
1,2-Dichloroethane-d4	Control Limits %	% Recovery
Toluene-d8	76	113
4-Bromofluorobenzene	88	103
	86	99

nalytes 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-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

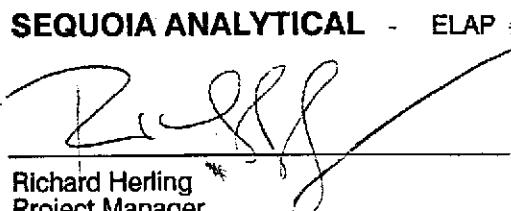
QC Batch Number: GC0129980HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	220
Chromatogram Pattern:	.....	C9-C24
Discrete Peak	.....	@C16
Surrogates		Control Limits %
n-Pentacosane (C25)	50	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
Methyl t-Butyl Ether
Benzene
Toluene
Ethyl Benzene
Xylenes (Total)
Chromatogram Pattern:

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

Surrogates

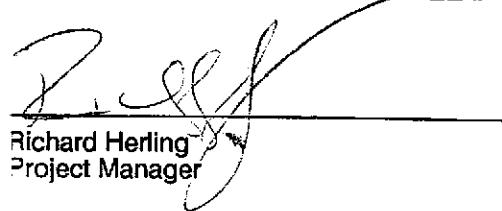
Trifluorotoluene

Control Limits %
70 130

% Recovery
82

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: 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.



Sequoia Analytical

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

oria
65th St. Suite C
nd, CA 94608

tion: Aubrey Cool

atch Number: MS0130988240EXA
ment ID: F3

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

yte

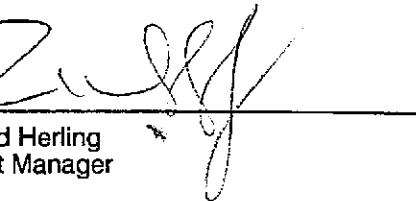
	Detection Limit ug/Kg	Sample Results ug/Kg
--	--------------------------	-------------------------

ogates
ichloroethane-d4
ne-d8
mofluorobenzene

	Control Limits %	% Recovery
70	121	105
81	117	96
74	121	92

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

JOIA ANALYTICAL - ELAP #1210


David Herling
Project Manager



**Sequoia
Analytical**

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FAX (916) 921-0100

Cambridge
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

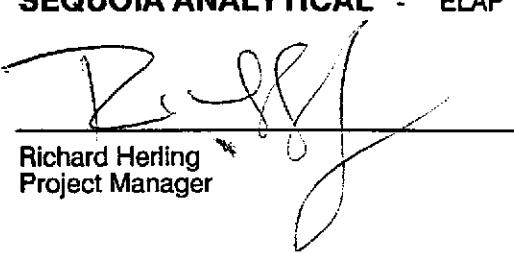
QC Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

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

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: 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

IC 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 % 50 150	% Recovery 71

nalytes 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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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

Surrogates

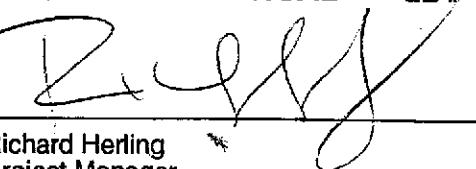
1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

Control Limits %
76 114
88 110
86 115

% Recovery
111
102
99

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
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

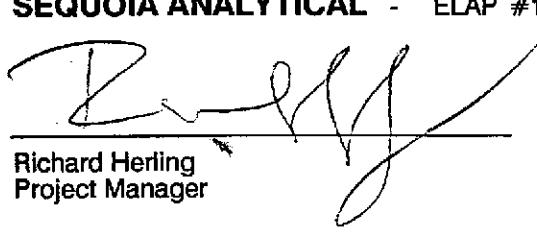
QC Batch Number: GC0129980HBPEXB
Instrument ID: GCHP5B

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 %	% Recovery
n-Pentacosane (C25)	50 150	95

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

SEQUOIA ANALYTICAL - ELAP #1210


Richard Herling
Project Manager

Page:

28



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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

GC 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
Methyl t-Butyl Ether
Benzene
Toluene
Ethyl Benzene
Xylenes (Total)
Chromatogram Pattern:

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

Surrogates

Trifluorotoluene

Control Limits %
70 130

% Recovery
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

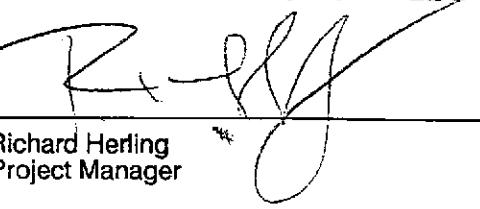
Sampled: 01/26/98
Received: 01/28/98
Analyzed: 02/03/98
Reported: 02/04/98

