



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

September 1, 2010

Mr. Denis Brown  
Shell Oil Products US  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039

Subject: Case Closure for Fuel Leak Case No. RO0002853 and Geotracker Global ID T0600112421, Shell #13-5695, 506-510 International Blvd., Oakland, California 94606

Dear Mr. Brown:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.swrcb.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

#### SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Total Petroleum Hydrocarbons as gasoline remain in soil at concentrations up to 8,400 ppm.
- Total Petroleum Hydrocarbons as gasoline remain in groundwater at concentrations up to 140 ppb.
- As described in section IV of the attached Case Closure Summary, the case was closed with Site Management Requirements that limit future land use to commercial land use only.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Donna L. Drogos".

Donna L. Drogos, P.E.  
Division Chief

#### Enclosures:

1. Remedial Action Completion Certification
2. Case Closure Summary

cc:

Leroy Griffin (w/enc)  
Oakland Fire Department  
250 Frank H. Ogawa Plaza, Ste. 3341  
Oakland, CA 94612-2032  
(Sent via E-mail to: [lgriffin@oaklandnet.com](mailto:lgriffin@oaklandnet.com))

Closure Unit (w/enc)  
State Water Resources Control Board  
UST Cleanup Fund  
P.O. Box 944212  
Sacramento, CA 94244-2120

Peter Schaefer (w/enc)  
Conestoga-Rovers & Associates  
5900 Hollis Street, Suite A  
Emeryville, CA 94608  
(Sent via E-mail to: [pschaefer@croworld.com](mailto:pschaefer@croworld.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))  
Jerry Wickham, ACEH (w/o enc)

Geotracker (w/enc)  
File (w/orig enc)



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**REMEDIAL ACTION COMPLETION CERTIFICATION**

September 1, 2010

Mr. Denis Brown  
Shell Oil Products US  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039

Subject: Case Closure for Fuel Leak Case No. RO0002853 and Geotracker Global ID T0600112421, Shell #13-5695, 506-510 International Blvd., Oakland, California 94606

Dear Mr. Brown:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Ariu Levi", written over a horizontal line.

Ariu Levi  
Director  
Alameda County Environmental Health

**CASE CLOSURE SUMMARY  
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

**I. AGENCY INFORMATION**

Date: May 26, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Mr. Jerry Wickham	Title: Senior Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Shell #13-5695		
Site Facility Address: 506-510 International Blvd., Oakland, California 94606		
RB Case No.: ---	STID No.: ---	LOP Case No.: RO0002853
URF Filing Dates: July 27, 2004	Geotracker ID: T0600112421	APN: 20-134-7-3
Responsible Parties	Addresses	Phone Numbers
Denis Brown Shell Oil Products US	20945 S. Wilmington Avenue, Carson, CA 90810	(707) 865-0251
---	---	---
---	---	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	550	Waste Oil	Removed	3/30/1993
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
Piping			---	---

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: Unknown. Waste oil UST appeared intact upon removal in 1993. A soil sample collected adjacent to the dispensers during dispenser upgrades in July 2004 contained 8,400 ppm total petroleum hydrocarbons as gasoline (TPHg), 420 ppm ethylbenzene, and 52 ppm toluene. Based on the detections in the soil samples, Shell Oil Products filed an Underground Storage Tank Unauthorized Release form, dated July 29, 2004. The source of the release is unknown.		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 5	Proper screened interval? Yes*
Highest GW Depth Below Ground Surface: 6.24	Lowest Depth: 11.55	Flow Direction: Southwest
Most Sensitive Current Use: Potential drinking water source.		

\* The monitoring wells have different screen intervals and static water levels are higher than the top of the screens. However, the screen intervals appear to intersect the first significant water-bearing zone and appear to be adequate to evaluate the extent of groundwater contamination from the site.

Summary of Production Wells in Vicinity: No water supply wells are located within 1 mile of the site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: Lake Merritt 1,700 feet northwest of site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	550-gallon waste oil UST	Transported by Erickson, Inc. to their facility in Richmond, CA for recycling	3/30/1993
Piping	----	----	----
Free Product	----	----	----
Soil	5 cubic yards	Transported by Manley Trucking Company of Sacramento, CA to Allied Waste Industries' Forward Landfill in Manteca, CA for disposal	8/11/2004
Soil	0.73 tons	Transported by Manley Trucking Company of Sacramento, CA to Allied Waste Industries' Forward Landfill in Manteca, CA for disposal	11/17/2005
Soil	6.10 tons	Transported by Manley Trucking Company of Sacramento, CA to Allied Waste Industries' Forward Landfill in Manteca, CA for disposal	9/28/2006
Groundwater	4,435 gallons	Transported by Onyx Industrial Services to Shell's Martinez refinery for treatment	7/30/2004

**MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP**  
 (Please see Attachments 2 – 5 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Groundwater (ppb)	
	Before	After	Before	After
TPH (Gas)	8,400	8,400	3,800(1)	140(1)
TPH (Diesel)	<10	<10	Not analyzed	Not analyzed
Oil & Grease	<30	<30	Not analyzed	Not analyzed
Benzene	0.045	0.045	24(2)	<0.50(2)
Toluene	52	52	140(2)	<1.0(2)
Ethylbenzene	420	420	110(2)	<1.0(2)
Xylenes	0.21	0.21	1,000(2)	<1.0(2)
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	Not analyzed	Not analyzed	Not analyzed	Not analyzed
MTBE	0.22(3)	0.22(3)	1,400(4)	90(5)
Other (8240/8270)	Not analyzed	Not analyzed	Not analyzed	Not analyzed

Footnotes:

- (1) The maximum concentration before cleanup is from a grab groundwater sample collected from boring SB-7 at 20-25 feet bgs on October 19, 2005; the maximum concentration after cleanup is the maximum concentration detected during the most recent sampling event on 11/03/2009.
- (2) The maximum concentration before cleanup is from a grab groundwater sample collected from boring SB-7 at 20-25 feet bgs on October 19, 2005; benzene, toluene, ethylbenzene, and xylenes were not detected during the most recent sampling event on 11/03/2009.
- (3) MTBE = 0.22 ppm; TBA = 2.7 ppm; TAME, ETBE, DIPE, EDB, and EDC not detected at various reporting limits.
- (4) The maximum concentrations before cleanup are from grab groundwater samples collected in October 2005; MTBE = 1,400 ppb; TBA = 3,200 ppb; TAME, ETBE, DIPE, EDB, and EDC not detected at various reporting limits.
- (5) The maximum concentration after cleanup is the maximum concentration detected during the most recent sampling event on November 3, 2009; MTBE = 90 ppb; TBA = 34 ppb; TAME, ETBE, DIPE, EDB, and EDC not detected at various reporting limits.

#### Site History and Description of Corrective Actions:

The site is currently an active gasoline service station located at the intersection of International Boulevard and 5<sup>th</sup> Avenue in Oakland, CA. Surrounding land use is mixed commercial and residential.

A 550-gallon waste oil underground storage tank (UST) was removed on March 30, 1993. No holes or leaks were identified during the removal. Weiss Associates (Weiss) collected two soil samples from the excavation floor. Total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), benzene, toluene, ethylbenzene, and xylenes (BTEX), and oil and grease were detected in the samples.

On March 24, 1998, secondary containment was added to the UST turbine sumps. Cambria Environmental Technology, Inc. (Cambria) inspected the turbine sump and tank pit areas and found no field indication of hydrocarbons, such as staining or odor. No sampling was performed.

In late June through mid July 2004, Paradiso Mechanical, Inc. (Paradiso) upgraded under dispenser sumps, installed enhanced vapor-recovery equipment, and improved sumps on the UST fuel fill ports. Soil samples collected from beneath the dispensers and adjacent piping on July 22, 2004 contained up to 8,400 ppm TPHg (P-3-5'), 0.045 ppm benzene (P-2-5'), 52 ppm toluene (P-3-5'), 420 ppm ethylbenzene (P-3-5'), and 0.020 ppm xylenes (P-2-5'). As a result, on July 29, 2004 Equilon Enterprises LLC dba Shell Oil Products US (Shell) filed an UST Unauthorized Release Report Form with the City of Oakland Fire Department's Office of Emergency Services.

On October 18 and 19, 2005, soil and grab groundwater samples were collected from soil borings SB-1 through SB-7. Grab groundwater samples contained up to ppb TPHg (SB-7: 20-25 feet below grade [fbg]), 24 ppb benzene (SB-7: 20-25 fbg), 140 ppb toluene (SB-7: 20-25 fbg), 110 ppb ethylbenzene (SB-7: 20-25 fbg), 1,000 ppb xylenes (SB-7: 20-25 fbg), 1,400 ppb Methyl tertiary-butyl ether (MTBE; SB-6: 25-27 fbg), and 3,200 ppb tertiary-butyl alcohol (TBA; S-5: 15-25 fbg).

In July 2006, five groundwater monitoring wells (MW-1 through MW-5) were installed in the area around the dispensers and UST complex. TPHg was detected in 7 of 19 soil samples collected from the well borings at concentrations ranging from 0.1 to 339 ppm. MTBE was detected in 8 of 19 soil samples collected from the well borings at concentrations ranging from 0.0028 to 0.112 ppm. Benzene was detected in 1 of 19 soil samples collected from the well borings at a concentration of 0.00514 ppm.

Quarterly groundwater monitoring was conducted at the site from August 2006 through November 2009. During the most recent November 2009 sample event, the maximum concentrations detected were 140 ppb TPHg (MW-2), 90 ppb MTBE (MW-1), and 34 ppb TBA (MW-2).

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
<p>Site Management Requirements: Case closure for this fuel leak site is granted for the current commercial land use only. If a change in land use to any residential or other conservative land use scenario occurs at this site, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.</p> <p>Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.</p> <p>This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.</p>		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: ---
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 5
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: ---		

**V. ADDITIONAL COMMENTS, DATA, ETC.**

<p>Considerations and/or Variances:</p> <p>No soil vapor sampling was conducted for the site. Based on the minimal concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) in vadose zone soil samples, and because groundwater detections are below ESLs for evaluation of potential vapor intrusion concerns, soil vapor sampling does not appear to be warranted.</p> <p>All required laboratory analyses required for waste oil tank removal were not performed.</p> <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current commercial land use based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary unless a change in land use to any residential or other conservative land use scenario occurs at the site. ACEH staff recommend closure for this site.</p>
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**VI. LOCAL AGENCY REPRESENTATIVE DATA**

Prepared by: Jerry Wickham	Title: Senior Hazardous Materials Specialist
Signature: <i>Jerry Wickham</i>	Date: 06/02/10
Approved by: Donna L. Drogos, P.E.	Title: Chief
Signature: <i>Donna L. Drogos</i>	Date: 06/02/10

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

**VII. REGIONAL BOARD NOTIFICATION**

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 06/02/10	

**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH: 06/11/10	Date of Well Decommissioning Report: 08/27/10	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 5	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: <i>Jerry Wickham</i>	Date: 09/01/10	

- Attachments:
1. Vicinity Map (1 pp)
  2. Site Plan (1 pp)
  3. Groundwater Contour and Chemical Concentration Map and Concentration Graphs (5 pp)
  4. Soil Analytical Data (5 pp)
  5. Groundwater Analytical Data (6 pp)
  6. Boring Logs (12 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

## Wickham, Jerry, Env. Health

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**From:** Cherie McCaulou [CMccaulou@waterboards.ca.gov]  
**Sent:** Wednesday, June 02, 2010 11:30 AM  
**To:** Wickham, Jerry, Env. Health  
**Subject:** Re: Closure summaries for 506-510 International and 2547 East 27th, Oakland

Jerry - Thanks for the notification. We have no objection to ACEH's recommendation for case closure of Case nos. RO00396 and RO02853.

