CAMBRIA

April 20, 1999

Larry Seto
Alameda County
Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Well Installation Report**
Shell-branded Service Station
610 Market Street
Oakland, California
Incident #98995750
Cambria Project #240-594-9

where are the GW results?

Dear Mr. Seto:

Cambria Environmental Technology, Inc. (Cambria), on behalf of Equiva Services LLC (Equiva), is pleased to present this report documenting the November 17, 1998 subsurface investigation and ground water monitoring well installation conducted at the above-referenced site. The objective of this investigation was to further assess the horizontal and vertical extent of subsurface hydrocarbons beneath the site. The site background, investigation procedures, and investigation results are presented below.

SITE BACKGROUND

Site Description: The site is an active Shell-branded service station located on Market Street between 6th and 7th Streets in Oakland, California in a primarily commercial area. A site plan is attached as Figure 1.

Site Renovation: In August 1995, Weiss Associates (WA) of Emeryville, California collected soil samples beneath the gasoline dispensers and product piping locations during station renovation activities. Renovation activities included replacing the gasoline dispensers and product piping. Up to 2,700 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and 0.70 ppm benzene were detected in soil samples collected from beneath the center dispenser island. A total of about 48 cubic yards of soil were excavated and disposed of during the renovation activities. Approximately 33 cubic yards of soil were removed in association with the dispenser and piping replacement, and the remaining 15 cubic yards of hydrocarbon-bearing soil were overexcavated as directed by the Alameda County Health Care Services Agency (ACHCSA).

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

Site Upgrade: In March 1998, the site was upgraded by Paradiso Mechanical of San Leandro, California (Paradiso). Paradiso added secondary containment to the turbine sumps. Cambria inspected the turbine sumps and tank pit areas. No field indications of hydrocarbons, such as staining or odor, were observed during the site visit. Therefore, no sampling was performed during this visit.

Site Investigation: On March 31, 1998, Cambria conducted a subsurface investigation at the site. The subsurface investigation was requested by the ACHCSA based on the results of the August 1995 site renovation soil sampling activities. Cambria installed three soil borings on the Shell property using a Geoprobe® direct push drill rig. Less than 2 ppm TPHg, BTEX, and MTBE were detected in analyzed soil samples collected from soil borings SB-A, SB-B, and SB-C. A maximum of 2,100 parts per billion (ppb) TPHg, 490 ppb benzene, and 14,000 ppb MTBE were detected in grab ground water samples collected from soil borings SB-A and SB-B. Concentrations of TPHg, BTEX, and MTBE were not detected above laboratory detection limits in the grab ground water sample collected from soil boring SB-C.

NOVEMBER 1998 INVESTIGATION PROCEDURES

In a letter dated August 3, 1998, the ACHCSA requested an investigation at the site to determine the extent of subsurface hydrocarbons. Cambria's September 15, 1998 *Additional Investigation Work Plan* proposed installing three ground water monitoring wells at the site. The *Additional Investigation Work Plan* was approved by the ACHCSA on September 23, 1998. Well locations are shown in Figure 1. Cambria's standard field procedures for monitoring well installation are included as Attachment A.

Well Installation

Personnel Present: Environmental Scientist Brian Busch directed the well installation activities, working under the supervision of California Registered Professional Engineer Diane Lundquist.

Permit: Drilling permit #98WR447 was obtained 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 #485165).

Drilling Date: November 17, 1998.

Drilling Methods: Marl M5T drill rig equipped with 10.25-inch hollow-stem augers.

Number of Wells: Three; MW-1, MW-2, and MW-3.

Well Materials: The wells were constructed using four-inch diameter, 0.010-inch slotted schedule 40 PVC well screen and schedule 40 PVC well casing. Well logs are included as Attachment C.

Screened Interval: Well MW-1 was screened from 5 to 25 ft below ground surface (bgs), with a total depth of 25 ft. Wells MW-2 and MW-3 were screened from 5 to 20.5 ft bgs, with a total depth of 20.5 ft.

Ground Water Depths: Ground water was encountered in all three borings at approximately 10 ft depth.

Subsurface Conditions: The site is underlain primarily by silty sands to the total explored depth of 26 ft. The first water-bearing zone was encountered beneath the site at approximately 10 ft depth.

