CONESTOGA-ROVERS & ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
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www.CRAworld.com

TRANSMITTAL

DATE: September 27, 2011

REFERENCE NO.: 240554

PROJECT NAME: 3420 San Pablo Avenue, Oakland

TO: Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED
10:56 am, Sep 30, 2011
Alameda County
Environmental Health

Please find enclosed:
- ☐ Draft
- ☐ Originals
- ☐ Prints
- ☒ Final
- ☐ Other

Sent via:
- ☐ Mail
- ☐ Overnight Courier
- ☐ Same Day Courier
- ☒ Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Subsurface Investigation Work Plan

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐
- ☐

COMMENTS:
If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
Shahriar Almasi, Portola Valley Shell (property owner), 965 Laurel Glen Drive, Palo Alto, CA 94304

Completed by: Peter Schaefer Signed: Aubrey Cool

Filing: **Correspondence File**

Denis L. Brown
Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Shell Service Station
3420 San Pablo Avenue
Oakland, California
SAP Code 139619
Incident No. 98995748
ACEH Case No. RO0000006

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Senior Program Manager

SUBSURFACE INVESTIGATION WORK PLAN

FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

SAP CODE	139619
INCIDENT NO.	98995748
AGENCY NO.	RO0000006

Prepared by:
Conestoga-Rovers & Associates

5900 Hollis Street, Suite A
Emeryville, California
U.S.A. 94608

Office: (510) 420-0700
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SEPTEMBER 27, 2011
REF. NO. 240554 (9)
This report is printed on recycled paper.

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LIST OF APPENDICES

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) as requested in Alameda County Environmental Health's (ACEH's) July 25, 2011 letter.

Per CRA's September 21, 2011 telephone conversation with ACEH, we will postpone proposing the soil vapor investigation requested in ACEH's July 25, 2011 letter pending refinement of the State Water Resources Control Board's low-threat underground storage tank closure policy.

The subject site is a former Shell service station located at the southeast corner of the San Pablo Avenue and 35th Street intersection in a mixed commercial and residential neighborhood of Oakland, California (Figure 1). Shell sold the station and property in March 2005. The site is currently an operating third-party service station (Figure 2).

A summary of previous work performed at the site and additional background information is contained in Appendix A.

2.0 WORK TASKS

2.1 PERMIT

CRA will obtain a drilling permit from Alameda County Public Works Agency (ACPWA).

2.2 HEALTH AND SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

2.3 UTILITY CLEARANCE

CRA will mark the proposed drilling locations, and the locations will be cleared through Underground Service Alert and a private line locator service prior to drilling.

2.4 SOIL BORINGS

To further investigate the extent of petroleum hydrocarbon and lead impact to shallow soil, six borings will be drilled to 5 feet below grade (fbg) using an air-knife rig. Figure 2 shows the proposed boring locations, and historical soil analytical data is presented in Table 1. Soil borings SB-7 through SB-12 will be drilled in the vicinity of the former dispenser located in the northwest portion of the site.

A CRA geologist will supervise the drilling and describe encountered soils using the Unified Soil Classification System and Munsell Soil Color Charts. Soil samples will be collected at a minimum of 1, 2, and 5 fbg for soil description, chemical analyses, and screening in the field for organic vapors using a photo-ionization detector (PID) using an Encore® soil sampler or a slide hammer. Soil sample selection will be based on field observations (including PID readings and soil types). CRA will prepare a boring log for each well boring, and PID measurements will be recorded on the boring logs. Groundwater may be encountered in these borings; however, CRA will not collect grab groundwater samples as the area is adequately characterized by data from wells MW-2 and MW-6R.

Soil samples designated for chemical analyses will be retained in stainless steel or brass sample tubes or Encore® samplers. The tubes will be covered on both ends with Teflon® sheets and plastic end caps. Soil samples will be labeled, entered onto a chain-of-custody record, and placed into a cooler with ice for transport to a State of California certified laboratory for analyses. CRA will request a standard 2-week turn around time for laboratory results.

CRA will perform this work under the supervision of a professional geologist or engineer.

2.5 CHEMICAL ANALYSES

Selected soil samples from borings SB-7 through SB-12 will be analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) using EPA Method 8260B and for total lead by EPA Method 6010B.