Sincerely,

Cherie McCaulou  
Engineering Geologist  
San Francisco Bay Regional Water Quality Control Board  
[cmccaulou@waterboards.ca.gov](mailto:cmccaulou@waterboards.ca.gov)  
510-622-2342

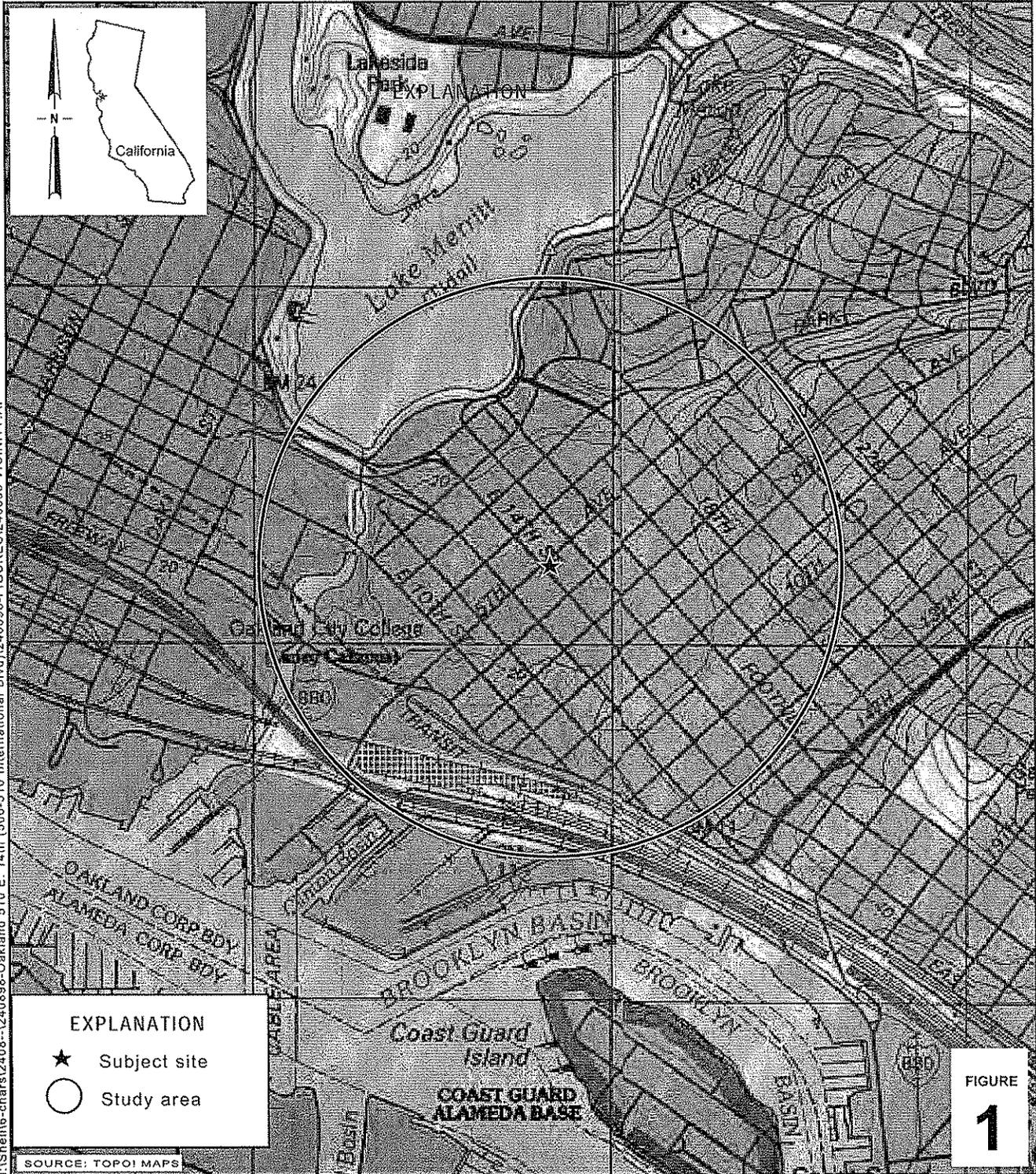
>>> "Wickham, Jerry, Env. Health" <[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)> 6/2/2010 10:05 AM >>>  
Hi Cherie,

The following sites are recommended for case closure. Attached are the closure summaries.

Shell, 506-510 International, Oakland  
Thorpe Property Gas Station, 2547 East 27<sup>th</sup> Street, Oakland

Regards,

**Jerry Wickham**  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
510-567-6791  
[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)



I:\Shell\6-charts\2408--1240898--Oakland 510 E. 14th (506-510 International Blvd)\240898-FIGURES\240898 VICINITY.AI

SOURCE: TOPOI MAPS

FIGURE  
**1**

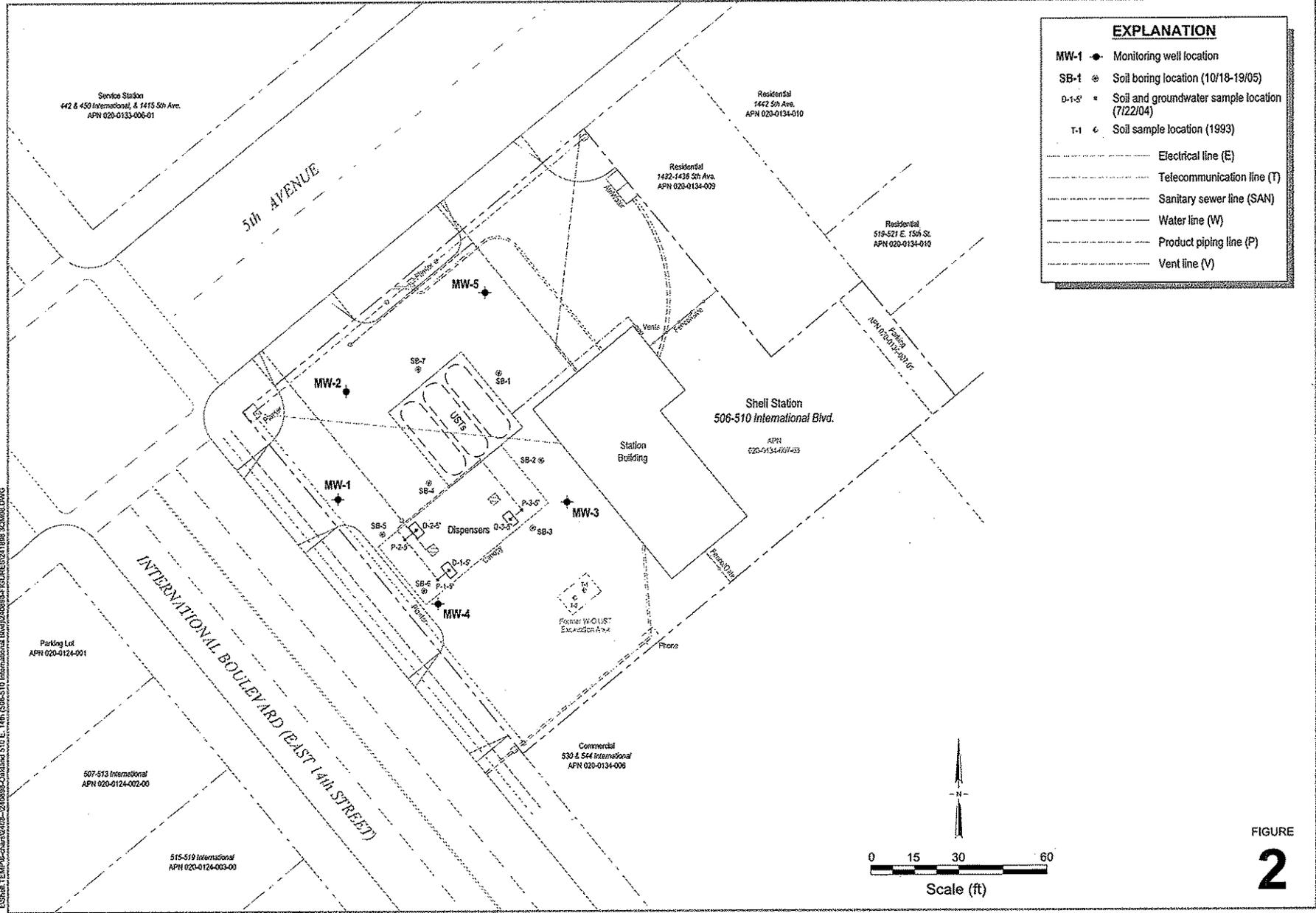
**Shell-branded Service Station**  
510 E. 14th Street (506-510 International Blvd.)  
Oakland, California



**CONESTOGA-ROVERS  
& ASSOCIATES**

Vicinity Map

**ATTACHMENT 1**



Site Plan



**Shell-branded Service Station**  
 510 East 14th Street (506-510 International Boulevard)  
 Oakland, California

# ATTACHMENT 2

LSheet\_TEMP-0408-210408-04land 510 E. 14th 506-510 International Blvd 040894-FIGURE 02 1888 30MAR.DWG



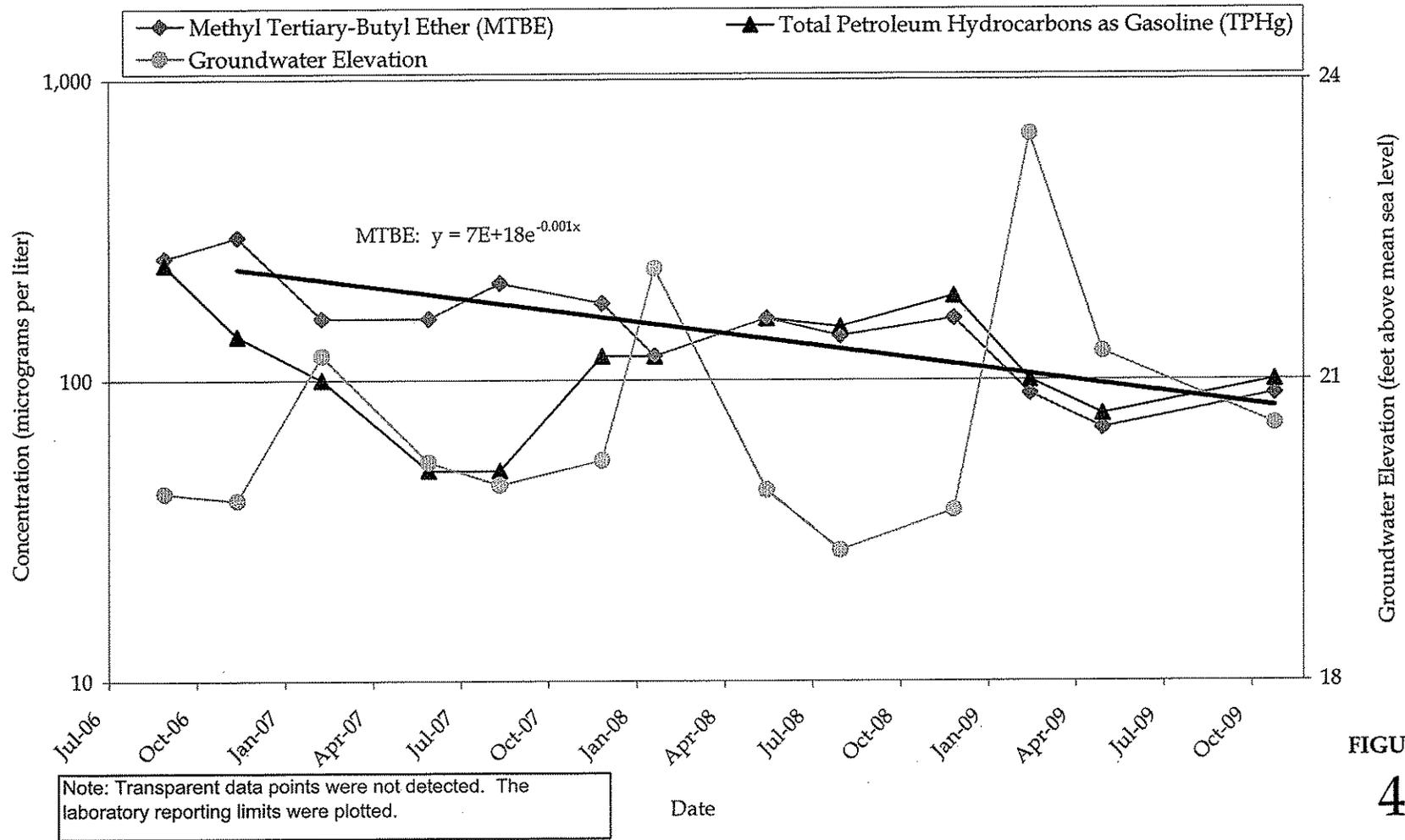


FIGURE  
4

Shell-branded Service Station  
510 E. 14th Street (506-510 International Boulevard)  
Oakland, California