Chemical Analyses: A minimum of one soil sample from each boring was selected for chemical analysis. The selected samples were analyzed for TPHg using modified EPA Method 8015, and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) using EPA Method 8020. Laboratory analytical results are summarized in Table 1 and presented in Attachment D.

Well Development: The wells were developed by Blaine Tech Services of San Jose, California (Blaine) during the first half of December 1998.

Well Sampling: The wells were sampled by Blaine on December 17, 1998. A report presenting the results of the December 17, 1998 ground water sampling will be submitted under separate cover.

INVESTIGATION RESULTS

Hydrocarbon Distribution in Soil: Up to 1,700 ppm TPHg, 8.3 ppm benzene, and 16 ppm MTBE were detected in the soil sample collected from the capillary fringe at 10.5 ft depth in the boring for MW-3. 8.3 ppm TPHg and 2.9 ppm MTBE were detected in the soil sample collected at 5.5 ft depth in the boring for MW-2. Concentrations of benzene were not detected above laboratory detection limits in analyzed soil samples collected during the installation of well MW-2. Concentrations of TPHg, BTEX, and MTBE were not detected above laboratory detection limits in analyzed soil samples collected during the installation of well MW-1.

SUMMARY

On November 17, 1998, Cambria supervised the installation of three ground water monitoring wells at the site. Soil samples collected during the installation of wells MW-2 and MW-3 contained detectable hydrocarbons concentrations. The three wells were developed and sampled in December 1998, and will be monitored on a quarterly basis. The first ground water monitoring report for the fourth quarter of 1998 will be submitted under separate cover. Data from quarterly monitoring events will provide additional information on ground water flow direction and gradient and MTBE plume characteristics.

CLOSING

We appreciate the opportunity to work with you on this project. If you have any questions or require additional information, please contact Brian Busch at (510) 420-3312.

Sincerely,
Cambria Environmental Technology, Inc.