2.6 REPORT PREPARATION

Following the receipt of analytical results from the laboratory, CRA will prepare a written report which will include field procedures, laboratory results, and boring logs.

3.0 HYDRAULIC GRADIENT AND PLUME STABILITY

ACEH's July 25, 2011 letter requested an evaluation of the hydraulic gradient and extent and stability of impacted groundwater at the site.

Groundwater flow direction and gradient have been variable since monitoring was initiated in August 1991. As shown in Table 2, the site wells have been constructed to various depths, with various screened intervals that do not uniformly intercept coarse-grained soil intervals. In addition, due to the shallow groundwater in this area, several of the well screens become submerged during high water periods. These factors contribute to the inconsistency of the measured flow direction and gradient. Cross sections and boring logs are provided in Appendix B.

Regardless of the inconsistent groundwater flow direction and gradient, the perimeter groundwater monitoring wells (MW-3R, MW-4, MW-5, MW-9, MW-10, and MW-11) are adequate to define the extent of all constituents of concern (COCs) horizontally to below San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs) for groundwater where groundwater is not a source of drinking water[1] with the exception of TPHg. Groundwater concentrations in the three perimeter wells which exceed the TPHg ESL, along with long-term concentration trends, are shown in the following table. CRA includes the groundwater monitoring data on Table 3.

TABLE A

Perimeter Well ID	*TPHg Concentration*	*ESL for Groundwater Where Groundwater is not a Potential Source of Drinking Water*	*Groundwater Concentration Trend*
MW-4	820 µg/L	180 µg/L	Stable to Decreasing
MW-5	2,000 µg/L	180 µg/L	Decreasing
MW-10	1,900 µg/L	180 µg/L	Decreasing

µg/L = micrograms per liter

1 *Screening for Environmental Concerns at Site With Contaminated Soil and Groundwater,* California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]

It should also be noted that RWQCB ESL guidance advises that "TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.)." In this case, BTEX, MTBE, and tertiary-butyl alcohol would be the appropriate related chemicals, and these COCs do not exceed ESLs in the perimeter wells. Therefore, the extent of groundwater impacts is adequately defined. As shown in Figures 3 through 11, concentrations of all COCs in site wells that exceed ESLs are stable to declining, demonstrating that the groundwater plume is stable and shrinking.

ACEH's letter also requested evaluation of TPHg concentrations in down-gradient groundwater monitoring well MW-10. As stated above, TPHg concentrations in MW-10 are declining (Figure 11). Based on current trends, TPHg concentrations in MW-10 are anticipated to reach ESLs in 2025.

Based on the adequately defined, stable and shrinking groundwater plume with declining concentrations expected to reach ESLs within a reasonable timeframe, no additional groundwater investigation is warranted at this time.

4.0 GROUNDWATER MONITORING

As requested in ACEH's July 25, 2011 letter, CRA will analyze groundwater samples collected during the semiannual monitoring events for 1,2-dichloroethane and ethylene dibromide starting with the fourth quarter 2011 sampling event.

5.0 SCHEDULE

CRA will begin work upon receiving ACEH's written approval of this work plan and the appropriate drilling permit from ACPWA.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