QC Batch Number: MS0130988240F3A
Instrument ID: F3

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

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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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
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

Page:

32



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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: 8015Mod/8020
Lab Number: 9801F42-11

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

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

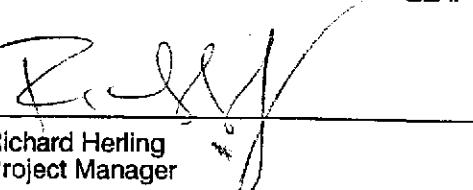
Surrogates

Trifluorotoluene

Control Limits %	% Recovery
70	130
	83

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-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
Surrogates		
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121
	Control Limits %	% Recovery

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
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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

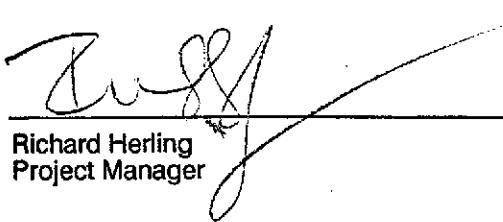
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

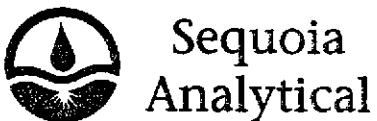
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	82
4-Bromofluorobenzene	60 140	87

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

nbria
4 65th St. Suite C
land, CA 94608
ntion: 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

atch Number: GC012998OHBPEXC
ment ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

lyte	Detection Limit mg/Kg	Sample Results mg/Kg
¹ H as Diesel omatogram Pattern:	..... 1.0	..... 2.1 C9-C24
rogates entacosane (C25)	Control Limits % 50 150	% Recovery 69

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

UOIA ANALYTICAL - ELAP #1210

A handwritten signature in black ink, appearing to read "Ward Herling" followed by "Project Manager". The signature is fluid and cursive.

Ward Herling
Project Manager



**Sequoia
Analytical**

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FAX (916) 921-0100

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

Client Proj. ID: Shell 2300 Santa Clara

Sampled: 01/26/98

Lab Proj. ID: 9801F43

Received: 01/28/98

Attention: Aubrey Cool

Analyzed: see below

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 Hertling
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	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	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-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

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

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 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

IC 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 Peaks	.....	.....
Surrogates	.....	.....
n-Pentacosane (C25)	Control Limits % 50	% Recovery 150

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: 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:		
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

IC 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

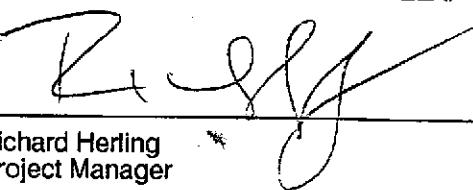
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	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

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

EQUOIA 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-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

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-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: GC020298BTEXXB
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	Control Limits %	% Recovery
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 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

Reported: Feb 4, 1998

9801F43 15, 16

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

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
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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
Anal. 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

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		

Please Note:

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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: 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	EPA 5030	EPA 5030	EPA 5030	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					

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**

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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, 06, 08, 10, 11
Reported: Feb 4, 1998

9801F43 13, 14

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	EPA 5030	EPA 5030	EPA 5030	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:

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SEQUOIA ANALYTICAL

Richard Herling
Project Manager



**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 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	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Mirafab				
MS/MSD #:	980197203	980197203	980197203	980197203	980197203
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. #:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.0	7.7	8.0	24	53
MS % Recovery:	80	77	80	80	88
Dup. Result:	9.5	8.8	9.1	28	61
MSD % Recov.:	95	88	91	93	102
RPD:	17	13	13	15	14
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. #:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.8	8.5	8.8	27	58
LCS % Recov.:	88	85	88	90	97

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					

Please Note:

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SEQUOIA ANALYTICAL


Richard Herling
Project Manager



**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
Anal. 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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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 #: 9801F42 08, 10, 11
9801F43 13

Reported: Feb 4, 1998

QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC0129980HBPEXB
Analy. 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.:

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

Please Note:

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SEQUOIA ANALYTICAL


Richard Herling
Project Manager



**Sequoia
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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:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA	MS0130988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:					

Analyst:	L. Duong	L. Duong	L. Duong	L. Duong	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	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	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	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	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					

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

SEQUOIA ANALYTICAL



Richard Herling
Project Manager



**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 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	L. Duong	L. Duong	L. Duong	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	500 µg/L	500 µg/L	500 µg/L	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	50 µg/L	50 µg/L	50 µg/L	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					

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

SEQUOIA ANALYTICAL

Richard Herling
Project Manager

9801F42.CCC <9>



**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: Liquid

Work Order #: 9801F43 13

Reported: Feb 4, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
QC Batch#:	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A	MS0130988240F2A
Anal. 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	50 µg/L	50 µg/L	50 µg/L	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	50 µg/L	50 µg/L	50 µg/L	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