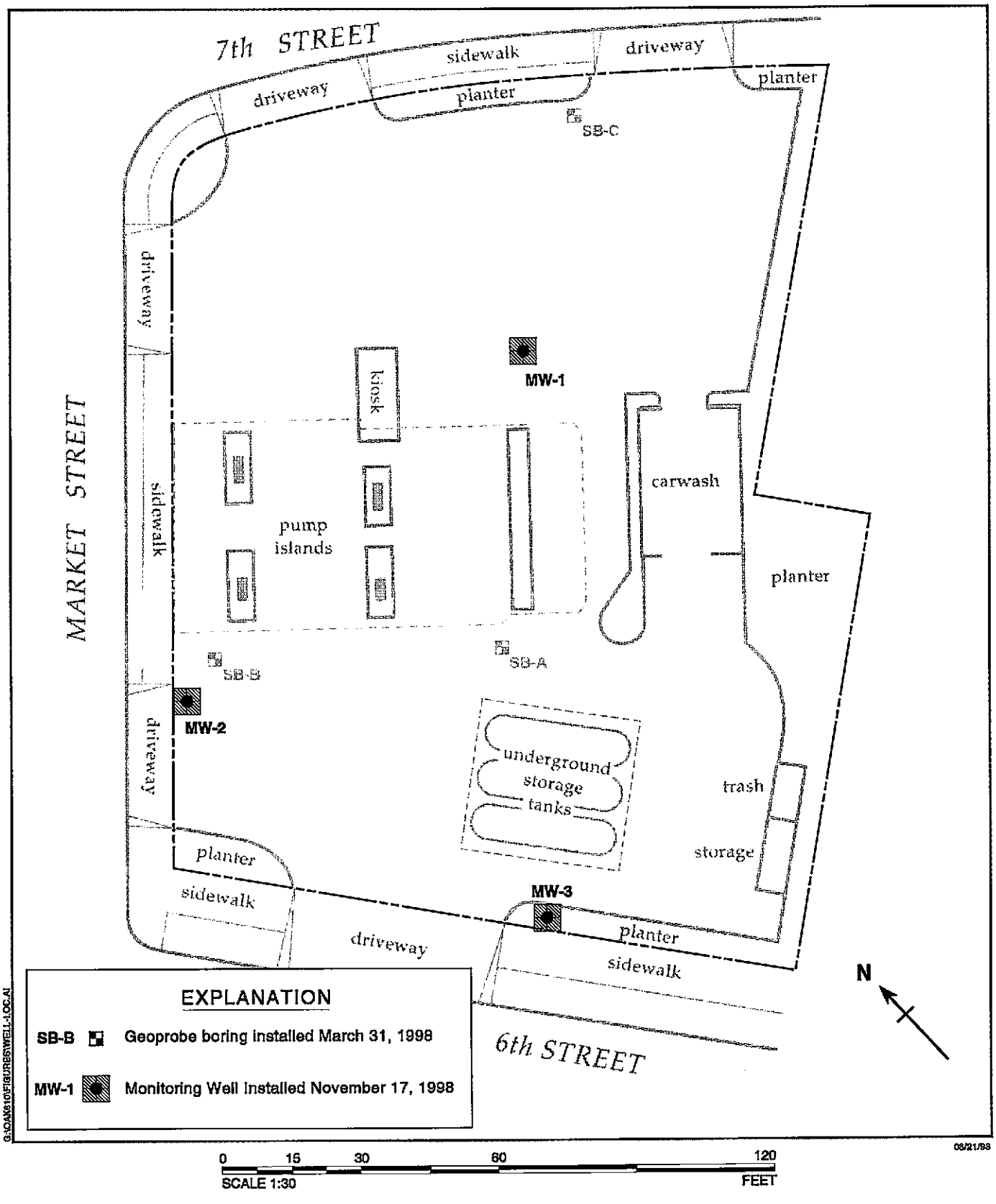
Brian Busch
Environmental Scientist

Diane Lundquist, P.E.
Principal Engineer

Attachments: A - Standard Field Procedures for Monitoring Well Installation
B - Drilling Permit
C - Well Logs
D - Laboratory Analytical Results

cc: Karen Petryna, Equiva Services LLC, P.O. Box 6249, Carson, CA 90749-6249

G:\OAK610\REPORTS\1198wellinstallreport.wpd



Shell-branded Service Station
610 Market Street
Oakland, California

CAMBRIA

Monitoring Well Locations
WIC #204-5508-5702
Figure No. 1

Table 1. Soil Analytical Data - Shell Service Station, WIC # 204-5508-5702, 610 Market Street, Oakland, California

Sample ID	Depth (ft)	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
			← (concentrations in mg/Kg) →					
MW-1 5.5	5.5	11/17/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
MW-1 9.5	9.5	11/17/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
MW-2 5.5	5.5	11/17/98	8.3	<0.0050	0.016	0.010	0.14	2.9
MW-2 10.5	10.5	11/17/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.0
MW-3 5.5	5.5	11/17/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.032
MW-3 10.5	10.5	11/17/98	1,700	8.3	11	<1.2	19	16

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020
MTBE = Methyl tert-butyl ether by EPA Method 8020
mg/Kg = Milligrams per kilogram, which is equivalent to parts per million (ppm)
<n = Below detection limit of n mg/Kg

ATTACHMENT A

Standard Field Procedures for Monitoring Well Installation

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling ground water monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned 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 Analysis

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.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. 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. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may 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.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Ground water monitoring wells are installed to monitor ground water quality and determine the ground water elevation, flow direction and gradient. Well depths and screen lengths are based on ground water depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 ft below and 5 ft above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three ft thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two ft thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of ground water surging and extraction. Surging agitates the ground water and dislodges fine sediments from the sand pack. After about ten minutes of surging, ground water is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of ground water are extracted and the sediment volume in the ground water is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Ground Water Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of ground water are purged prior to sampling. Purging continues until ground water pH, conductivity, and temperature have stabilized. Ground water samples are collected using bailers or pumps and 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. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

F:\TEMPLATE\SOPS\WELLS-GW.WPD

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 610 MARKET ST
OAKLAND, CA

California Coordinates Source _____ ft. Accuracy ± ___ ft.
CCN _____ ft. CCE _____ ft.
APN 1-223-1, 1-223-5

CLIENT
Name EQUILON ENTERPRISES LLC
Address P.O. BOX 8080 Phone (510) 669-9935
City MARTINEZ Zip 94553

APPLICANT
Name CAMBRIA ENVIRONMENTAL - Brian Busch
Fax (510) 420-9170
Address 1144 65TH ST, SUITE C Phone (510) 420-3312
City OAKLAND Zip 94608