MW-1: TPHg and MTBE Concentrations  
and Groundwater Elevation versus Time

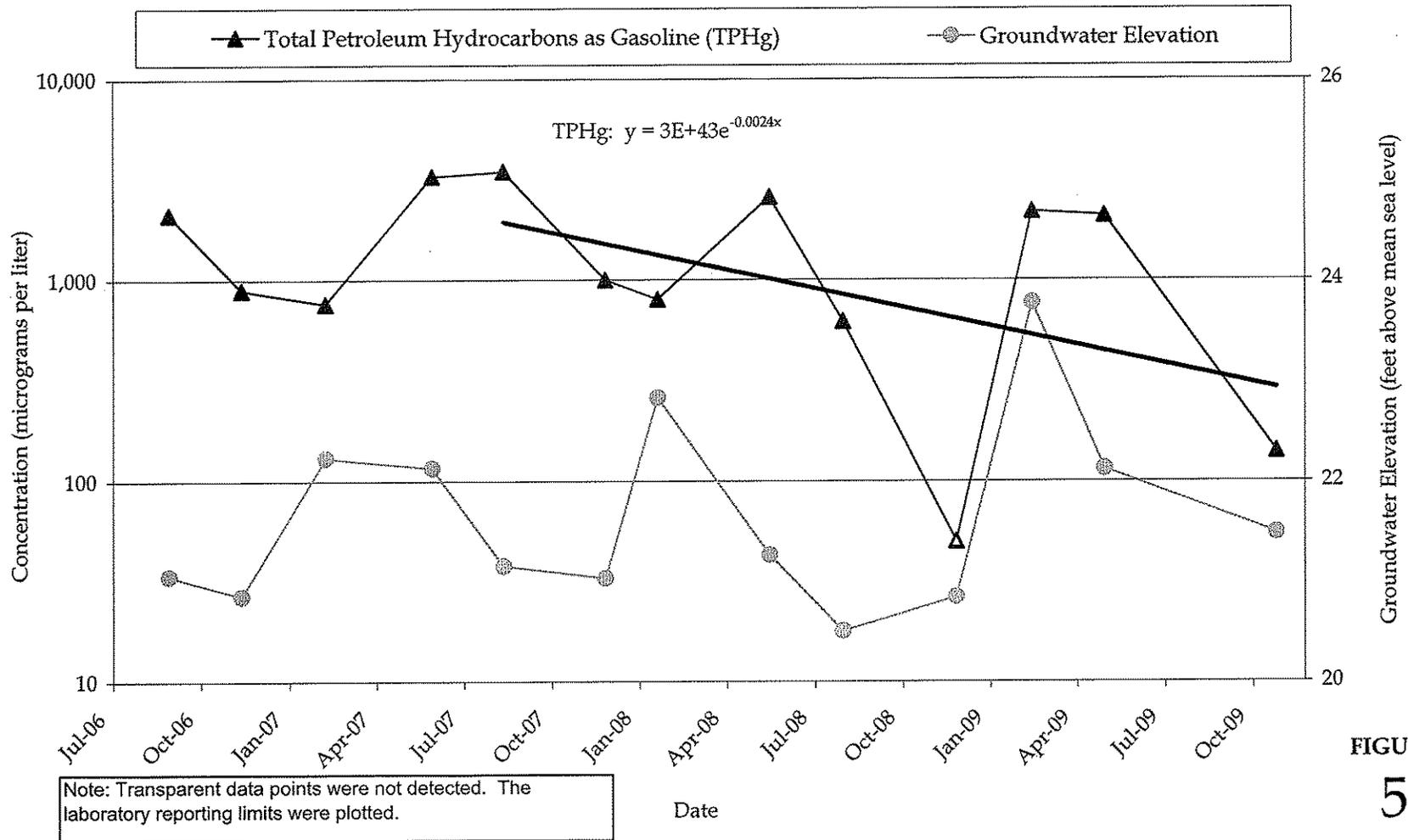


FIGURE  
5

Shell-branded Service Station  
 510 E. 14th Street (506-510 International Boulevard)  
 Oakland, California



MW-2: TPHg Concentration and  
 Groundwater Elevation versus Time

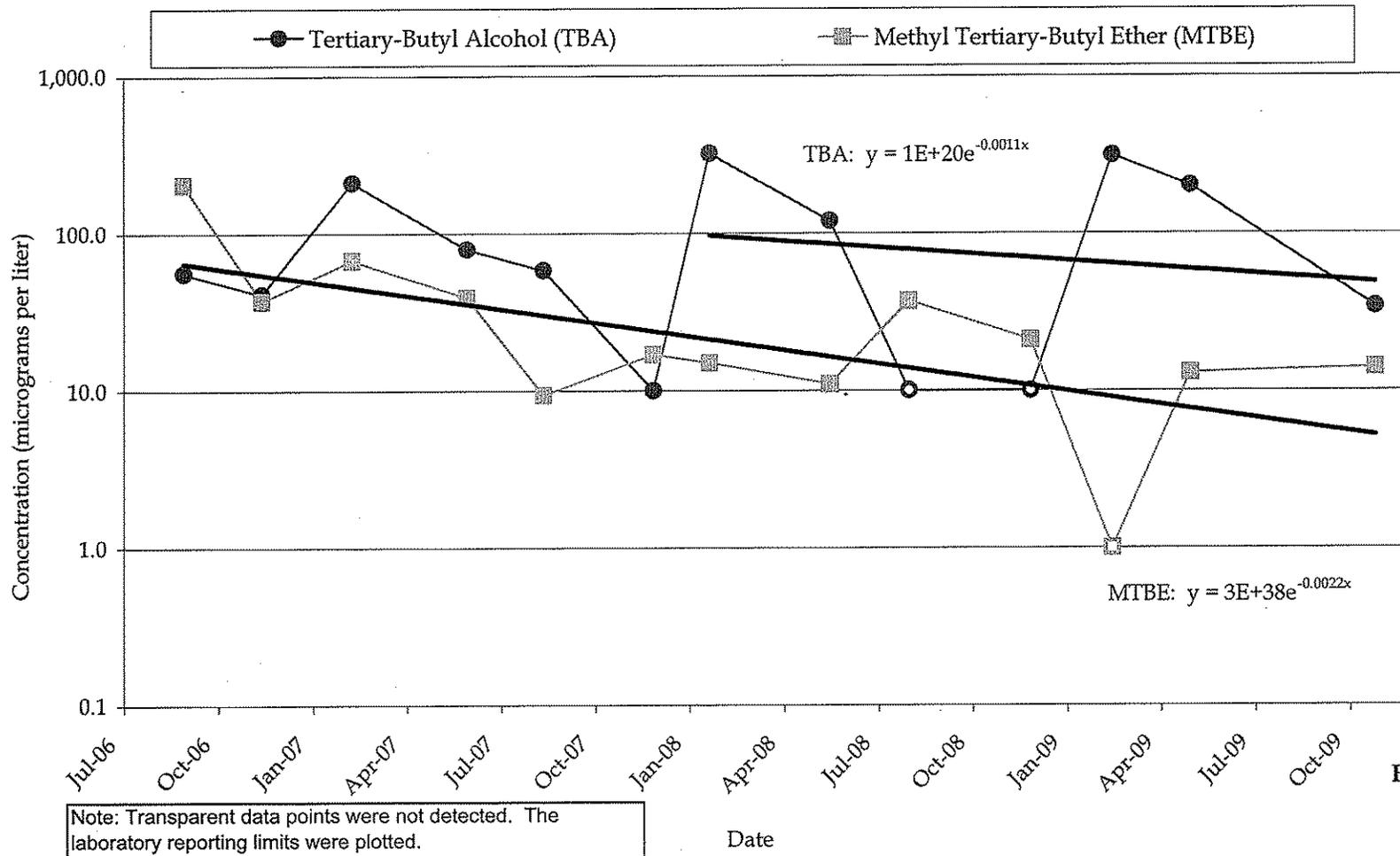


FIGURE  
6

Shell-branded Service Station  
 510 E. 14th Street (506-510 International Boulevard)  
 Oakland, California



MW-2: MTBE and TBA Concentrations  
 versus Time

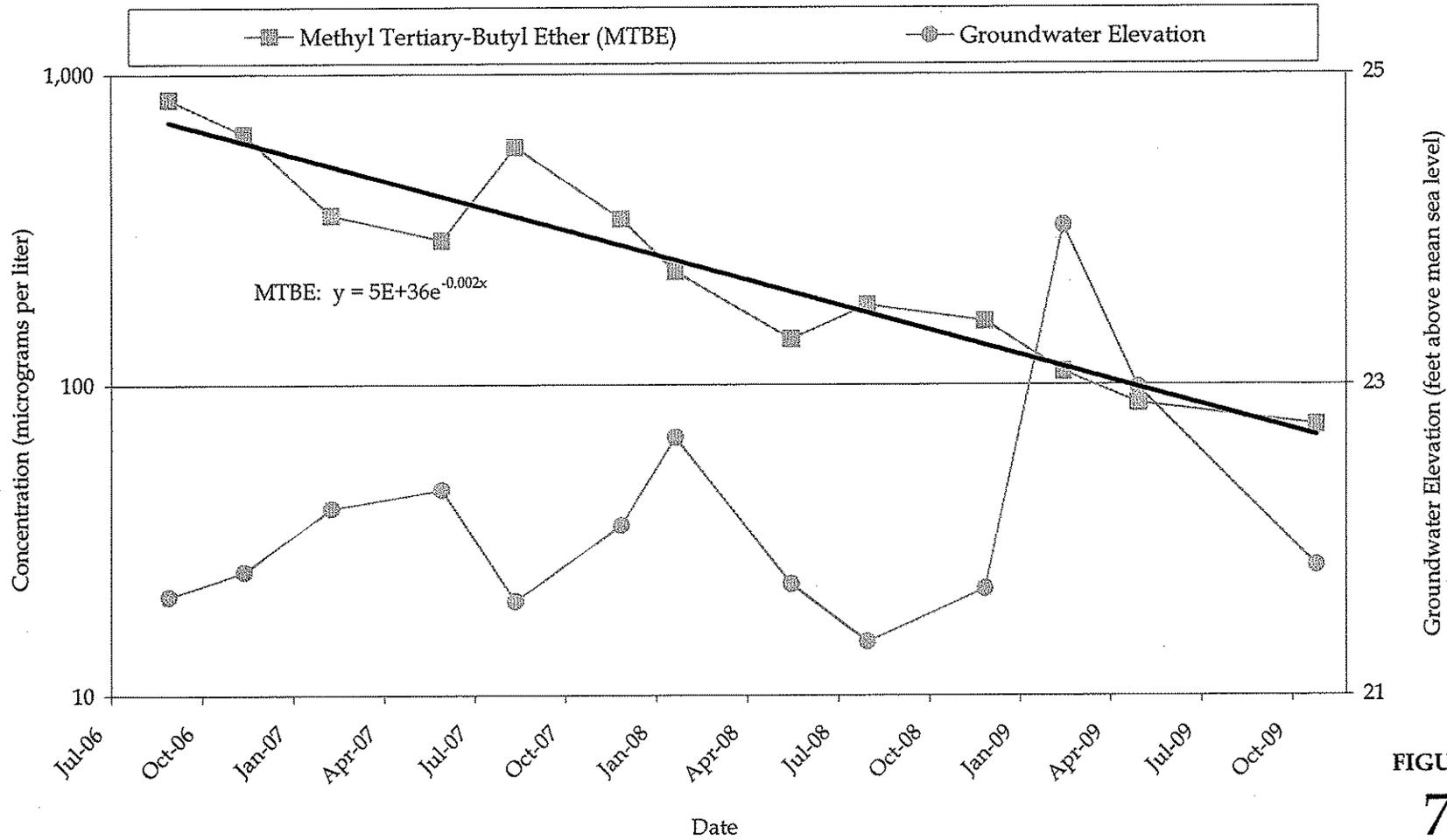


FIGURE  
7

Shell-branded Service Station  
 510 E. 14th Street (506-510 International Boulevard)  
 Oakland, California