Aubrey K. Cool, PG

FIGURES

12/02/08

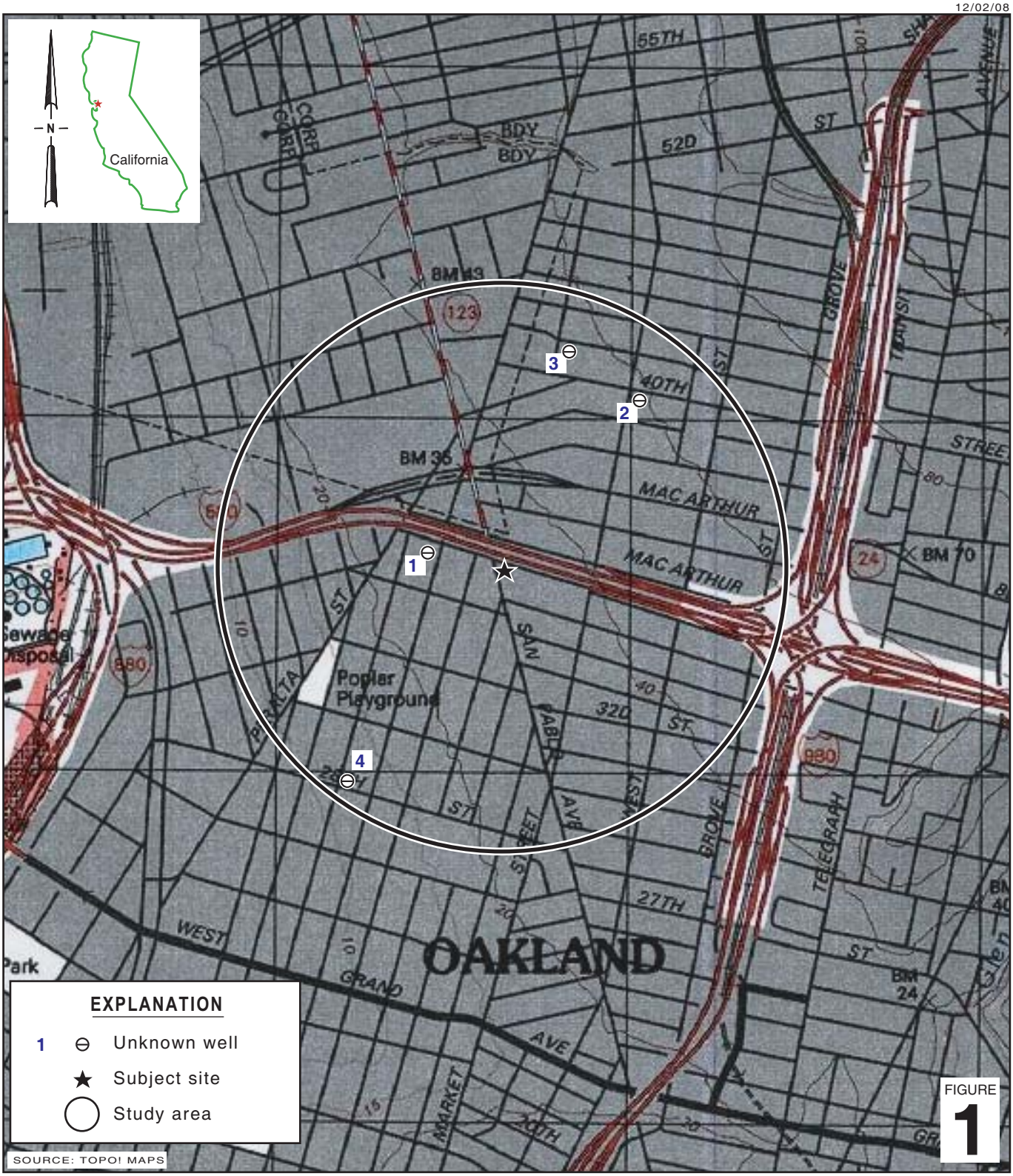

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FIGURE
1

0 1/8 1/4 1/2 1

SCALE (MILES)

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

09/21/2011

Site Plan

EXPLANATION

- SB-7 — Proposed soil boring location
- MW-1 — Monitoring well location (Shell)
- MW-3 — Destroyed monitoring well location
- MW-1 — Monitoring well location (Thrifty)
- RW-1R — Recovery well location (Thrifty)
- Storm drain line (STM)
- Sanitary Sewer line (SAN)
- Water line (W)
- Overhead electrical line (OHE)
- Storm drain catch basin
- Fire hydrant (FH)
- Flow direction indicator
- Miscellaneous utility vault, as labeled
- SB-1 — Soil boring location (Cambria, 2006)
- B-1 — Soil boring location (ENSCO, 1988)
- P-1 — Soil sample location (Cambria, 1997)
- B-1 — Soil boring location (Thrifty)
- B-1 — Soil boring location (Thrifty, 1987)
- SB1 — Soil boring location (Thrifty, 1986)

INTERSTATE 580
35th STREET
34th STREET
SAN PABLO AVENUE
LINDEN STREET
Apartments/Residential
Station Building
Former 550 gal. W/O UST (removed 1997)
Former Building
Former Dispenser Island
Former Product Line
Former Dispensers
Former Shell Station
3420 San Pablo Ave.
Former Thrifty #049
(Current Arco Station)
3400 San Pablo Ave.
Dispensers
Disp-1
Disp-2
USTs
Planter
Trash
Recovery System Controls
Recovery System Piping
Office
Former USTs (rounded)
Existing USTs
Dispenser Islands
Median
PGE MH
FH
E vault
PP