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☑	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☑
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. C57 485165 - Gregg Drilling

WELL PROJECTS
Drill Hole Diameter 10.25 in. Maximum
Casing Diameter 4 in. Depth 25 ft.
Surface Seal Depth 10 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 11-17-98
ESTIMATED COMPLETION DATE 11-17-98

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brian Busch DATE 10-6-98

FOR OFFICE USE

PERMIT NUMBER 98WR447
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACFWA 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 Alvin Kan DATE 10/19/98

ATTACHMENT C

Well Logs

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC	**BORING/WELL NAME**	MW-1
JOB/SITE NAME	Shell-Branded Service Station	**DRILLING STARTED**	17-Nov-98
LOCATION	610 Market, Oakland CA	**DRILLING COMPLETED**	17-Nov-98
PROJECT NUMBER	240-0594	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	21.70 ft
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	10.25"	**SCREENED INTERVAL**	5 to 25 ft bgs
LOGGED BY	B. Busch	**DEPTH TO WATER (First Encountered)**	10.0 ft (17-Nov-98)
REVIEWED BY		**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5' bgs		

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								ASPHALT.	0.5	Portland Type I/II Cement
						SW		**SAND**; (SW); brown; medium dense; damp; 10% silt, 90% sand; no plasticity; moderate estimated permeability.		Bentonite Seal
0			MW1 - 5.5		5					Monterey Sand #2/16
									7.5	
1.6			MW1 - 9.5		10	SM		**Silty SAND**; (SM); brown, grey; medium dense; damp; 20% silt, 80% sand; no plasticity; moderate estimated permeability. 11/17/98 ▽		
					15			@ 15' - 15% silt, 85% sand.	15.0	4"-diam., 0.010" Slotted Schedule 40 PVC
58			MW1 - 16.0							
NT			MW1 - 19.5		20	SM				
0.3			MW1 - 24.0		25				25.0	Bottom of Boring @ 25 ft

WELL LOG (PID) G:\OAK610\GINT\OAK610.GPJ DEFAULT.GDT 12/21/98

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC	**BORING/WELL NAME**	MW-2
JOB/SITE NAME	Shell-Branded Service Station	**DRILLING STARTED**	17-Nov-98
LOCATION	610 Market, Oakland CA	**DRILLING COMPLETED**	17-Nov-98
PROJECT NUMBER	240-0594	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	19.61 ft
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	10.25"	**SCREENED INTERVAL**	5 to 20.5 ft bgs
LOGGED BY	B. Busch	**DEPTH TO WATER (First Encountered)**	10.0 ft (17-Nov-98)
REVIEWED BY		**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5' bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								ASPHALT.	0.5	Portland Type I/II Cement
						SW		**SAND**; (SW); brown to grey; loose; damp; 5% silt, 95% sand; no plasticity; high estimated permeability.		Bentonite Seal
1.0			MW2 - 5.5		5					Monterey Sand #2/16
									7.5	
						SM		**Silty SAND**; (SM); grey; loose; moist; 15% silt, 85% fine grained sand; no plasticity; moderate estimated permeability. 11/17/98 ▽		
11.0			MW2 - 10.5		10					4"-diam., 0.010" Slotted Schedule 40 PVC
					15	SM		@ 15' - 15% silt, 85% fine to medium grained sand.	15.0	
3.0			MW2 - 15.5							
						SW		**SAND**; (SW); brown; loose; wet; 10% silt, 90% sand; no plasticity; high estimated permeability.	17.5	
1.0			MW2 - 19.5		20				20.5	Bottom of Boring @ 20.5 ft