MW-5: MTBE Concentration and  
 Groundwater Elevation versus Time

TABLE 1

**HISTORICAL SOIL ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA**

Sample ID	Date	Depth (fbg)	TPHg	TPHd	Oil and Grease	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
<i>1993 Tank Excavation Sampling</i>																
T-1	3/30/1993	7.5	<0.5 <sup>a</sup>	<10	<30	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	---	---	---	---	---	---	---
T-2	3/30/1993	7.5	<0.5 <sup>a</sup>	<10	<30	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	<0.0050 <sup>a</sup>	---	---	---	---	---	---	---
<i>2004 Upgrade Activities</i>																
P-1-5'	7/22/2004	5	220	---	---	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---
P-2-5'	7/22/2004	5	4.8	---	---	0.045	0.021	0.14	0.020	---	---	---	---	---	---	---
P-3-5'	7/22/2004	5	8,400	---	---	<5.0	52	420	<5.0	---	---	---	---	---	---	---
D-1-5'	7/22/2004	5	92	---	---	<0.50	0.57	0.52	<0.50	---	---	---	---	---	---	---
D-2-5'	7/22/2004	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	0.015	---	---	---	---	---	---	---
D-3-5'	7/22/2004	5	1.4	---	---	<0.0050	0.0082	0.12	<0.0050	---	---	---	---	---	---	---
<i>2005 Subsurface Investigation</i>																
SB-1-5.0	10/19/2005	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.11 <sup>b</sup>	0.12	<0.010	<0.0050	<0.0050	---	---
SB-1-9.5	10/19/2005	9.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.096 <sup>b</sup>	0.025	<0.010	<0.0050	<0.0050	---	---
SB-1-14.5	10/19/2005	14.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.071 <sup>b</sup>	0.026	<0.010	<0.0050	<0.0050	---	---
SB-1-19.5	10/19/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.38	<0.010	<0.0050	<0.0050	---	---
SB-1-24.5	10/19/2005	24.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-2-5.0	10/18/2005	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.017 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-2-10.0	10/18/2005	10	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-2-14.5	10/18/2005	15.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-2-19.5	10/18/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-2-24.5	10/18/2005	24.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA

Sample ID	Date	Depth (fbg)	TPHg	TPHd	Oil and Grease	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
SB-3-5.0	10/19/2005	5	14	---	---	<0.025	<0.025	0.078	0.21	0.15 <sup>b</sup>	0.11	<0.050	<0.025	<0.025	---	---
SB-3-9.5	10/19/2005	9.5	18	---	---	0.013	<0.0050	0.22	0.030	0.22 <sup>b</sup>	0.059	<0.010	<0.0050	<0.0050	---	---
SB-3-11.5	10/19/2005	11.5	18	---	---	<0.025	<0.025	0.034	<0.025	0.038 <sup>b</sup>	0.15	<0.050	<0.025	<0.025	---	---
SB-3-14.5	10/19/2005	14.5	1.0	---	---	0.0074	<0.0050	0.0091	<0.0050	0.034 <sup>b</sup>	0.056	<0.010	<0.0050	<0.0050	---	---
SB-3-19.5	10/19/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.018 <sup>b</sup>	0.064	<0.010	<0.0050	<0.0050	---	---
SB-3-24.5	10/19/2005	24.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-3-29.5	10/19/2005	29.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-4-5.0	10/18/2005	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.19	<0.010	<0.0050	<0.0050	---	---
SB-4-9.5	10/18/2005	9.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.26	<0.010	<0.0050	<0.0050	---	---
SB-4-14.5	10/18/2005	14.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-4-19.5	10/18/2005	19.5	<5.0	---	---	<0.025	<0.025	<0.025	<0.025	0.18 <sup>b</sup>	2.7	<0.050	<0.050	<0.050	---	---
SB-4-23.5	10/18/2005	23.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.016 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-5-5.0	10/18/2005	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.0054 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-5-9.5	10/18/2005	9.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-5-14.5	10/18/2005	14.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-5-19.5	10/18/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.031	<0.010	<0.0050	<0.0050	---	---
SB-5-24.5	10/18/2005	24.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.063 <sup>b</sup>	0.15	<0.010	<0.0050	<0.0050	---	---
SB-6-5.0	10/18/2005	5	120 <sup>c</sup>	---	---	<0.50	<0.50	<0.50	<0.50	<0.50 <sup>b</sup>	<2.5	<1.0	<0.50	<0.50	---	---
SB-6-9.5	10/18/2005	9.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-6-14.5	10/18/2005	14.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-6-19.5	10/18/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
SB-6-24.5	10/18/2005	24.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	0.16 <sup>b</sup>	0.024	<0.010	<0.0050	<0.0050	---	---

TABLE 1

**HISTORICAL SOIL ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA**

Sample ID	Date	Depth (ftg)	TPHg	TPHd	Oil and Grease	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
SB-7-5.0	10/19/2005	5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.016	<0.010	<0.0050	<0.0050	---	---
SB-7-10.0	10/19/2005	10	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.10	<0.010	<0.0050	<0.0050	---	---
SB-7-14.5	10/19/2005	14.5	4.4	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.045	<0.010	<0.0050	<0.0050	---	---
SB-7-19.5	10/19/2005	19.5	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	0.14	<0.010	<0.0050	<0.0050	---	---
SB-7-24.0	10/19/2005	24	<1.0	---	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050 <sup>b</sup>	<0.010	<0.010	<0.0050	<0.0050	---	---
<b>2006 Well Installation</b>																
MW-1-5	7/26/2006	5	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-1-10	7/28/2006	10	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-1-15	7/28/2006	15	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-1-20	7/28/2006	20	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	0.0114	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-2-5	7/26/2006	5	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-2-10	7/27/2006	10	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-2-14	7/27/2006	14	2.74	---	---	<0.00200	<0.0020	<0.00200	<0.0050	0.0028	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-3-5	7/26/2006	5	0.403	---	---	<0.00200	<0.0020	<0.00200	<0.0050	0.155	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-3-10	7/28/2006	10	0.507	---	---	0.00514	<0.0020	<0.00200	<0.0050	0.089	0.0588	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-3-15	7/28/2006	15	0.107	---	---	<0.00200	0.0102	0.00296	0.0134	0.0212	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-3-20	7/28/2006	20	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	0.00571	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-4-5	7/28/2006	5	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-4-10	7/28/2006	10	339	---	---	<0.00200	<0.0020	0.137	0.00505	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-4-15	7/28/2006	15	<0.100	---	---	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200

TABLE 1

**HISTORICAL SOIL ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA**

Sample ID	Date	Depth (fbg)	TPHg	TPHd	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
MW-4-20	7/28/2006	20	<0.100	--	--	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-5-5	7/26/2006	5	<0.100	--	--	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-5-10	7/27/2006	10	<0.100	--	--	<0.00200	<0.0020	<0.00200	<0.0050	<0.00200	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-5-15	7/27/2006	15	0.136	--	--	<0.00200	<0.0020	<0.00200	<0.0050	0.0387	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
MW-5-20	7/27/2006	20	0.222	--	--	<0.00200	<0.0020	<0.00200	<0.0050	0.112	<0.0500	<0.00200	<0.00500	<0.00200	<0.00200	<0.00200
Shallow Soil (≤10 fbg) ESL			180	180	NA	0.27	9.3	4.7	11	8.4	110	NA	NA	NA	0.48	0.044
Deep Soil (>10 fbg) ESL			180	180	NA	2.0	9.3	4.7	11	8.4	110	NA	NA	NA	1.8	1.0

Notes:

All results in milligrams per kilograms (mg/kg) unless otherwise indicated.

fbg = Feet below grade

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B unless otherwise indicated.

TPHd = Total petroleum hydrocarbons as diesel, analysis method unknown.

Oil and Grease analysis method unknown.

Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B unless otherwise noted.

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B unless otherwise noted.

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B

EDB = 1,2-Dibromoethane by EPA Method 8260B

<x = Not detected at reporting limit x

-- = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA  
 SHELL-BRANDED SERVICE STATION  
 510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
 OAKLAND, CALIFORNIA

Sample ID	Date	Depth (ftg)	TPHg	TPHd	Oil and Grease	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
-----------	------	----------------	------	------	-------------------	---------	---------	-------------------	------------------	------	-----	------	------	------	---------	-----

Results in bold equal or exceed applicable ESL

a = Analysis method unknown.

b = Analyzed by EPA Method 8260B and 8260B C6-12. Highest concentration reported.

c = Quantity of unknown hydrocarbon(s) in sample based on gasoline

d = San Francisco Bay Regional Water Quality Control Board commercial land use ESL for soil where groundwater is not a current or potential source of drinking water (Tables B and D of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 2

**HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA**

Sample ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
SB-1-W1	10/19/2005	20-25	<50	<0.50	<0.50	<0.50	<1.0	19	<5.0	<2.0	<2.0	<2.0	--	--
SB-2-W	10/18/2005	20-25	<50	<0.50	<0.50	<0.50	<1.0	1.6	<5.0	<2.0	<2.0	<2.0	--	--
SB-3-W1	10/19/2005	20-25	560	3.0	<0.50	22	18	6.3	<5.0	<2.0	<2.0	<2.0	--	--
SB-4-W	10/18/2005	15-20	<50	<0.50	<0.50	<0.50	<1.0	70	270	<2.0	<2.0	<2.0	--	--
SB-5-W	10/18/2005	15-20	250	<2.5	<2.5	<2.5	<5.0	5.9	3,200	<10	<10	<10	--	--
SB-6-W	10/18/2005	20-25	270	<2.5	<2.5	<2.5	<5.0	820	<25	<10	<10	<10	--	--
SB-6-W2	10/18/2005	25-27	1,200	<5.0	<5.0	15	29	1,400	<50	<20	<20	<20	--	--
SB-7-W1	10/19/2005	20-25	3,800	24	140	110	1,000	2.7	<20	<8.0	<8.0	<8.0	--	--
MW-1W <sup>a</sup>	7/28/2006	4.3-10	145	<0.500	<0.500	<0.500	<0.500	<0.500	<10	<0.500	<0.500	<0.500	<0.500	<0.500
MW-4W <sup>a</sup>	7/28/2006	9.71-10	373	<0.500	<0.500	<0.500	<0.500	1.49	<10	<0.500	<0.500	<0.500	<0.500	<0.500
<b>Groundwater ESL<sup>b</sup>:</b>			210	46	130	43	100	1,800	18,000	NA	NA	NA	200	150

Notes:

All results in micrograms per liter (µg/l) unless otherwise indicated.

fbg = Feet below grade

TPHg = Total petroleum hydrocarbons as gasoline; analyzed by EPA Method 8260B

Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B

TABLE 2

HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA  
SHELL-BRANDED SERVICE STATION  
510 EAST 14TH STREET (506-510 INTERNATIONAL BOULEVARD),  
OAKLAND, CALIFORNIA

EDB = 1,2-Dibromoethane by EPA Method 8260B

<x = Not detected at reporting limit x

— = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

a = Samples were collected from boreholes that were 10 fbg and left open overnight.