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

SEQUOIA ANALYTICAL

Richard Herling
Project Manager

9801F42.CCC <10>



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 5027

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1114 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
2 GP-A	1/26	8:45		X			5 vials 1 Liter 1 plastic
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			5 vials 1 Liter 1 plastic
5 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:

CHAIN OF CUSTODY RECORD

Serial No: 9861P42/13

Date: 1-26-98

Page 1 of 3

Analysis Required

LAB: Sequoia

CHECK ONE (1) BOX ONLY	C/I/D	TURB 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"/> 50 day
<input type="checkbox"/> Soil/Air Rmn. or Sys. O&M	4452	
<input type="checkbox"/> Water Rmn. or Sys. O&M	4453	
<input type="checkbox"/> Other		

NOTE: Daily lab is soon as possible of 24/48 hrs. IAI.

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	see attached Shell Protocol
	HOLD
	see attached Shell Protocol



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 230 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 contns.	TPH (EPA 8015 Mod. GCR)		TPH (EPA 8015 Mod. Diesel)	STEX (EPA 8020/8020)	Volatile Organics (EPA 8240)	Test for Disposal	Shell 4B-28	Container Size	Preparation Used	Composite Y/N	UST AGENCY: Alameda County			
								TPH (EPA 8015 Mod. GCR)	TPH (EPA 8015 Mod. Diesel)								MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS			
6 GP-C	1/26	12:20		X			1	✓			✓	✓	✓	✓	✓						
7 GP-D-6.0'	1/26	12:30	X				1		✓		✓		✓	✓							
GP-D-10.0'	1/26	12:40	X				1													HOLD	
8 GP-D	1/26	13:00		X			1	✓			✓	✓	✓	✓							
9 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			
10 GP-E	1/26	13:45		X			1	✓			✓	✓	✓								
10 GP-H	1/26	16:50	X				1	✓			✓	✓	✓								

Relinquished By (signature):

Aubrey K. Cool

Printed Name:

Aubrey Cool

Date: 1-28-98

Time: 10:10

Received (Signature):

EJKE E&M

Printed Name:

EJKE E&M

Date: 1-28-98

Time: 10:40

Received (Signature):

EJKE E&M

Relinquished By (signature):

Printed Name:

Date:

Received (Signature):

ABAD

Printed Name:

ABAD

Date: 1/28/98

Time: 11:45

Received (Signature):

ABAD

Relinquished By (signature):

Printed Name:

Date:

Received (Signature):

ABAD

Printed Name:

ABAD

Date: 1/28/98

Time: 11:45

Received (Signature):

ABAD

CHAIN OF CUSTODY RECORD

Serial No:

9601FG2/43

Date: 1-26-98

Page 2 of 3

LAB: Sequoia

CHECK OUT (1) BOX ONLY	C/D	TURN AROUND TIME
G.W. Monitoring	<input type="checkbox"/> 4441	24 hours <input type="checkbox"/>
Site Investigation	<input checked="" type="checkbox"/> 4441	48 hours <input type="checkbox"/>
Soil Classify/Deposit	<input type="checkbox"/> 4442	16 days <input type="checkbox"/>
Water Classify/Deposit	<input type="checkbox"/> 4443	Other <input checked="" type="checkbox"/> 5 DAY
Soil/Air Reme. or Sys. O&M	<input type="checkbox"/> 4452	NOTE: Hold Submission of Possible of 24/48 hrs. TAL.
Water Reme. or Sys. O&M	<input type="checkbox"/> 4453	
Other	<input type="checkbox"/>	

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITHIN ONE WEEK 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 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 Sludge	Soil	Water	Air	No. of contns.	Analysis Required		Asbestos	Container Size	Preparation Used	Composite Y/N	UST AGENCY: Alameda County	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
							TPH (EPA 8015 Mod. GCS)	TPH (EPA 8015 Mod. Diesel)							
GP-F-5.0'	1-26 98	14:20	X			1		✓	✓						
GP-F-10.0'	1-26 98	14:30	X			1									HOLD
GP-F	1-26 98	14:35		X			6 VOCs, 2 Litter 1 Plastic	✓	✓	✓	✓				
GP-L	1-26 98	16:35		X			6 VOCs, 1 Liter 1 plastic			✓	✓				
GP-G-7.0'	1-26 98	1600	X			1				✓	✓				
GP-G-9.5'	1-26 98	1605	X			1									HOLD
GP-H-6.0'	1-26 98	1630	X			1				✓	✓				
GP-H-9.5'	1-26 98	1640	X			1									