WELL LOG (PID) G:\OAK610\GINT\OAK610.GPJ DEFAULT.GDT 12/21/98

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC	**BORING/WELL NAME**	MW-3
JOB/SITE NAME	Shell-Branded Service Station	**DRILLING STARTED**	17-Nov-98
LOCATION	610 Market, Oakland CA	**DRILLING COMPLETED**	17-Nov-98
PROJECT NUMBER	240-0594	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	19.05 ft
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	10.25"	**SCREENED INTERVAL**	5 to 20.5 ft bgs
LOGGED BY	B. Busch	**DEPTH TO WATER (First Encountered)**	10.0 ft (17-Nov-98)
REVIEWED BY		**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5' bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								TOPSOIL.	1.0	Portland Type I/II Cement
								Silty SAND; (SM); grey; loose; damp; 15% silt, 85% sand; no plasticity; moderate estimated permeability.		Bentonite Seal
12.0			MW3 - 5.5		5	SM				Monterey Sand #2/16
								11/17/98 ▽		
204			MW3 - 10.5		10					
										4"-diam., 0.010" Slotted Schedule 40 PVC
					15			@ 15' - wet.	15.0	
15.0			MW3 - 15.5			SM				
17.0			MW3 - 19.5		20				20.0	Bottom of Boring @ 20.5 ft

WELL LOG (PID) G:\OAK610\GINT\OAK610.GPJ DEFAULT.GDT 12/21/98

ATTACHMENT D

Laboratory Analytical Results

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria
1144 65th St. Suite C
Oakland, CA 94608
Attention: Brian Busch

Project: Shell 610 Market

Enclosed are the results from samples received at Sequoia Analytical on November 18, 1998. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION		DATE COLLECTED	TEST METHOD
9811E81 -01	SOLID,	MW-1 5.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -02	SOLID,	MW-1 9.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -03	SOLID,	MW-2 5.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -04	SOLID,	MW-2 10.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -05	SOLID,	MW-3 5.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -06	SOLID,	MW-3 10.5	11/17/98	Purgeable TPH/BTEX/MTBE
9811E81 -07	SOLID,	MW-1 16.0	11/17/98	TPHG_S Purgeable TPH
9811E81 -08	SOLID,	MW-1 19.5	11/17/98	TPHG_S Purgeable TPH
9811E81 -09	SOLID,	MW-2 15.5	11/17/98	TPHG_S Purgeable TPH
9811E81 -10	SOLID,	MW-3 15.5	11/17/98	TPHG_S Purgeable TPH
9811E81 -11	SOLID,	MW-(1 16.0-3 15.5)Comp	11/17/98	BTEX_S Distinction
9811E81 -11	SOLID,	MW-(1 16.0-3 15.5)Comp	11/17/98	ISTLCS Title 22: Metals, S
9811E81 -11	SOLID,	MW-(1 16.0-3 15.5)Comp	11/17/98	ITTLCS Title 22: Metals, T

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

Peggy Penner
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, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-1 5.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-01	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP7

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	101
4-Bromofluorobenzene	60	140	72

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-1 9.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-02	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP7

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	95
4-Bromofluorobenzene	60	140	74

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-2 5.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-03	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**8.3**
Methyl t-Butyl Ether	**0.025**	**2.9**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.016**
Ethyl Benzene	**0.0050**	**0.010**
Xylenes (Total)	**0.0050**	**0.14**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89
4-Bromofluorobenzene	60	140	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

Sequoia Analytical

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-2 10.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-04	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP31

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**	**2.0**
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	92
4-Bromofluorobenzene	60	140	79

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-3 5.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-05	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP31

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**	**0.032**
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	92
4-Bromofluorobenzene	60	140	79

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-3 10.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-06	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**250**	**1700**
Methyl t-Butyl Ether	**6.2**	**16**
Benzene	**1.2**	**8.3**
Toluene	**1.2**	**11**
Ethyl Benzene	1.2	N.D.
Xylenes (Total)	**1.2**	**19**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	196 Q
4-Bromofluorobenzene	60	140	0.0 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-1 16.0	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-07	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**2.5**	**28**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	119
4-Bromofluorobenzene	60	140	38 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-1 19.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-08	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
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	88
4-Bromofluorobenzene	60	140	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-2 15.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-09	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH)

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102
4-Bromofluorobenzene	60	140	69

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

Sequoia Analytical

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-3 15.5	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-10	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	5.0
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108
4-Bromofluorobenzene	60	140	76

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-(1 16.0-3 15.5)Comp	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: EPA 8020	Analyzed: 12/01/98
Attention: Brian Busch	Lab Number: 9811E81-11	Reported: 12/02/98