b = San Francisco Bay Regional Water Quality Control Board ESL for groundwater where groundwater is not a source of drinking water (Table B of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.85	10.98	19.87
MW-1	08/29/2006	242	<0.500	<0.500	<0.500	<0.500	255	<0.500	<0.500	<0.500	54.1	<0.500	<0.500	30.85	10.98	19.87
MW-1	11/13/2006	140 a	<2.5	<2.5	<2.5	<2.5	300	<2.5	<2.5	<2.5	<100	NA	NA	30.85	11.05	19.80
MW-1	02/09/2007	100	<0.50	0.86	<0.50	<1.0	160	<2.0	<2.0	<2.0	95	NA	NA	30.85	9.61	21.24
MW-1	06/01/2007	<50 b	<0.50	<1.0	<1.0	<1.0	160	<2.0	<2.0	<2.0	<10	NA	NA	30.85	10.67	20.18
MW-1	08/15/2007	<50 b	<0.50	<1.0	<1.0	<1.0	210	<2.0	<2.0	<2.0	5.8 c	NA	NA	30.85	10.90	19.95
MW-1	11/30/2007	120 b,d	<1.0	<2.0	<2.0	<2.0	180	<4.0	<4.0	<4.0	<02	NA	NA	30.85	10.65	20.20
MW-1	01/24/2008	120 b,d	<0.50	<1.0	<1.0	<1.0	120	<2.0	<2.0	<2.0	<10	NA	NA	30.85	8.74	22.11
MW-1	05/20/2008	160	<0.50	<1.0	<1.0	<1.0	160	<2.0	<2.0	<2.0	<10	NA	NA	30.85	10.95	19.90
MW-1	08/05/2008	150	<0.50	<1.0	<1.0	<1.0	140	<2.0	<2.0	<2.0	<10	NA	NA	30.85	11.55	19.30
MW-1	12/02/2008	190	<0.50	<1.0	<1.0	<1.0	160	<2.0	<2.0	<2.0	<10	NA	NA	30.85	11.15	19.70
MW-1	02/20/2009	100	<0.50	<1.0	<1.0	<1.0	90	<2.0	<2.0	<2.0	<10	NA	NA	30.85	7.40	23.45
MW-1	05/07/2009	77	<0.50	<1.0	<1.0	<1.0	69	<2.0	<2.0	<2.0	<10	NA	NA	30.85	9.57	21.28
MW-1	11/03/2009	100	<0.50	<1.0	<1.0	<1.0	90	<2.0	<2.0	<2.0	<10	NA	NA	30.85	10.29	20.56
MW-2	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.96	9.91	21.05
MW-2	08/29/2006	2,130	1.18	0.660	1.67	0.960	206	<0.500	<0.500	<0.500	55.5	<0.500	<0.500	30.96	9.91	21.05
MW-2	11/13/2006	890	<0.50	1.4	4.1	4.5	37	<0.50	<0.50	<0.50	41	NA	NA	30.96	10.11	20.85
MW-2	02/09/2007	760	0.84	3.0	5.0	6.7	67	<2.0	<2.0	<2.0	210	NA	NA	30.96	8.73	22.23
MW-2	06/01/2007	3,300 b	0.48 c	0.98 c	12	3.89 c	39	<2.0	<2.0	<2.0	79	NA	NA	30.96	8.83	22.13
MW-2	08/15/2007	3,500 b	0.40 c	0.78 c	11	3.4	9.4	<2.0	<2.0	<2.0	58	NA	NA	30.96	9.81	21.15
MW-2	11/30/2007	1,000 b	<0.50	0.34 c	<1.0	1.1	17	<2.0	<2.0	<2.0	<10	NA	NA	30.96	9.93	21.03
MW-2	01/24/2008	800 b	<0.50	<1.0	2.5	1.8	15	<2.0	<2.0	<2.0	320	NA	NA	30.96	8.13	22.83
MW-2	05/20/2008	2,600	<0.50	<1.0	11	2.6	11	<2.0	<2.0	<2.0	120	NA	NA	30.96	9.70	21.26
MW-2	08/05/2008	620	<0.50	<1.0	3.4	<1.0	37	<2.0	<2.0	<2.0	<10	NA	NA	30.96	10.46	20.50
MW-2	12/02/2008	<50	<0.50	<1.0	<1.0	<1.0	21	<2.0	<2.0	<2.0	<10	NA	NA	30.96	10.12	20.84
MW-2	02/20/2009	2,200	<0.50	<1.0	8.9	1.9	<1.0	<2.0	<2.0	<2.0	310	NA	NA	30.96	7.19	23.77
MW-2	05/07/2009	2,100	<0.50	1.2	6.8	1.7	13	<2.0	<2.0	<2.0	200	NA	NA	30.96	8.84	22.12
MW-2	11/03/2009	140	<0.50	<1.0	<1.0	<1.0	14	<2.0	<2.0	<2.0	34	NA	NA	30.96	9.48	21.48

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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MW-3	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.02	10.00	22.02
MW-3	08/29/2006	<50.0	<0.500	<0.500	<0.500	<0.500	28.8	<0.500	<0.500	<0.500	11.9	<0.500	<0.500	32.02	10.00	22.02
MW-3	11/13/2006	<50	<0.50	<0.50	<0.50	<0.50	1.5	<0.50	<0.50	<0.50	<20	NA	NA	32.02	10.85	21.17
MW-3	02/09/2007	<50	<0.50	2.4	0.81	5.8	2.6	<2.0	<2.0	<2.0	<5.0	NA	NA	32.02	9.90	22.12
MW-3	06/01/2007	<50 b	<0.50	<1.0	<1.0	<1.0	0.98 c	<2.0	<2.0	<2.0	<10	NA	NA	32.02	9.72	22.30
MW-3	08/15/2007	<50 b	<0.50	<1.0	<1.0	<1.0	1.3	<2.0	<2.0	<2.0	<10	NA	NA	32.02	10.69	21.33
MW-3	11/30/2007	<50 b	<0.50	<1.0	<1.0	<1.0	0.90 c	<2.0	<2.0	<2.0	<10	NA	NA	32.02	10.69	21.33
MW-3	01/24/2008	<50 b	<0.50	<1.0	<1.0	<1.0	1.1	<2.0	<2.0	<2.0	<10	NA	NA	32.02	9.00	23.02
MW-3	05/20/2008	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	10.70	21.32
MW-3	08/05/2008	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	11.22	20.80
MW-3	12/02/2008	<50	0.68	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	10.38	21.64
MW-3	02/20/2009	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	7.79	24.23
MW-3	05/07/2009	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	9.62	22.40
MW-3	11/03/2009	<50	<0.50	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	32.02	10.41	21.61

MW-4	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.10	9.91	21.19
MW-4	08/29/2006	375	<0.500	<0.500	3.10	0.660	6.53	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	31.10	9.91	21.19
MW-4	11/13/2006	120	<0.50	<0.50	0.87	<0.50	4.6	<0.50	<0.50	<0.50	<20	NA	NA	31.10	10.05	21.05
MW-4	02/09/2007	130	<0.50	0.92	1.6	<1.0	5.2	<2.0	<2.0	<2.0	11	NA	NA	31.10	8.62	22.48
MW-4	06/01/2007	580 b	0.30 c	<1.0	5.5	0.57 c	3.4	<2.0	<2.0	<2.0	<10	NA	NA	31.10	6.94	24.16
MW-4	08/15/2007	430 b	<0.50	<1.0	0.48 c	<1.0	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	31.10	9.01	22.09
MW-4	11/30/2007	87 b	<0.50	<1.0	0.25 c	<1.0	1.7	<2.0	<2.0	<2.0	<10	NA	NA	31.10	9.89	21.21
MW-4	01/24/2008	350 b,d	<0.50	<1.0	1.7	<1.0	2.5	<2.0	<2.0	<2.0	<10	NA	NA	31.10	7.52	23.58
MW-4	05/20/2008	200	<0.50	<1.0	<1.0	<1.0	1.8	<2.0	<2.0	<2.0	<10	NA	NA	31.10	9.85	21.25
MW-4	08/05/2008	<50	<0.50	<1.0	<1.0	<1.0	1.1	<2.0	<2.0	<2.0	<10	NA	NA	31.10	10.54	20.56
MW-4	12/02/2008	86	0.53	<1.0	<1.0	<1.0	1.4	<2.0	<2.0	<2.0	<10	NA	NA	31.10	10.20	20.90
MW-4	02/20/2009	240	<0.50	<1.0	4.5	<1.0	2.0	<2.0	<2.0	<2.0	<10	NA	NA	31.10	6.24	24.86
MW-4	05/07/2009	230	<0.50	<1.0	1.7	<1.0	1.7	<2.0	<2.0	<2.0	<10	NA	NA	31.10	8.14	22.96

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-4	11/03/2009	71	<0.50	<1.0	<1.0	<1.0	1.5	<2.0	<2.0	<2.0	<10	NA	NA	31.10	9.57	21.53
MW-5	08/24/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.61	9.98	21.63
MW-5	08/29/2006	1,260	<0.500	<0.500	<0.500	<0.500	829	<0.500	<0.500	<0.500	<10.0	<0.500	<0.500	31.61	9.98	21.63
MW-5	11/13/2006	290 a	<5.0	<5.0	<5.0	<5.0	640	<5.0	<5.0	<5.0	<200	NA	NA	31.61	9.82	21.79
MW-5	02/09/2007	260	<0.50	1.1	<0.50	1.1	350	<2.0	<2.0	<2.0	270	NA	NA	31.61	9.41	22.20
MW-5	06/01/2007	<50 b	<1.0	<2.0	<2.0	<2.0	290	<4.0	<4.0	<4.0	<20	NA	NA	31.61	9.29	22.32
MW-5	08/15/2007	<50 b	<0.50	<1.0	<1.0	<1.0	580	<2.0	<2.0	<2.0	<10	NA	NA	31.61	10.01	21.60
MW-5	11/30/2007	210 b,d	<2.5	<5.0	<5.0	<5.0	340	<10	<10	<10	<50	NA	NA	31.61	9.52	22.09
MW-5	01/24/2008	82 b,d	<0.50	<1.0	<1.0	<1.0	230	<2.0	<2.0	<2.0	<10	NA	NA	31.61	8.95	22.66
MW-5	05/20/2008	160	<1.0	<2.0	<2.0	<2.0	140	<4.0	<4.0	<4.0	<20	NA	NA	31.61	9.90	21.71
MW-5	08/05/2008	190	<0.50	<1.0	<1.0	<1.0	180	<2.0	<2.0	<2.0	<10	NA	NA	31.61	10.27	21.34
MW-5	12/02/2008	180	<0.50	<1.0	<1.0	<1.0	160	<2.0	<2.0	<2.0	<10	NA	NA	31.61	9.93	21.68
MW-5	02/20/2009	120	<0.50	<1.0	<1.0	<1.0	110	<2.0	<2.0	<2.0	<10	NA	NA	31.61	7.59	24.02
MW-5	05/07/2009	92	<0.50	<1.0	<1.0	<1.0	87	<2.0	<2.0	<2.0	<10	NA	NA	31.61	8.63	22.98
MW-5	11/03/2009	82	<0.50	<1.0	<1.0	<1.0	74	<2.0	<2.0	<2.0	<10	NA	NA	31.61	9.78	21.83

**WELL CONCENTRATIONS**  
**Shell Service Station**  
**510 E. 14th Street**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8260B.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol or tertiary butanol, analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane, analyzed by EPA Method 8260B

EDB = Ethylene Dibromide, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

Notes:

a = The result for this hydrocarbon is elevated due to the presence of single analyte peak(s) in the quantitation range.

b = Analyzed by EPA Method 8015B (M).

c = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

d = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

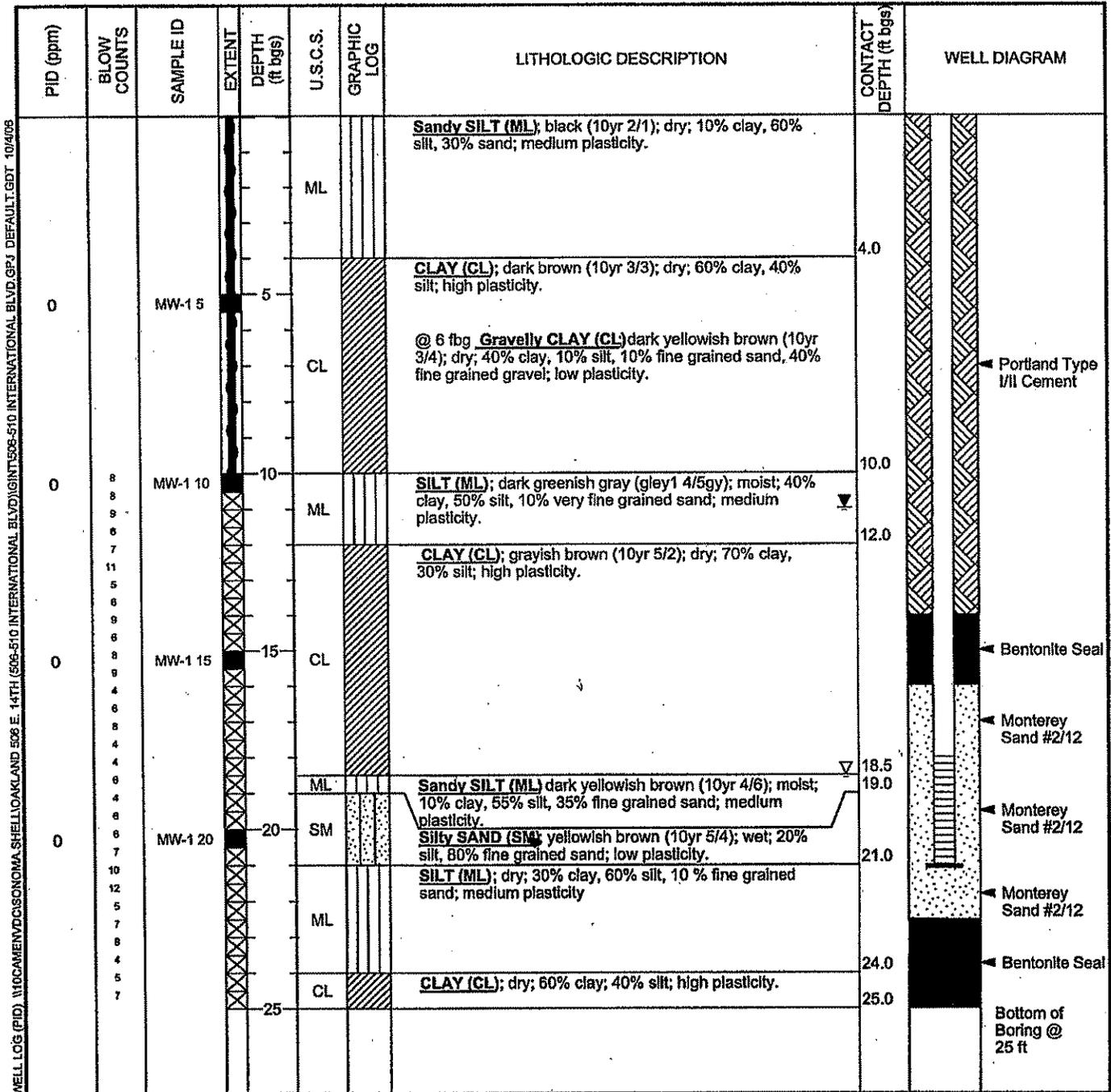
Site surveyed September 7, 2006 by Virgil Chavez of Vallejo, CA.



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-1
<b>JOB/SITE NAME</b>	506-510 International Blvd	<b>DRILLING STARTED</b>	26-Jul-06
<b>LOCATION</b>	Oakland, CA	<b>DRILLING COMPLETED</b>	28-Jul-06
<b>PROJECT NUMBER</b>	248-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	25-Aug-06 (64 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	31.13 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	30.85 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	18 to 21 ft bgs
<b>LOGGED BY</b>	B. DeBoer	<b>DEPTH TO WATER (First Encountered)</b>	18.5 ft (28-Jul-06) $\nabla$
<b>REVIEWED BY</b>	A. Friel	<b>DEPTH TO WATER (Static)</b>	10.98 ft (29-Aug-06) $\nabla$
<b>REMARKS</b>	Hand Augered to 10 fbg		



WELL LOG (PID) \\10CAMENV\DC\SONOMA\_SHELL\OAKLAND 506 E. 14TH (506-510 INTERNATIONAL BLVD)\GINT\506-510 INTERNATIONAL BLVD.GPJ DEFAULT.GDT 10/4/06



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-2
<b>JOB/SITE NAME</b>	506-510 International Blvd	<b>DRILLING STARTED</b>	26-Jul-06
<b>LOCATION</b>	Oakland, CA	<b>DRILLING COMPLETED</b>	27-Jul-06
<b>PROJECT NUMBER</b>	248-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	25-Aug-06 (93 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	31.46 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	30.96 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	14 to 24 ft bgs
<b>LOGGED BY</b>	B. DeBoer	<b>DEPTH TO WATER (First Encountered)</b>	14.0 ft (27-Jul-06)
<b>REVIEWED BY</b>	A. Friel	<b>DEPTH TO WATER (Static)</b>	9.91 ft (29-Aug-06)
<b>REMARKS</b>	Hand Augered to 10 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		MW-2 5'	0-5	ML		<b>SILT (ML)</b> ; dark yellowish brown (10yr 4/4); dry; 10% clay, 80% silt, 10% sand.  @ 2 fbg <b>Sandy SILT (ML)</b> ; dark yellowish brown (10yr 4/4); dry; 70% silt, 30% sand; low plasticity.	4.0	
			5	CL		<b>CLAY (CL)</b> ; dark greenish gray (gley1 4/5g); dry; 80% clay, 20% silt; high plasticity.	6.0	
0	4 8 9 7 10 13 9 15 16	MW-2 10'	10-15	ML		<b>SILT (ML)</b> ; greenish gray (gley1 5/10gy); dry; 15% clay, 75% silt, 10% fine grained sand; low plasticity.  @ 10 fbg ; 40% clay, 50% silt, 10% fine grained gravel; medium plasticity	13.0 13.5	
0	11 17 18 11 17 5 7 10 7 8	MW-2 15'	15-20	CH SW SM ML		@12.5 fbg <b>SILT With Sand (ML)</b> ; greenish gray (gley1 6/10gy); dry; 80% silt, 20% fine grained sand; low plasticity. <b>CLAY (CH)</b> ; dry; 80% clay, 40% silt; high plasticity <b>Well Graded SAND With Gravel (SW)</b> ; Moist; 85% sand, 15% fine grained gravel. @ 14 fbg; wet <b>Silty SAND With Gravel (SM)</b> 15% silt, 70% sand, 15% gravel. @16.5 fbg; <b>Silty SAND (SM)</b> ; wet; 10% clay, 30% silt, 50% sand, 10 % gravel; low plasticity. <b>Silt With SAND (ML)</b> ; dark gray (10yr 4/1); moist; 15% clay, 60% silt, 25% fine grained sand; high plasticity.	15.5 17.0	
0	10 7 8 10 7 9 12		20-25	SW SM		<b>Well Graded SAND With Silt (SW-SM)</b> ; wet; 10% silt, 80% medium grained sand, 10% fine grained gravel. @21 fbg; 10% silt, 90% fine grained sand.  @22 fbg; 20% silt, 80% medium grained sand.	20.0 25.0	

WELL LOG (PID) \\C:\CAMEN\DC\SONOMA\_SHELL\OAKLAND 506 E. 14TH (506-510 INTERNATIONAL BLVD)\GINT\506-510 INTERNATIONAL BLVD.GPJ DEFAULT.GDT 10/4/06



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-3
<b>JOB/SITE NAME</b>	508-510 International Blvd	<b>DRILLING STARTED</b>	26-Jul-06
<b>LOCATION</b>	Oakland, CA	<b>DRILLING COMPLETED</b>	28-Jul-06
<b>PROJECT NUMBER</b>	248-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	25-Aug-06 (114 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	32.41 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	32.02 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	19 to 29 ft bgs
<b>LOGGED BY</b>	B. DeBoer	<b>DEPTH TO WATER (First Encountered)</b>	19.0 ft (28-Jul-06) ▽
<b>REVIEWED BY</b>	A. Friel	<b>DEPTH TO WATER (Static)</b>	10.00 ft (29-Aug-06) ▽
<b>REMARKS</b>	Hand Augered to 10 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		MW-3 5'	5	ML		<b>SILT (ML)</b> ; black (10yr 2/1); dry; 10% clay, 80% silt, 10% sand.  @ 3 fbg; very dark gray (10yr 3/1); dry; 30% clay, 70% silt; medium plasticity. @ 4 fbg; very dark gray (10yr 3/1); moist; 70% silt, 30% fine grained sand; high plasticity.	4.0	<p>Portland Type I/II Cement</p> <p>Bentonite Seal</p> <p>Monterey Sand #2/12</p> <p>Monterey Sand #2/12</p> <p>Bottom of Boring @ 30 ft</p>
				CL		<b>CLAY (CL)</b> green mottling; brown (10yr 4/3); dry; 70% clay, 30% silt; high plasticity.	7.0	
				ML		<b>SILT (ML)</b> ; dark yellowish brown (10yr 4/4); dry; 10% clay, 80% silt, 10% sand.	8.0	
				CL		<b>CLAY (CL)</b> ; odor; grayish green (gley1 4/5g); dry; 70% clay, 30% silt; high plasticity	10.0	
0	6 7 8 9 10 11 12 13	MW-3 10'	10	ML		<b>SILT (ML)</b> ; grayish green (gley1 4/5g); dry; 40% clay, 60% silt; high plasticity.	15.0	
				ML		@ 13 fbg; yellowish brown (10yr 5/4); dry; 40% clay, 60% silt; high plasticity.		
		MW-3 15'	15	CL		<b>CLAY (CL)</b> ; dry; 70% clay, 30% silt; medium plasticity.	19.0	
				SM		<b>Silty SAND (SM)</b> ; wet; 20% silt, fine grained 80% sand; low plasticity.	21.0	
		MW-3 20'	20	SM		<b>Well Graded Silty SAND (SM)</b> 15% silt, 85% fine/coarse grained sand.	22.0	
				SW		<b>Well Graded SAND (SW)</b> 100% medium/coarse grained sand.	27.0	
				ML		<b>SILT With Sand (ML)</b> wet; 75% silt, 25% fine grained sand; medium plasticity.	30.0	

WELL LOG (PID) \\C:\CAMBI\ENV\CA\SONOMA\_SHELL\OAKLAND\_508 E. 14TH (508-510 INTERNATIONAL BLVD)\GINT\508-510 INTERNATIONAL BLVD.GPJ DEFAULT.GDT 10/4/06



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-4
<b>JOB/SITE NAME</b>	506-510 International Blvd	<b>DRILLING STARTED</b>	26-Jul-06
<b>LOCATION</b>	Oakland, CA	<b>DRILLING COMPLETED</b>	28-Jul-06
<b>PROJECT NUMBER</b>	248-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	25-Aug-06 (39 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	31.31 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	31.10 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	18 to 21.5 ft bgs
<b>LOGGED BY</b>	B. DeBoer	<b>DEPTH TO WATER (First Encountered)</b>	19.0 ft (28-Jul-06) ▽
<b>REVIEWED BY</b>	A. Friel	<b>DEPTH TO WATER (Static)</b>	9.91 ft (29-Aug-06) ▽
<b>REMARKS</b>	Hand Augered to 10 fbg		

WELL LOG (PID) \\\OCAMENV\CS\SONOMA SHELL\OAKLAND 506 E. 14TH (506-510 INTERNATIONAL BLVD)\GINT\506-510 INTERNATIONAL BLVD.GPJ DEFAULT.GDT. 10/4/06

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		MW-4 5'	5	ML		<p><b>SILT With Sand with some brick (ML)</b>; very dark brown (10yr 2/2); dry; 60% silt, 30% fine grained sand, 10% fine grained gravel.</p> <p>@ 3 fbg; 70% silt, 40% sand.</p> <p>@ 4 fbg; <b>SILT (ML)</b>; dark greenish gray (gley1 4/10gy); damp/dry; 30% clay, 60% silt, 10% fine grained sand; high plasticity.</p>	6.0	
0	7	MW-4 10'	10	CL		<p><b>CLAY (CL)</b>; greenish gray (gley1 5/5g); dry; 60% clay, 40% silt; medium plasticity.</p>	10.0	
0	9	MW-4 15'	15	ML		<p><b>SILT With Sand (ML)</b>; dark brown (10yr 3/3); dry; 30% clay, 55% silt, 15% fine grained sand; medium plasticity.</p>	12.0	
0	10	MW-4 15'	15	CL		<p><b>CLAY (CL)</b>; dark greenish gray (gley1 4/10gy); dry; 70% clay, 30% silt; medium plasticity.</p> <p>@ 14 fbg; green mottling; yellowish brown (10yr 5/4)</p>	18.0	
0	11	MW-4 20'	20	ML		<p><b>SILT With Sand (ML)</b>; moist; 20% clay, 60% silt, 20% fine grained sand; medium plasticity.</p> <p>@ 19 fbg; wet; 10% clay, 50% silt, 10% fine grained sand.</p> <p>@ 20 fbg; moist; 10% clay, 70% silt, 20% fine grained sand; medium plasticity.</p> <p>@ 21 fbg; dry.</p> <p>@ 22 fbg; <b>SILT (ML)</b>; dry; 40% clay, 60% silt; high plasticity.</p>	25.0	
	8		25					Bottom of Boring @ 25 ft