Relinquished By (Signature):
Aubrey K. Cool

Printed Name: Aubrey Cool

Date: 1-28-98

Time: 10:10

Date:

Time:



**Sequoia
Analytical**

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

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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

Received: 01/28/98

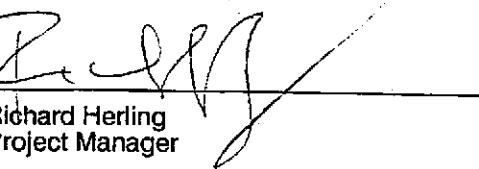
Lab Proj. ID: 9801F42

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 102 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

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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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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: 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	.....	5.7
Chromatogram Pattern:		
Unidentified HC	.....	C9-C24
Surrogates		
n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 81

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-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

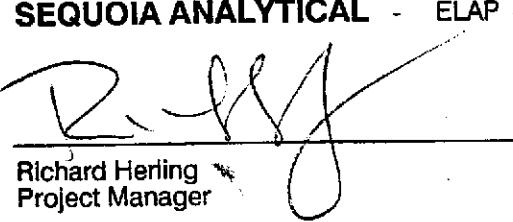
QC Batch Number: GC0209980HBPEXA
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	.....	120
Chromatogram Pattern:		
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	92

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

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Richard Herling
Project Manager

Page:

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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

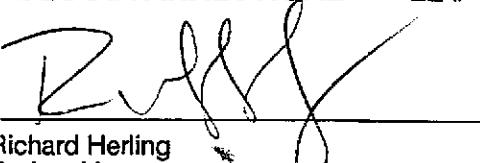
C Batch Number: GC0205980HBPEXB
Instrument ID: GCHP4B

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		
n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 84

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

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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

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

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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

IC 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.

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Richard Herling
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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

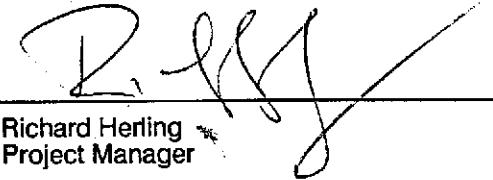
QC Batch Number: GC0209980HBPEXA
Instrument ID: GCHP4A

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

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

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Project Manager

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mbria
44 65th St. Suite C
kland, CA 94608
ention: 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

Batch Number: GC0205980HBPEXB
ument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

alyte	Detection Limit mg/Kg	Sample Results mg/Kg
PH as Diesel	.....	1.0
romatogram Pattern:	.....	.....
identified HC	.....	C9-C24
rogates	Control Limits %	% Recovery
Pentacosane (C25)	50 150	80

tes 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
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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.



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Cambria
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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

IC Batch Number: MS0208988240EXA
Instrument ID: F2

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
---------	--------------------------	-------------------------

Surrogates

1,2-Dichloroethane-d4	70	121	111
Toluene-d8	81	117	110
4-Bromofluorobenzene	74	121	102

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

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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: 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	.....	3.1
Chromatogram Pattern:		
Unidentified HC	.....	C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	78

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

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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 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.



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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

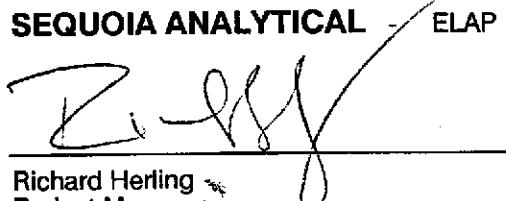
Sampled: 01/26/98
Received: 01/28/98
Extracted: 02/10/98
Analyzed: 02/10/98
Reported: 02/11/98

QC Batch Number: MS0208988240EXA
Instrument ID: F2

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates		
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

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Richard Herling
Project Manager

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bria
65th St. Suite C
and, CA 94608
tion: Aubrey Cool

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

atch Number: GC0205980HBPEXB
ment ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample Type	Detection Limit mg/Kg	Sample Results mg/Kg
H as Diesel	.....	5.4
matogram Pattern:	.....	C9-C24
Identified HC	.....
Surrogates	Control Limits %	% Recovery
pentacosane (C25)	50 150	101