QC Batch Number: GC112498BTEXEXC
Instrument ID: GCHP18

BTEX Distinction

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Benzene	**0.025**	**0.11**
Toluene	**0.025**	**0.057**
Ethyl benzene	**0.025**	**0.25**
Xylenes (Total)	**0.025**	**0.96**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	116
4-Bromofluorobenzene	60	140	15 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-(1 16.0-3 15.5)Comp	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/25/98
	Analysis Method: Title 22	Analyzed: 11/26/98
Attention: Brian Busch	Lab Number: 9811E81-11	Reported: 12/02/98

QC Batch Number: ME1125986010MDB
Instrument ID: MTJA-5

Inorganic Persistent and Bioaccumulative Toxic Substances : STLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Chromium, Cr	560	0.010	0.22

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Sampled: 11/17/98
1144 65th St. Suite C	Sample Descript: MW-(1 16.0-3 15.5)Comp	Received: 11/18/98
Oakland, CA 94608	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: Title 22	Analyzed: 11/24/98
Attention: Brian Busch	Lab Number: 9811E81-11	Reported: 12/02/98

QC Batch Number: ME1124986010MDE
Instrument ID: MTJA-5

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/kg	Detection Limit mg/kg	Sample Results mg/kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
Barium, Ba	**10000**	**5.0**	**42**
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	**2500**	**0.50**	**51**
Cobalt, Co	**8000**	**2.5**	**7.1**
Copper, Cu	**2500**	**0.50**	**5.5**
Lead, Pb	1000	5.0	N.D.
Mercury, Hg	20	0.050	N.D.
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	**2000**	**2.5**	**37**
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	**2400**	**2.5**	**26**
Zinc, Zn	**5000**	**0.50**	**19**

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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

Client Project ID: Shell 610 Market
Matrix: Solid
Work Order #: 9811E81 -11

Reported: Dec 4, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1124986010MDE	ME1124986010MDE	ME1124986010MDE	ME1124986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	R. Sharma	R. Sharma	R. Sharma	R. Sharma
MS/MSD #:	9811E3502	9811E3502	9811E3502	9811E3502
Sample Conc.:	N.D.	N.D.	43	66
Prepared Date:	11/24/98	11/24/98	11/24/98	11/24/98
Analyzed Date:	11/24/98	11/24/98	11/24/98	11/24/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	40	41	89	109
MS % Recovery:	80	82	92	86
Dup. Result:	36	37	83	102
MSD % Recov.:	72	74	80	72
RPD:	11	10	7.0	6.6
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	LCS112498	LCS112498	LCS112498	LCS112498
Prepared Date:	11/24/98	11/24/98	11/24/98	11/24/98
Analyzed Date:	11/24/98	11/24/98	11/24/98	11/24/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	47	47	48	48
LCS % Recov.:	94	94	96	96
MS/MSD Control Limits	80-120	80-120	80-120	80-120
LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

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

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Cambria
1144 65th St Ste. C
Oakland, CA 94608
Attention: Brian Busch

Client Project ID: Shell 610 Market

QC Sample Group: 9811E81-01-11

Reported: Dec 6, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8015
Analyst: R.GECKLER

ANALYTE Gasoline

QC Batch #: GC112498BTEXEXC

Sample No.: 9811E81-1
Date Prepared: 11/24/98
Date Analyzed: 11/25/98
Instrument I.D.#: GCHP31

ample Conc., mg/Kg: N.D.
Conc. Spiked, mg/Kg: 5.0

Matrix Spike, mg/Kg: 5.5
% Recovery: 110

Matrix
ike Duplicate, mg/Kg: 4.7
% Recovery: 94

elative % Difference: 16

RPD Control Limits: 0-25

LCS Batch#: GC112498BTEXEXC

Date Prepared: 11/24/98
Date Analyzed: 11/25/98
Instrument I.D.#: GCHP31

Conc. Spiked, mg/Kg: 5.0

Recovery, mg/Kg: 5.2
LCS % Recovery: 104

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Peggy Penner
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.