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-5
<b>JOB/SITE NAME</b>	508-510 International Blvd	<b>DRILLING STARTED</b>	26-Jul-06
<b>LOCATION</b>	Oakland, CA	<b>DRILLING COMPLETED</b>	27-Jul-06
<b>PROJECT NUMBER</b>	248-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	25-Aug-09 (39 gallons)
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	31.96 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	31.61 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVAL</b>	19 to 22 ft bgs
<b>LOGGED BY</b>	B. DeBoer	<b>DEPTH TO WATER (First Encountered)</b>	20.0 ft (27-Jul-06) ▽
<b>REVIEWED BY</b>	A. Friel	<b>DEPTH TO WATER (Static)</b>	9.98 ft (29-Aug-06) ▽
<b>REMARKS</b>	Hand Augered to 10 fbg		

WELL LOG (PID) \\VOCAMER\DCSONOMA\SHELL\OAKLAND 508 E. 14TH (508-510 INTERNATIONAL BLVD)\GINT1506-510 INTERNATIONAL BLVD.GPJ DEFAULT.GDT 10/4/06

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		MW-5 5'	5	ML		<b>SILT (ML)</b> ; dark yellowish brown (10yr 4/4); dry; 10% clay, 80% silt, 10% fine grained sand.  @ 2 fbg; <b>Sandy SILT (ML)</b> ; very dark grayish brown (10yr 3/2); dry; 70% silt, 40% fine grained sand.	4.0	
0		MW-5 10'	10	ML		<b>CLAY (CL)</b> ; (odor); dark greenish gray (gley1 4/10gy); dry; 60% clay, 40% silt; high plasticity.  @ 6 fbg; 80% clay, 20% silt.	8.0	
0	7 9 9 10 12	MW-5 15'	15	ML		<b>SILT (ML)</b> ; greenish gray (gley1 5/10gy); dry; 15% clay, 75% silt, 10% fine grained sand; low plasticity.  @ 10 fbg; greenish gray (gley1 5/5g); 35% clay, 55% silt, 10% fine grained sand; medium plasticity.	13.0	
0	6 6 7 7 10 4 7 9 5 8	MW-5 20'	20	CL		<b>SILT (ML)</b> ; (Black Spotting); dark grayish brown (10yr 4/2); 50% silt, 40% sand, 10% fine grained gravel; low plasticity. <b>CLAY With Sand (CL)</b> yellowish brown (10yr 5/4); dry; 50% clay, 30% silt, 20% fine grained sand; medium plasticity.  @ 15 fbg <b>CLAY (CL)</b> ; dry; 60% clay, 40% silt; high plasticity.	19.0	
0	7 10 11 7 9 9 4 8 8		20	ML		@ 18 fbg <b>CLAY With Sand (CL)</b> dry; 50% clay, 30% silt, 20% fine grained sand; high plasticity.	20.0	
			21	SM		<b>Sandy SILT (SM)</b> ; moist; 20% silt, 80% fine grained sand.	21.0	
			21	SM		<b>Silty SAND (SM)</b> ; moist; 20% silt, 80% extra fine grained sand.	21.0	
			21	ML		<b>Sandy SILT (ML)</b> ; wet; 25% clay, 45% silt, 30% fine grained sand; medium plasticity.	21.0	
			22	ML		@ 22 fbg; <b>SILT (ML)</b> ; dry; 40% clay, 60% silt; medium plasticity.	25.0	
			25				25.0	



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-1
JOB/SITE NAME	Former Shell-Branded Service Station	DRILLING STARTED	19-Oct-05
LOCATION	510 E. 14th St (506 - 510 International Blvd.)	DRILLING COMPLETED	19-Oct-05
PROJECT NUMBER	247-0898-006	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Direct Push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVALS	NA
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered)	20.0 fbg (19-Oct-05)
REVIEWED BY	Aubrey Cool, PG 7659	DEPTH TO WATER (Static)	13.00 fbg
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				GM		<b>Asphalt</b> <b>Silty Gravel</b> (GM); black; dry; 50% silt, 50% gravel.	0.3	
				ML		<b>SILT</b> (ML); dark brown; dry; 40% clay, 60% silt, medium plasticity.	3.0	
		SB-1-5.0	5	CL		<b>CLAY</b> (CL); gray with green mottling; damp to moist; 65% clay, 35% silt, medium plasticity.	4.5	
						<b>CLAY</b> (CL); greenish gray; very dry; 50% clay, 50% silt, low to moderate plasticity.	7.5	
0		SB-1-9.5	10	CL				
						<b>SILT with sand</b> (ML); brown; dry; 10% clay, 65% silt, 25% sand; low plasticity.	13.0	
3		SB-1-14.5	15	ML				
						<b>SILT with Sand</b> (ML); brown; dry; 20% clay, 55% silt, 15% sand, 10% gravel; low plasticity.	15.0	
						<b>CLAY with Sand</b> (CL); brown; moist; 60% clay, 25% silt, 15% sand; moderate plasticity.	16.5	
0		SB-1-19.5	20	CL				
						<b>Sandy CLAY</b> (CL); brown with gray mottling; moist; 70% clay, 30% sand; moderate plasticity.	20.0	
				SC		<b>Clayey SAND</b> (SC); brown; moist to wet; 25% clay, 10% silt, 65% sand; moderate plasticity.	22.5	
				CL		<b>Sandy CLAY</b> (CL); brown; moist; 50% clay, 25% silt, 25% sand; low plasticity.	23.5	
0		SB-1-24.5	25				25.0	

Notes: Grab groundwater sample (SB-1-W1) collected from a temporary well casing screened 20-25 fbg.

Portland Type I/II

Bottom of Boring @ 25 fbg

WELL LOG (PID) 6:0AKLAND 510 E 14TH (506 - 510 INTERNATIONAL BLVD) 2005 SURFACE INVESTIGATION INT.GPJ DEFAULT.GDT 12/13/05



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-2
JOB/SITE NAME	Former Shell-Branded Service Station	DRILLING STARTED	18-Oct-05
LOCATION	510 E. 14th St (506 - 510 International Blvd.)	DRILLING COMPLETED	18-Oct-05
PROJECT NUMBER	247-0898-006	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Direct Push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVALS	NA
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered)	20.0 fbg (18-Oct-05) ▽
REVIEWED BY	Aubrey Cool, PG 7659	DEPTH TO WATER (Static)	15.80 fbg ▽
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.2			<b>ASPHALT</b>	0.2	
				5.0	ML		<b>SILT (ML)</b> ; greenish gray; dry; 25% clay, 70% silt, 5% sand; moderate plasticity.	5.0	
3		SB-2-5.0		5.0	CL		<b>CLAY (CL)</b> ; light gray; moist; 65% clay, 35% silt; low plasticity.	9.5	
				11.0	SC		<b>Clayey SAND with grave(SC)</b> ; greenish gray; moist; 25% clay, 50% sand, 25% gravel.	11.0	
2		SB-2-10.0		11.0	CL		<b>Sandy CLAY with Gravel (CL)</b> light brown; dry; 65% clay, 20% sand, 15% gravel; low plasticity.	19.5	
				15.0	CL		<b>Sandy CLAY with Gravel (CL)</b> light brown; dry; 65% clay, 20% sand, 15% gravel; low plasticity. ▽	19.5	
				19.5	CL		<b>CLAY (CL)</b> ; light brown; moist; 60% clay, 40% silt; low to medium plasticity. ▽	19.5	<p>← Portland Type I/II</p>
0		SB-2-19.5		20.0	CL		<b>CLAY (CL)</b> ; light brown; moist; 60% clay, 40% silt; low to medium plasticity. ▽	23.5	
				23.5	SC		<b>Clayey SAND(SC)</b> ; light brown; moist; 25% clay, 75% sand.	25.0	
0		SB-2-24.5		25.0	SC		<b>Clayey SAND(SC)</b> ; light brown; moist; 25% clay, 75% sand.	25.0	Bottom of Boring @ 25 fbg

Notes: Grab groundwater sample (SB-2-W) collected from a temporary well casing screened 20-25 fbg.

WELL LOG (PID) G:\OAS\DA-12005SU-1\GINT.GPJ DEFAULT.GDT 12/8/05



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-3
JOB/SITE NAME	Former Shell-Branded Service Station	DRILLING STARTED	19-Oct-05
LOCATION	510 E. 14th St (506 - 510 International Blvd.)	DRILLING COMPLETED	19-Oct-05
PROJECT NUMBER	247-0898-006	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Direct Push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVALS	NA
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered)	20.0 fbg (19-Oct-05)
REVIEWED BY	Aubrey Cool, PG 7659	DEPTH TO WATER (Static)	10.80 fbg

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S. GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.3	ML	<b>ASPHALT</b> SILT (ML); dark brown; dry; 15% clay, 80% silt, 5% sand; moderate plasticity.	0.3	
			3.5	CL	<b>CLAY (CL)</b> ; gray; moist; 60% clay, 35% silt, 5% sand; low plasticity.	3.5	
164		SB-3-5.0	5.0	CL	<b>CLAY with Sand (CL)</b> ; yellow brown; dry; 60% clay, 25% silt, 15% sand; low plasticity.	5.0	
			10.0	CL	<b>CLAY (CL)</b> ; gray with some brown mottling; moist; 65% clay, 35% silt; low plasticity.	10.0	
22		SB-3-9.5	11.5	CL	<b>CLAY with sand (CL)</b> ; light greenish gray; damp to moist; 60% clay, 20% silt, 20% sand; low plasticity.	11.5	
82		SB-3-11.5	14.5	CL	<b>CLAY (CL)</b> ; light gray; moist; 70% clay, 30% silt, moderate plasticity.	14.5	
45		SB-3-14.5	19.5	CL	<b>Poorly Graded SAND with silt (SP-SM)</b> ; light brown; moist to wet; 10% silt, 85% sand, 5% gravel.	19.5	
			20.0	SP SM	<b>Well-Graded GRAVEL with sand (GW)</b> ; light brown; wet; 35% sand, 65% gravel.	20.0	
			25.0	GW	<b>CLAY with sand (CL)</b> ; brown; moist; 65% clay, 10% silt, 25% sand; low plasticity.	25.0	
1		SB-3-24.5	27.5	CL	<b>CLAY (CL)</b> ; brown; damp to moist; 65% clay, 30% silt, 5% sand; moderate plasticity.	27.5	
			30.0	CL		30.0	Bottom of Boring @ 30 fbg

Notes: Grab groundwater sample (SB-3-W1) collected from a temporary well casing screened 20-25 fbg.