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

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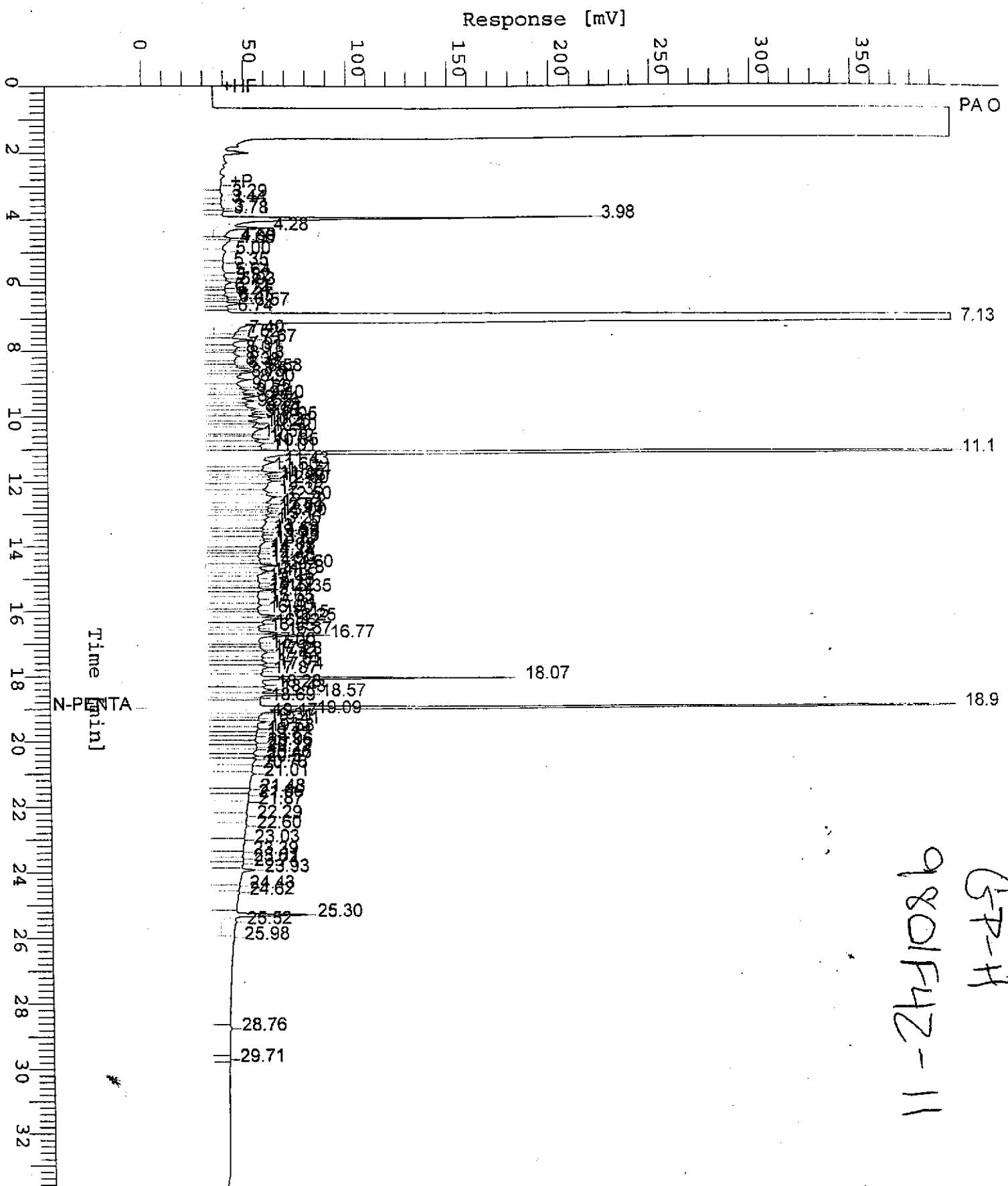
Richard Herling
Project Manager

Chromatogram

Sample Name : DW9801F42-11 (500:1)
FileName : S:\GHP_05\0201\129B028.raw
Method : TPH05A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 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



GP-H
9801F42-11



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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 #: 9802318 08

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	L. Zhu	L. Zhu	L. Zhu	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	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	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	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	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



**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	L. Zhu	L. Zhu	L. Zhu	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	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	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
819 Striker Avenue, Suite 8

Redwood City, CA 94063
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(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 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

MS/MSD 50-150

LCS 60-140

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.

SEQUOIA ANALYTICAL

Richard Herling
Project Manager



**Sequoia
Analytical**

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(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 #: 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

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 230 Santa Clara, Alameda

WICN: 204-CC172-0908

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 #: 510 420-0170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	Air	No. of contns.	Analysis Required							Comments Y/N			
								TPH (EPA 8015 Mod. G8)	TPH (EPA 8015 Mod. Diesel)	STEX (EPA 8020/50D)	Volatile Organics (EPA 8240)	Test for Deposits	Shell 4B-28	Combustion TPH, SO2S & STEX 8020 & MTBE	Asbestos	Container Size	Preparation Used	
6 GP-C	1/26	12:20		X			6 VOCAs 1 Liter 1 Plastic	✓	✓	✓	✓	✓	✓	Pb				
7 GP-D-6.0'	1/26	12:30	X				1	✓	✓	✓	✓	✓	✓					
GP-D-10.0'	1/26	12:40	X				1	✓	✓	✓	✓	✓	✓					
8 GP-D	1/26	13:00		X			6 VOCAs 2 Liters 1 Plastic	✓	✓	✓	✓	✓	✓					
9 GP-E-6.0'	1/26	13:15	X				1	✓	✓	✓	✓	✓	✓					
GP-E-10.0'	1/26	13:30	X				1	✓	✓	✓	✓	✓	✓					
10 GP-E	1/26	13:45		X			6 VOCAs 1 Liter 1 plastic	✓	✓	✓	✓	✓	✓					
11 GP-H	1/26	14:50		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):
Aubrey