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Cambria	Client Proj. ID: Shell 610 Market	Received: 11/18/98
1144 65th St. Suite C		
Oakland, CA 94608	Lab Proj. ID: 9811E81	Reported: 12/02/98
Attention: Brian Busch		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 11 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Renner
Project Manager

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 9811E81

Date: 11-17-98
Page 1 of 3

Site Address: 610 Market, Oakland

WIC#: 204-5508-5702

Shell Engineer: Karen Petryna
Phone No.: 559-645-9306
Fax #: 645-5643

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

Consultant Contact: BRIAN BUSCH
Phone No.: 510-420-0700
Fax #: 420-9170

Comments:

Sampled by: BRIAN BUSCH

Printed Name:

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY — CI/DI

G.W. Monitoring	☐	4481
Site Investigation	☒	4441
Soil Classify/Disposal	☐	4442
Water Classify/Disposal	☐	4443
Soil/Air Rem. or Sys. O & M	☐	4452
Water Rem. or Sys. O & M	☐	4453
Other	☐	

TURN AROUND TIME

24 hours ☐
48 hours ☐
14 days ☒ (Normal)
Other ☐ .....

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

UST AGENCY:

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1 5.5	11-17-98	01	X			1								1.5 +6	∅	no	SOIL	HOLD
MW-1 9.5	"	02	X			1								"	"	"	"	"
MW-1 16.0	"		X			1								"	"	"	"	"
MW-1 19.5	"		X			1								"	"	"	"	"
MW-1 24.0	"		X			1								"	"	"	"	"

Relinquished By (signature): Brian Busch
Printed Name: BRIAN BUSCH
Date: 11-18
Time: 12:30

Relinquished By (signature): Charles Armstrong
Printed Name: Charles ARMSTRONG
Date: 11-18
Time:

Relinquished By (signature):
Printed Name:
Date:
Time:

Received (signature): Charles Armstrong
Printed Name: Charles ARMSTRONG
Date: 11-18
Time: 12:30

Received (signature):
Printed Name:
Date:
Time:

Received (signature):
Printed Name:
Date: 11/18
Time: 1535

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 9811E81

Date: 11-17-98

Site Address: 610 Market, Oakland

WIC#: 204-5508-5702

Shell Engineer: Karen Petryna — Phone No.: 559-645-9306 Fax #: 645-5643

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

Consultant Contact: BRIAN BUSCH — Phone No.: 510-420-0700 Fax #: 420-9170

Comments:

Sampled by: BRIAN BUSCH

Printed Name:

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY — C1/D1

G.W. Monitoring	☐	4481
Site Investigation	☒	4441
Soil Classify/Disposal	☐	4442
Water Classify/Disposal	☐	4443
Soil/Air Remt. or Sys. O & M	☐	4452
Water Remt. or Sys. O & M	☐	4453
Other	☐	

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 16 days ☒ (Normal)
- Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

UST AGENCY:

Analysis Required

Sample ID		Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-2	5.5	11-17-98	03	X			1										1-5+6	Ø	N	SOIL	HOLD
MW-2	10.5	↓	04	X			1										↓	↓	↓	↓	↓
MW-2	15.5			X			1														
MW-2	19.5	↓		X			1										↓	↓	↓	↓	

Relinquished By (signature): Brian Busch — Printed Name: BRIAN BUSCH — Date: 11-18 Time: 11:30 — Received (signature): Charles Armstrong — Printed Name: Charles ARMSTRONG — Date: 11-18 Time: 12:30

Relinquished By (signature): Charles Armstrong — Printed Name: Charles ARMSTRONG — Date: 11-18 Time: — Received (signature): — Printed Name: — Date: Time:

Relinquished By (signature): — Printed Name: — Date: Time: — Received (signature): — Printed Name: J How — Date: 11/18/98 Time: 1538

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 981181

Date: 11-17-98

Site Address: 610 Market, Oakland

WIC#: 204-5508-5702

Shell Engineer: Karen Petryna
Phone No.: 559-645-9306
Fax #: 645-5643

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

Consultant Contact: BRIAN BUSCH
Phone No.: 510-420-0700
Fax #: 420-9170

Comments:

Sampled by: BRIAN BUSCH

Printed Name:

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY | C1/D1
- G.W. Monitoring [ ] 4441
- Site Investigation [X] 4441
- Soil Classify/Disposal [ ] 4442
- Water Classify/Disposal [ ] 4443
- Soil/Air Rem. or Sys. O & M [ ] 4452
- Water Rem. or Sys. O & M [ ] 4453
- Other [ ]

TURN AROUND TIME
- 24 hours [ ]
- 48 hours [ ]
- 10 days [X] (Normal)
- Other [ ] .....