WELL LOG (PID) G:\OAS\TD4-1\2005SU-1\GINT.GPJ DEFAULT.GDT 12/8/05



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products Company	<b>BORING/WELL NAME</b>	SB-4
<b>JOB/SITE NAME</b>	Former Shell-Branded Service Station	<b>DRILLING STARTED</b>	18-Oct-05
<b>LOCATION</b>	510 E. 14th St (506 - 510 International Blvd.)	<b>DRILLING COMPLETED</b>	18-Oct-05
<b>PROJECT NUMBER</b>	247-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Vironex	<b>GROUND SURFACE ELEVATION</b>	Not Surveyed
<b>DRILLING METHOD</b>	Direct Push	<b>TOP OF CASING ELEVATION</b>	Not Surveyed
<b>BORING DIAMETER</b>	3"	<b>SCREENED INTERVALS</b>	NA
<b>LOGGED BY</b>	Ron Barone	<b>DEPTH TO WATER (First Encountered)</b>	15.0 fbg (18-Oct-05)
<b>REVIEWED BY</b>	Aubrey Cool, PG 7659	<b>DEPTH TO WATER (Static)</b>	13.00 fbg

**REMARKS**

WELL LOG (PID) G:\OAKLAND 510 E 14TH (506 - 510 INTERNATIONAL BLVD)\2005 SUBSURFACE INVESTIGATION\GINT.GPJ DEFAULT.GDT 12/13/05

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.7			<b>ASPHALT</b>	0.7	
				2.5	ML		<b>SILT (ML)</b> ; dark brown; moist; 15% clay, 80% silt, 5% sand.	2.5	
				5	CL		<b>CLAY (CL)</b> ; brown with gray mottling; dry to moist; 80% clay, 20% silt; moderate plasticity.	5	
		SB-4-5.0		5	CL		<b>CLAY with sand (CL)</b> ; yellowish brown; dry to moist; 60% clay, 20% silt, 20% sand; low plasticity.	6.0	
				7.0	SC		<b>Clayey SAND (SC)</b> ; yellowish brown; dry; 35% clay, 15% silt, 50% sand.	7.0	
				8.5	SM		<b>Silty SAND with gravel (SM)</b> brown with gray and red; dry; 15% clay, 20% silt, 50% sand, 15% gravel.	8.5	
0		SB-4-9.5		10			<b>CLAY with sand (CL)</b> ; greenish brown and gray; moist; 65% clay, 15% silt, 20% sand; low plasticity.	9.0	
				15	CL			15	
0		SB-4-14.5		15			<b>Sandy Clay (CL)</b> ; greenish brown; moist; 70% clay, 20% sand, 10% gravel; low plasticity.	15	
				18.0	SC		<b>Clayey SAND (SC)</b> brown; moist; 30% clay, 70% sand; low plasticity.	18.0	
25		SB-4-19.5		20	CL		<b>CLAY with sand (CL)</b> brown; moist; 70% clay, 10% silt, 20% sand, low plasticity.	20.0	
				22.0	SC		<b>Clayey SAND (SC)</b> light brown; wet; 15% clay, 85% sand; no plasticity.	22.0	
				25.0	CL		<b>CLAY with sand (CL)</b> light brown; moist; 75% clay, 10% silt, 10% sand; 5% gravel; medium plasticity.	25.0	
		SB-4-24.5		25				25.0	

← Portland Type I/II

Bottom of Boring @ 25 fbg

Notes: Grab groundwater sample (SB-4-W) collected from a temporary well casing screened 15-20 fbg.  
 No sample recovered from hydropunch at 20-23 fbg after 30 minutes.



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-5
JOB/SITE NAME	Former Shell-Branded Service Station	DRILLING STARTED	18-Oct-05
LOCATION	510 E. 14th St (506 - 510 International Blvd.)	DRILLING COMPLETED	18-Oct-05
PROJECT NUMBER	247-0898-006	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Direct Push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVALS	NA
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered)	20.0 fbg (18-Oct-05)
REVIEWED BY	Aubrey Cool, PG 7659	DEPTH TO WATER (Static)	14.00 fbg

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5	ML		<b>ASPHALT</b> SILT with sand (ML); dark brown; moist; 10% clay, 65% silt, 25% sand; low plasticity.	0.5	
			2.0	CL		CLAY (CL); brown; moist; 65% clay, 35% silt; moderate plasticity.	2.0	
		SB-5-5.0	5	CL			7.0	
		SB-5-9.5	10	SC		Clayey SAND with Gravel (SC); grayish brown; moist; 15% clay, 60% sand, 25% gravel.	10.5	
			10.5	CL		CLAY (CL); brown with gray mottling; moist; 65% clay, 35% silt; low plasticity.	14.0	
4.5		SB-5-14.5	15	ML		Sandy SILT (ML); gray; moist; 50% silt, 50% sand; low plasticity.	16.5	
			16.5	CL		CLAY (CL); brown; moist; 60% clay, 30% silt, 10% sand; moderate plasticity.	21.0	
33		SB-5-19.5	20	SP SM		Poorly Graded SAND with silt (SP-SM); yellowish brown; wet; 10% silt, 90% sand.	24.0	
			24.0	SC		Clayey SAND (SC); yellowish brown; moist; 15% clay, 10% silt, 75% sand.	25.0	
87		SB-5-24.5	25					

Portland Type III

Bottom of Boring @ 29 fbg

Notes: Grab groundwater sample (SB-5-W) collected from a temporary well casing screened 15-20 fbg.

No sample recovered from hydropunch at 25-29 fbg after 30 minutes.

WELL LOG (PID) C:\OAKLAND 510 E 14TH (506 - 510 INTERNATIONAL BLVD)2005 SURFACE INVESTIGATION\GINT.GPJ DEFAULT.GDT 12/13/05



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# BORING/WELL LOG

CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-6
JOB/SITE NAME	Former Shell-Branded Service Station	DRILLING STARTED	18-Oct-05
LOCATION	510 E. 14th St (506 - 510 International Blvd.)	DRILLING COMPLETED	18-Oct-05
PROJECT NUMBER	247-0898-006	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Direct Push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVALS	NA
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered)	20.0 fbg (18-Oct-05)
REVIEWED BY	Aubrey Cool, PG 7659	DEPTH TO WATER (Static)	17.00 fbg

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S. GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5	ML	<b>ASPHALT</b>	0.5	
			2.0	ML	<b>SILT (ML)</b> ; brown; dry; 20% clay, 80% silt; moderate to low plasticity.	2.0	
			5.0	CL	<b>CLAY (CL)</b> ; brown with Gray Mottling; moist; 70% clay, 30% silt; moderate plasticity.		
0		SB-6-5.0	5.0	CL	<b>CLAY with sand (CL)</b> ; brown with gray mottling; moist; 50% clay, 25% silt, 25% sand; low plasticity.	6.0	
			7.0	SC	<b>Clayey SAND (SC)</b> ; greenish gray; dry to moist; 35% clay, 15% silt, 50% sand.	7.0	
1		SB-6-9.5	10.0	CL	<b>CLAY with sand (CL)</b> ; greenish gray; moist; 55% clay, 25% silt, 20% sand; low plasticity.	9.0	
			12.0	CL	<b>CLAY (CL)</b> ; gray; moist; 65% clay, 35% silt; moderate plasticity.	12.0	
5		SB-6-14.5	15.0	CL	<b>CLAY (CL)</b> ; gray; moist; 60% clay, 30% silt, 10% gravel; low to medium plasticity.	17.00	
0		SB-6-19.5	20.0	CL	<b>CLAY (CL)</b> ; greenish gray; dry to moist; 65% clay, 30% silt, 5% gravel; low to medium plasticity.	20.0	
			21.5	SC	<b>Clayey SAND (SC)</b> ; olive gray; moist to wet; 20% clay, 10% silt, 70% sand.	21.5	
1		SB-6-24.5	25.0	SP SC	<b>Poorly Graded SAND with clay (SP-SC)</b> ; olive gray to brown; wet; 10% clay, 90% sand.	25.0	
			27.0	ML	<b>Sandy SILT (ML)</b> ; olive brown; moist; 15% clay, 55% silt, 30% sand; low plasticity.	27.0	
			30.0	ML		30.0	

Notes: Grab groundwater sample (SB-6-W) collected from a temporary well casing screened 20-25 fbg.  
 Sample SB-6-W2 was collected at 25-27 fbg using a depth discrete hydropunch sampler.

Bottom of Boring @ 30 fbg

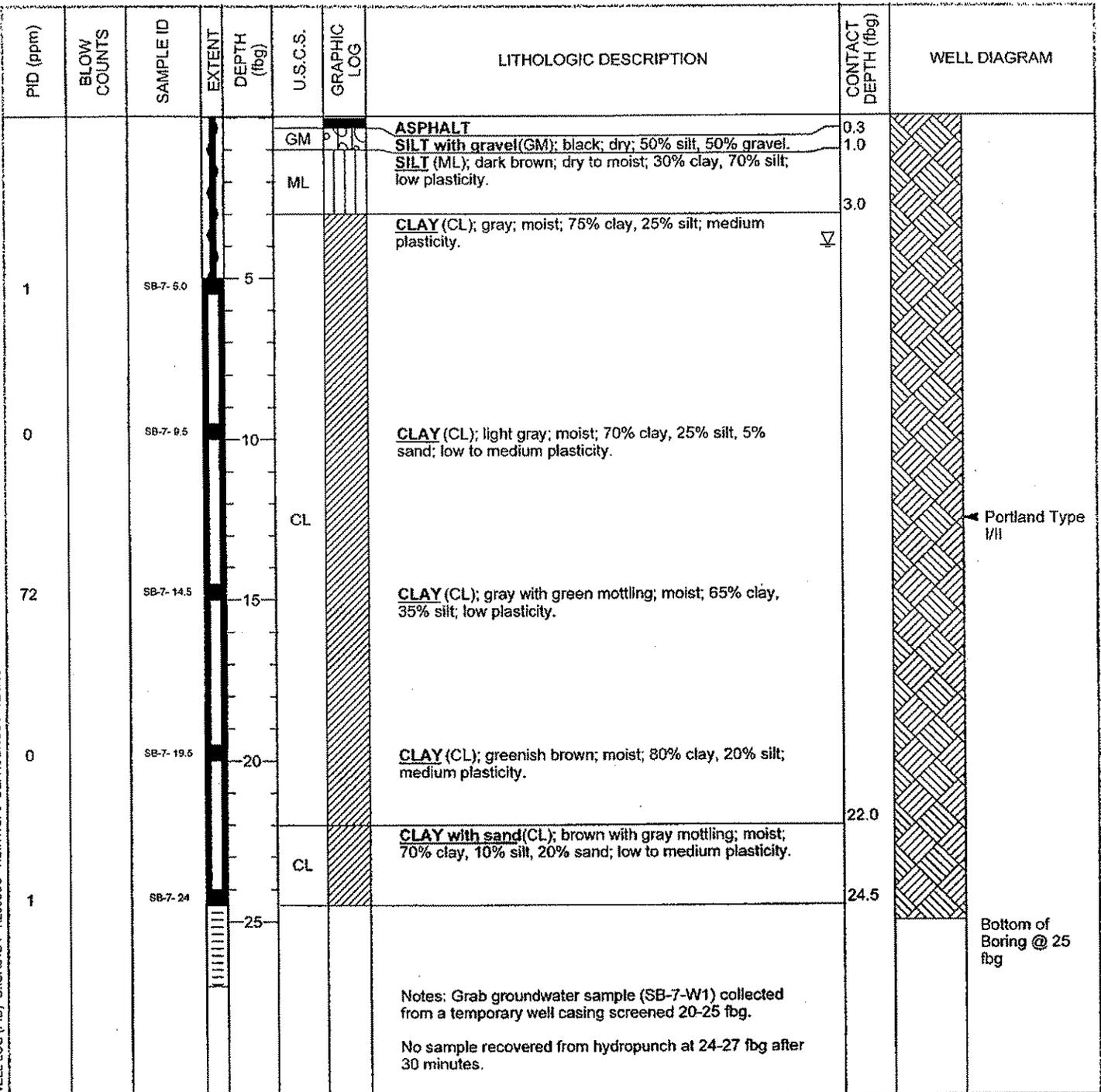
WELL LOG (PID) G:\OAS\104-1\2005SU-1\GINT.GPJ DEFAULT.GDT 12/8/05



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# BORING/WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products Company	<b>BORING/WELL NAME</b>	SB-7
<b>JOB/SITE NAME</b>	Former Shell-Branded Service Station	<b>DRILLING STARTED</b>	19-Oct-05
<b>LOCATION</b>	510 E. 14th St (506 - 510 International Blvd.)	<b>DRILLING COMPLETED</b>	19-Oct-05
<b>PROJECT NUMBER</b>	247-0898-006	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Vironex	<b>GROUND SURFACE ELEVATION</b>	Not Surveyed
<b>DRILLING METHOD</b>	Direct Push	<b>TOP OF CASING ELEVATION</b>	Not Surveyed
<b>BORING DIAMETER</b>	3"	<b>SCREENED INTERVALS</b>	NA
<b>LOGGED BY</b>	Ron Barone	<b>DEPTH TO WATER (First Encountered)</b>	4.0 fbg (19-Oct-05)
<b>REVIEWED BY</b>	Aubrey Cool, PG 7659	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>			



WELL LOG (PID) G:\0451D4-1\2005SU-1\GINT.GPJ DEFAULT.GDT 12/8/05