Printed Name:

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

Received (Signature):
EJKE EDOMON

Date:
Time:

Received (Signature):

Date:
Time:

Received (Signature):
ABAD

Printed Name:
EJKE EDOMON

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

Printed Name:

Date:
Time:

Printed Name:
ABAD

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

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

Date: 1-26-98
Page 2 of 3

9601542/43

LAB: Sequoia

CHECK DATE (1) BOX ONLY	C/H/DI	TURB AROUND DATE
<input type="checkbox"/> G.W. Monitoring	<input type="checkbox"/> 400	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	<input type="checkbox"/> 400	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Clarity/Deposit	<input type="checkbox"/> 400	16 days <input type="checkbox"/> (1 month)
<input type="checkbox"/> Water Clarity/Deposit	<input type="checkbox"/> 400	Other <input type="checkbox"/> 1/45 PAY
<input type="checkbox"/> Soil/Air Rents or Sys. O & M	<input type="checkbox"/> 400	HDR: Dolly tub or can or Possible of 24/48 hrs. IAI.
<input type="checkbox"/> Water Rents. or Sys. O & M	<input type="checkbox"/> 400	
<input type="checkbox"/> Other	<input type="checkbox"/>	

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	HOLD
	See attached Shell Protocol

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



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 #: 510 420-9170

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	TIME	Medium	Soil	Water	Air	No. of contns.	Analysis Required							Composite Y/N	UST AGENCY: Alameda County
								TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	ETEX (EPA 8020/6C20)	Volatile Organics (EPA 8240)	Test for Disposed Shell 4B - 28	Combustion TPH 8015 & ETEX 8020 & MTBE	Asbestos	Container Size	Preparation Used
12 GP-F-5.0'	1-26 98	14:20	X				1	✓		✓	✓	✓	✓	PL		
13 GP-F-10.0'	1-26 98	14:30	X				1									HOLD
14 GP-F	1-26 98	14:35	X	6 VOCs 2 Liters 1 plastic			1	✓	✓	✓	✓	✓	✓			
15 GP-G-7.0'	1-26 98	16:35	X	6 VOCs 1 Liter 1 plastic			1				✓	✓				
15 GP-G-7.0'	1-26 98	16:00	X				1				✓	✓				
16 GP-G-9.5'	1-26 98	16:05	X				1									HOLD
16 GP-H-6.0'	1-26 98	16:30	X				1				✓	✓				
GP-H-9.5'	1-26 98	16:40	X				1				✓					See attached Shell protocol

Relinquished By (Signature):

Aubrey K. Cool

Printed Name: Aubrey Cool

Relinquished By (Signature):

Printed Name:

Relinquished By (Signature):

Printed Name:

Date: 1-28-98

Time: 10:10

Date:

Time:

Date:

Time:

Received (Signature):

Printed Name:

Received (Signature):

Printed Name:

Received (Signature):

Printed Name:

Received (Signature):

Printed Name:

CHAIN OF CUSTODY RECORD

Serial No:

GSATF42/43

Date: 1-26-98

Page 3 of 3

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CF/CDI	URGE AROUND SITE
<input type="checkbox"/> G.W. Monitoring	<input type="checkbox"/> 4401	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	<input type="checkbox"/> 4401	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Classify/Discard	<input type="checkbox"/> 4402	16 days <input type="checkbox"/> (allowable)
<input type="checkbox"/> Water Classify/Discard	<input type="checkbox"/> 4403	
<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: Haul Job or truck not Possible of 24/48 hrs. I.A.)
<input type="checkbox"/> Other	<input type="checkbox"/>	



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 5627
Fax #: 510 335 6522

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.
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

Relinquished By (Signature):
Aubrey K. Cool

Relinquished by (Signature):

Relinquished By (Signature):

Printed Name: Aubrey Cool

Printed Name:

Printed Name:

CHAIN OF CUSTODY RECORD

Serial No.:

9861F421B

Date: 1-26-98
Page 1 of 3

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CL/BL	TURB AROUND TIME
<input type="checkbox"/> D.W. Monitoring	<input checked="" type="checkbox"/> 440	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site Investigation	<input checked="" type="checkbox"/> 440	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil/Clothing/Drinking	<input checked="" type="checkbox"/> 440	16 days <input type="checkbox"/> (Standard)
<input type="checkbox"/> Water/Clothing/Drinking	<input checked="" type="checkbox"/> 440	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/> Soil/Air Rins. or Sys. O&M	<input checked="" type="checkbox"/> 4451	NOTE: (Only lab can do as possible of 24/48 hrs. TAT)
<input type="checkbox"/> Water Rins. or Sys. O&M	<input checked="" type="checkbox"/> 4451	
<input type="checkbox"/> Other	<input checked="" type="checkbox"/>	

LST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	see attached Shell Protocol

3 DAY TAT

See attached
Shell Protocol

Printed Name: EJK/FROMAN

Printed Name:



SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WIC#:

204-COT2-0908

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 #: 420-0700

Comments:

Sampled by: Aubrey K. Cool

Printed Name: Aubrey K. Cool

Sample ID	Date	Time	Sludge	Soil	Water	All	No. of contns.
GP - C	1/26	12:20		X			6VACAS 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			6VACAS 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			6VACAS 1 Liter 1 Plastic
GP-H	1/26	16:50		X			6VACAS 1 Liter 1 Plastic

Relinquished By (Signature):

Aubrey K. Cool

Printed Name: Aubrey Cool

Relinquished By (Signature):

Aubrey K. Cool

Printed Name:

Relinquished By (Signature):

Aubrey K. Cool

Printed Name:

CHAIN OF CUSTODY RECORD

Serial No:

9601562/43

Date: 1-26-98

Page 2 of 3

Analysis Required

LAB: Sequoia

CHECK OFF (1) BOX ONLY	C/N	TURR AROUND DATE
<input type="checkbox"/>	4401	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/>	4401	48 hours <input type="checkbox"/>
<input type="checkbox"/>	4402	16 days <input type="checkbox"/>
<input type="checkbox"/>	4403	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/>	4404	NOTE: Hold lab in room or Possible of 24/48 hrs. TAI.
<input type="checkbox"/>	4405	

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	HOLD
	See attached Shell Protocol

Received (Signature):

Date: 1-28-98

Time: 10:10

Received (Signature):

Date:

Time:

Received (Signature):

Date:

Time:

Received (Signature):

Date: 1-28-98

Time: 10:40

Received (Signature):

Date:

Time:

Received (Signature):

Date:

Time:

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 2300 Santa Clara, Alameda

WICH: 204 - 0072 - 0908

Shell Engineer:

Alex Perez

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

Consultant Contact:

Aubrey Cool

Continents: J

Sampled by: Aubrey K Coel

Pinned Name: Aubrey K. Cool

Sample ID	Date	TIME Sludge	Salt	Water	Air	No. of conts.
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 VCA 2 Litter 1 plastic
GP-G	1-26 98	16.35	X			6 VCA 1 litter 1 plastic
GP-G-7.0'	1-26 98	1600	X			1
GP-G-9.5'	1-26 98	1605	X			1
GP-H-6.0'	1-26 98	1630	X			1
GP-H-9.5'	1-26 98	1640	X			1

Registered by (signature):
Theresa F. Cole

Reprinted By (Signature):

Distinguished By (Signature):

CHAIN OF CUSTODY RECORD

Serial Nos:

9580154242

Date: 1-26-78
Page 3 of 3

Analysis Required

Page 3 of 3

Sequoia

CHICK OIL (1) BOX ONLY	C/I/R	BURN AROUND DATE
<input type="checkbox"/> G.W. Monitoring	<input checked="" type="checkbox"/> 4481	24 hours <input type="checkbox"/>
<input checked="" type="checkbox"/> Site investigation	<input checked="" type="checkbox"/> 4481	48 hours <input type="checkbox"/>
<input type="checkbox"/> Soil Clearly/Disperse	<input type="checkbox"/> 4482	16 days <input type="checkbox"/> retained
<input type="checkbox"/> Water Clearly/Disperse	<input type="checkbox"/> 4483	Other <input checked="" type="checkbox"/> 5 DAY
<input type="checkbox"/> Soil/Air Bulk or Sys. O & M	<input type="checkbox"/> 4482	
<input type="checkbox"/> Water Bulk or Sys. O & M	<input type="checkbox"/> 4483	NOTE: Hold tank in step at Possible of 24/48 hrs. (AI).
Other	<input type="checkbox"/>	

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	HOLD
	HOLD
	See attached Shell Protocol
Entered Name: ENKE FROMONI	Date: 1-28-93 Time: 1650 Entered Name: Entered Name: ABAB
	Date: _____ Time: _____ Entered Name: _____ Entered Name: _____

THE LABORATORY MUST PROVIDE A COPY OF THE CHAIN-OF-CUSTODY WITH SOURCE 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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(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

Received: 01/28/98

Lab Proj. ID: 9802318

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 2 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

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

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

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

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**

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

Client Proj. ID: Shell 2300 Santa Clara

Sampled: 01/26/98

Lab Proj. ID: 9801F35

Received: 01/28/98

Attention: Aubrey Cool

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.