MW-11, MW-9, MW-6, MW-6R, MW-3, MW-3R, MW-5, MW-7, MW-2, MW-1, MW-2R, RW-1, RW-1R, MW-8, MW-4, MW-4R, MW-10

SB-7, SB-9, SB-10, SB-8, SB-3, SB-1, P-7, SB-2, SB-11, P-6, P-5, P-4, SB-12, P-8, P-1, P-2, P-3, SB-4, SB-5, SB-6, B-1, B-2, B-3, TP-N, TP-S, B-4, B-5, SB3, SB1, SB2

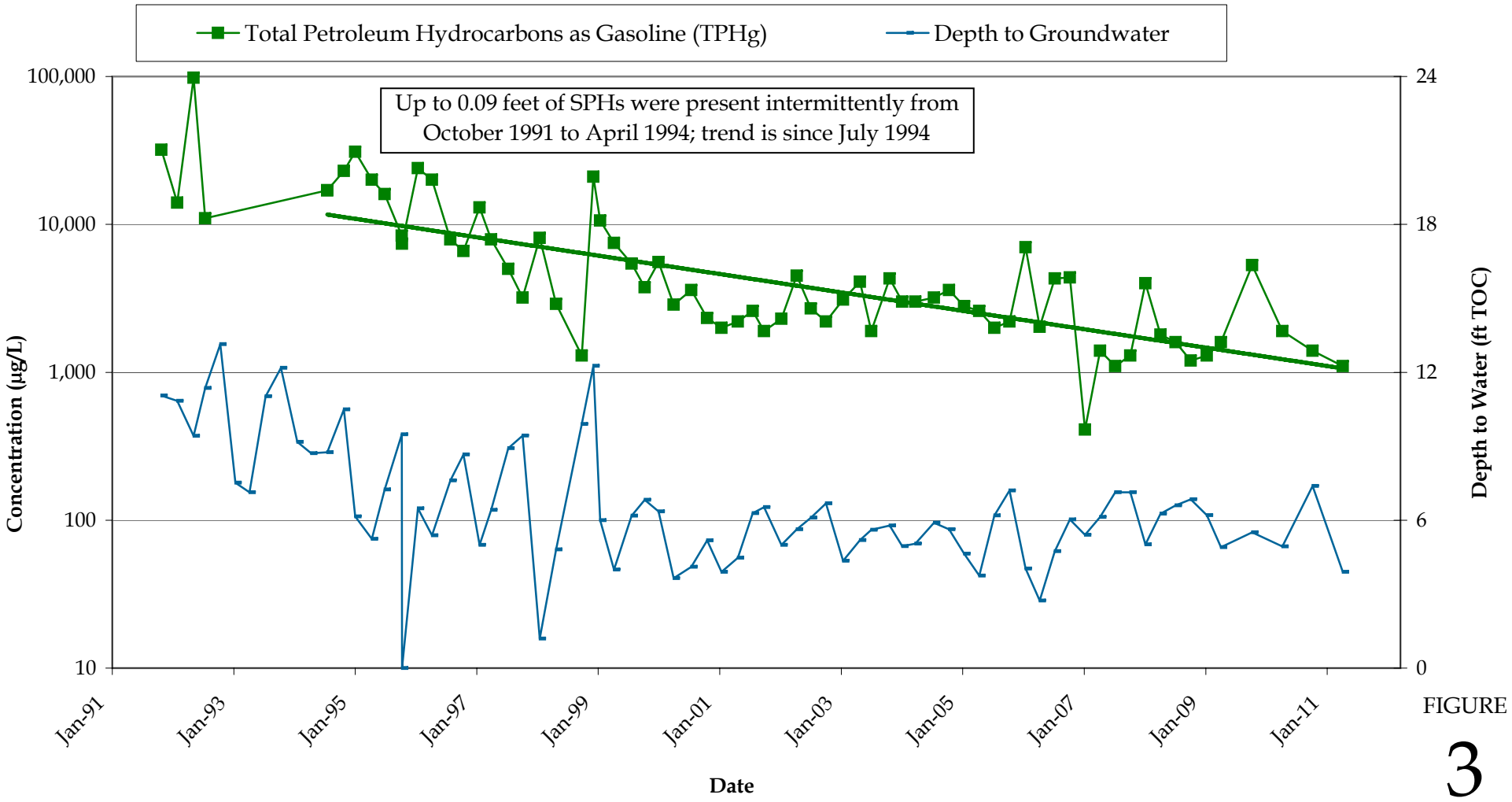
0 20 40 80
Scale (ft)