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

UST AGENCY:

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-3 5.5	11-17-98	05	X			1								1-5 +6	Ø	No	SOIL	HOLD
MW-3 10.5	↓	06	X			1								↓	↓	↓	↓	↓
MW-3 15.5			X			1												
MW-3 19.5	↓		X			1												

98 18 3 38

Relinquished By (signature): Brian Busch
Printed Name: BRIAN BUSCH
Date: 11-18-98
Time: 12:30
Received (signature): Charles Armstrong
Printed Name: Charles Armstrong
Date: 11-18
Time: 12:30

Relinquished By (signature): Charles Armstrong
Printed Name: Charles Armstrong
Date: 11-18
Time:
Received (signature):
Printed Name:
Date:
Time:

Relinquished By (signature):
Printed Name:
Date:
Time:
Received (signature):
Printed Name: SHOU
Date: 11/18
Time: 1638

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

ISSUED DATE: 05/23/97
CANCELS ISSUE: 03/05/97
ISSUED BY: RLG

MATERIAL: UNDERGROUND STORAGE TANK (UST) SOIL CONTAMINATED WITH GASOLINE/DIESEL

USE FOR ARIZONA , CALIFORNIA AND NEVADA WASTE ONLY!!!

MINIMUM REQUIRED TESTING

TPH = TOTAL PETROLEUM HYDROCARBONS, DHS GC-FID MOD 8015
GASOLINE ~~OR DIESEL~~ AS REQUIRED.
BTXE = EPA 8020
CAM METALS = TTLC ALL:
STLC ON ALL TTLC METALS 10 X STLC MAXIMUM:
TTLC LEAD => 13 MG/KG REQUIRES ORGANIC ANALYSIS
TCLP METALS FOR STLC METALS AT OR ABOVE
STLC REGULATORY LEVEL.

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES WITH GREATER THAN 5000 PPM TPH. COMPOSITE A MAXIMUM OF 4 SAMPLES.

AQUATIC BIOASSAY (FISH TOX) = PART 800 OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)"

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

- 8015/8020 TO BE BILLED AS "COMBO" WITHOUT EXCEPTION
- TPH REQUIRED FOR ALL SAMPLES.
- ALL OTHER TESTS REQUIRED TO BE RUN ON COMPOSITE(S). MAXIMUM 4 SAMPLES PER COMPOSITE.
- STLC REQUIRED FOR METALS WITH TTLC VALUE 10 X STLC MAXIMUM.
- ORGANIC ANALYSIS REQUIRED FOR TTLC LEAD OF 13 MG/KG OR GREATER WOULD REQUIRE ORGANIC ANALYSIS).
- LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS.
- MAIL OR FAX ALL ANALYSIS TO PERSON REQUESTING ANALYSIS.

PROCEDURE ORIGINAL DATE: 07/10/90
PROCEDURE REVISED DATE: 03/05/97

CAMBRIA Environmental Technology

1144 65th Street, Suite C • Oakland, CA 94608 • (510) 420-0700 • Fax (510) 420-9170

FAX TRANSMITTAL

TO: Peggy Penner

COMPANY: Sequoia Analytical

FAX NUMBER: (650) 364-9233

FROM: Brian Busch

DATE: November 20, 1998

PROJECT NUMBER: 24-0594

SUBJECT: Lab Analyses for 610 Market, Oakland

PAGES TO FOLLOW: one

HARD COPY TO FOLLOW: no

Dear Peggy:

On November 18, 1998, your courier picked up 13 soil samples from our office in Oakland. These samples were collected from the Shell site at 610 Market Street in Oakland. The samples were put on hold. I have had a chance to review the site data, and would like to analyze some of these samples on normal 15 day turnaround. Here is what I would like analyzed:

Samples: MW-1 5.5, MW-1 9.5, MW-2 5.5, MW-2 10.5, MW-3 5.5, MW-3 10.5

Analyze for: TPHg, BTEX, MTBE by 8015/8020. Confirm MTBE by EPA 8260.

Samples: MW-1 16.0, MW-1 19.5, MW-2 15.5, MW-3 15.5

Analyze for: Composite and analyze per attached Shell protocol.

Please call me at (510) 420-3312 if you have any questions or comments. Thanks.

Brian Busch

Brian