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-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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ambria
144 65th St. Suite C
akland, CA 94608

ttention: 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

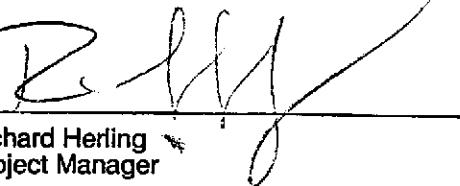
Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH)

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

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

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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	1.7 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 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: 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

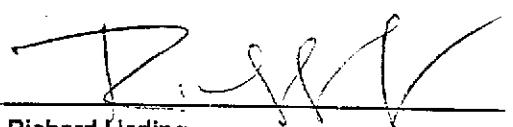
QC Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Chromatogram Pattern:		
Surrogates		
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		% Recovery
		91
		86

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

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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

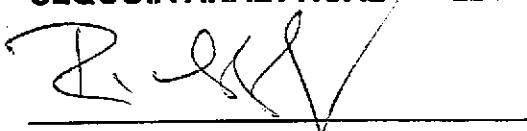
QC Batch Number: GC012998OHBPEXC
Instrument ID: GCHP4B

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



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Camibia
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

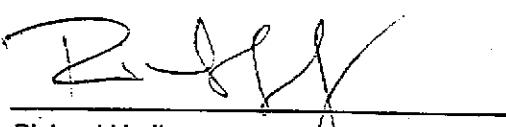
QC Batch Number: GC012998BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Chromatogram Pattern:	1.0	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.

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Richard Herling
Project Manager



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Camibia
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

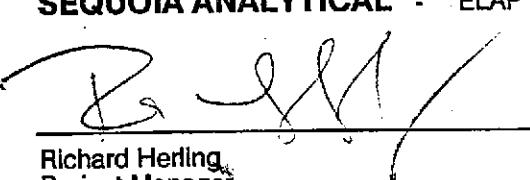
QC Batch Number: GC012998OHBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0	..... 1.6 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 76

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

SEQUOIA ANALYTICAL - ELAP #1210


Richard Herling,
Project Manager

Page: 8



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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,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		
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 #: 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
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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 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:

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

9801F35.CCC <2>



**Sequoia
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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 #: 9801F35 05

Reported: Feb 13, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0202986010MDA	ME0202986010MDA	ME0202986010MDA	ME0202986010MDA
Anal. 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:

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 <3>

SEQUOIA ANALYTICAL


Richard Herling
Project Manager



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: 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:

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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(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:	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	EPA 5030	EPA 5030	EPA 5030	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

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 <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
1114 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 cons.
GP-A - 5.0'	1/26	8:30	X				1
GP-A - 9.0'	1/26	8:35	X				1
GP-A	1/26	8:45		X			500gAs 1 Liter 1 plastic
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 plastic
GP-C-6.0'	1/26	11:50	X				1
GP-C-10.0'	1/26	12:10	X				1

Rollingquished By (signature):
Aubrey K. Cool

Rollingquished By (signature):

Rollingquished By (signature):

Printed Name:
Aubrey Cool

Printed Name:

Printed Name:

CHAIN OF CUSTODY RECORD
Serial No: 98D1F35

Date: 1-26-98
Page 1 of 3

Analysis Required

LAB: Sequoia

CHECK OUT (1) BOX ONLY	CH/DI	TURN AROUND TIME
<input type="checkbox"/> G.W. Monitoring	<input checked="" 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 checked="" type="checkbox"/> 4442	16 days <input type="checkbox"/> (Normal)
<input type="checkbox"/> Water Classify/Disposal	<input checked="" type="checkbox"/> 4443	Other <input checked="" type="checkbox"/> 504K
<input type="checkbox"/> Soil/Air Rmn. or Sys. O & M	<input checked="" type="checkbox"/> 4451	
<input type="checkbox"/> Water Rmn. or Sys. O & M	<input checked="" type="checkbox"/> 4453	
Other	<input type="checkbox"/>	NOTE: Turn Around as soon as possible of 24/48 hrs. TAI.

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/COMMENTS
	see attached Shell Protocol
	HOLD
	see attached Shell Protocol

Printed Name: <i>EJKE ROMANU</i>	Date: 1-26-98
Printed Name:	Time: 1400
Printed Name:	Date:
Printed Name: <i>ABD</i>	Time: 1400
Printed Name:	Date: 1/27/98
Printed Name:	Time: 1200

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