FIGURE
2

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

I:\Shell\6-chars\2405--\240554-Oakland 3420 San Pablo\240554-FIGURES\240554 SITE PLAN.DWG



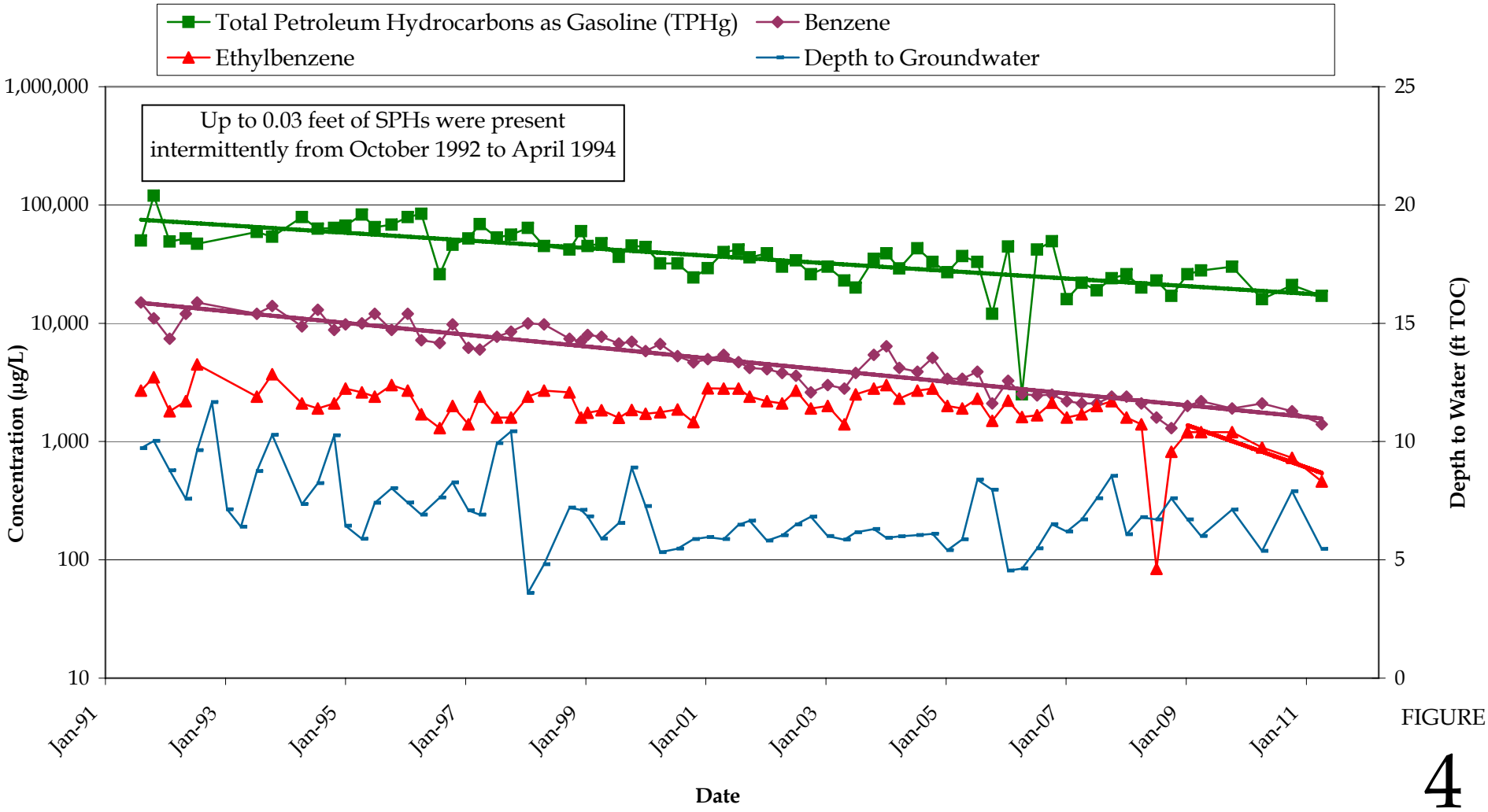
FIGURE

3

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-1:
TPHg Groundwater Concentrations and Depth to Water versus Time



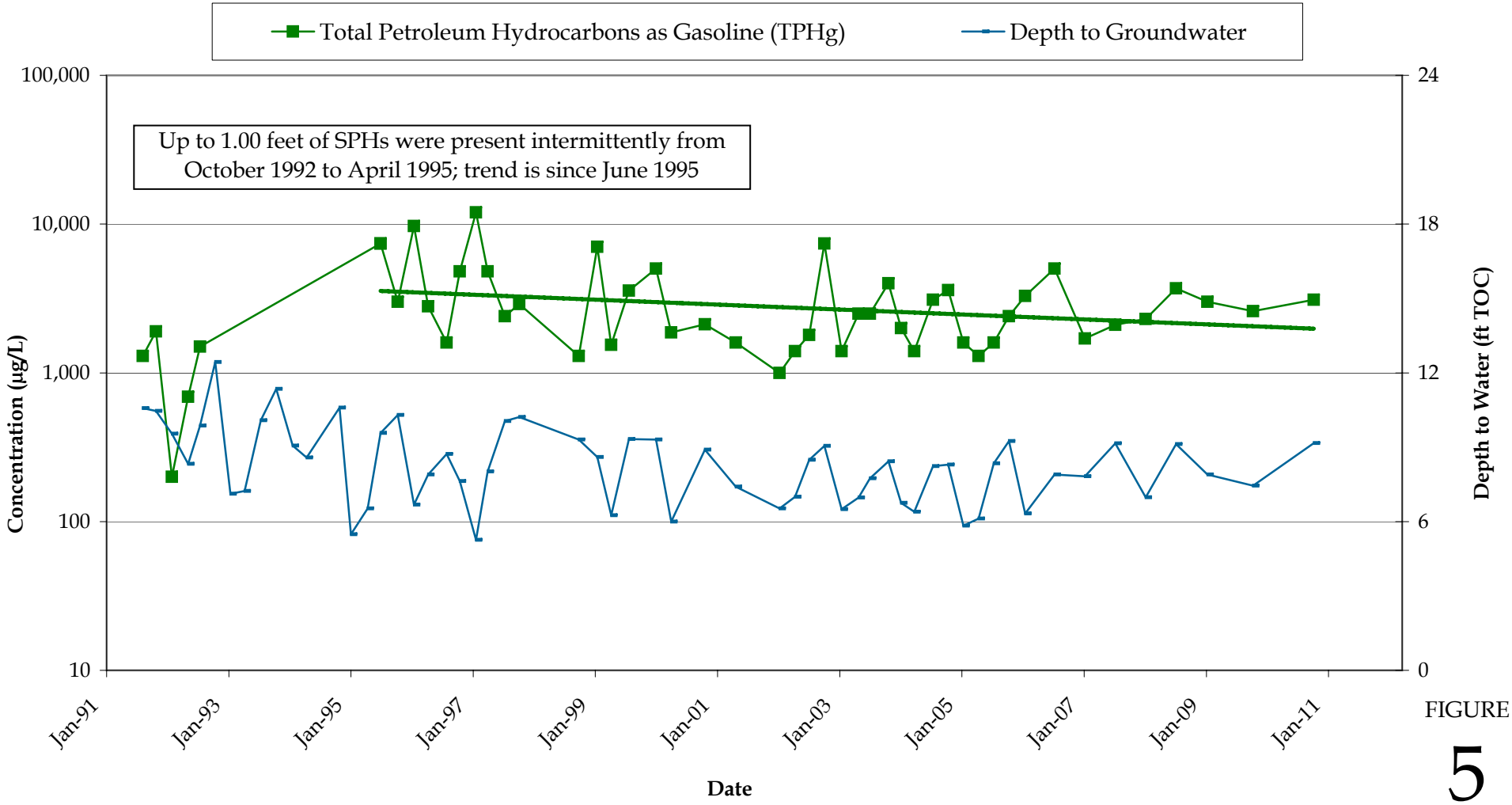
FIGURE

4

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-2:
TPHg, Benzene, and Ethylbenzene Concentrations and Depth to Water versus Time



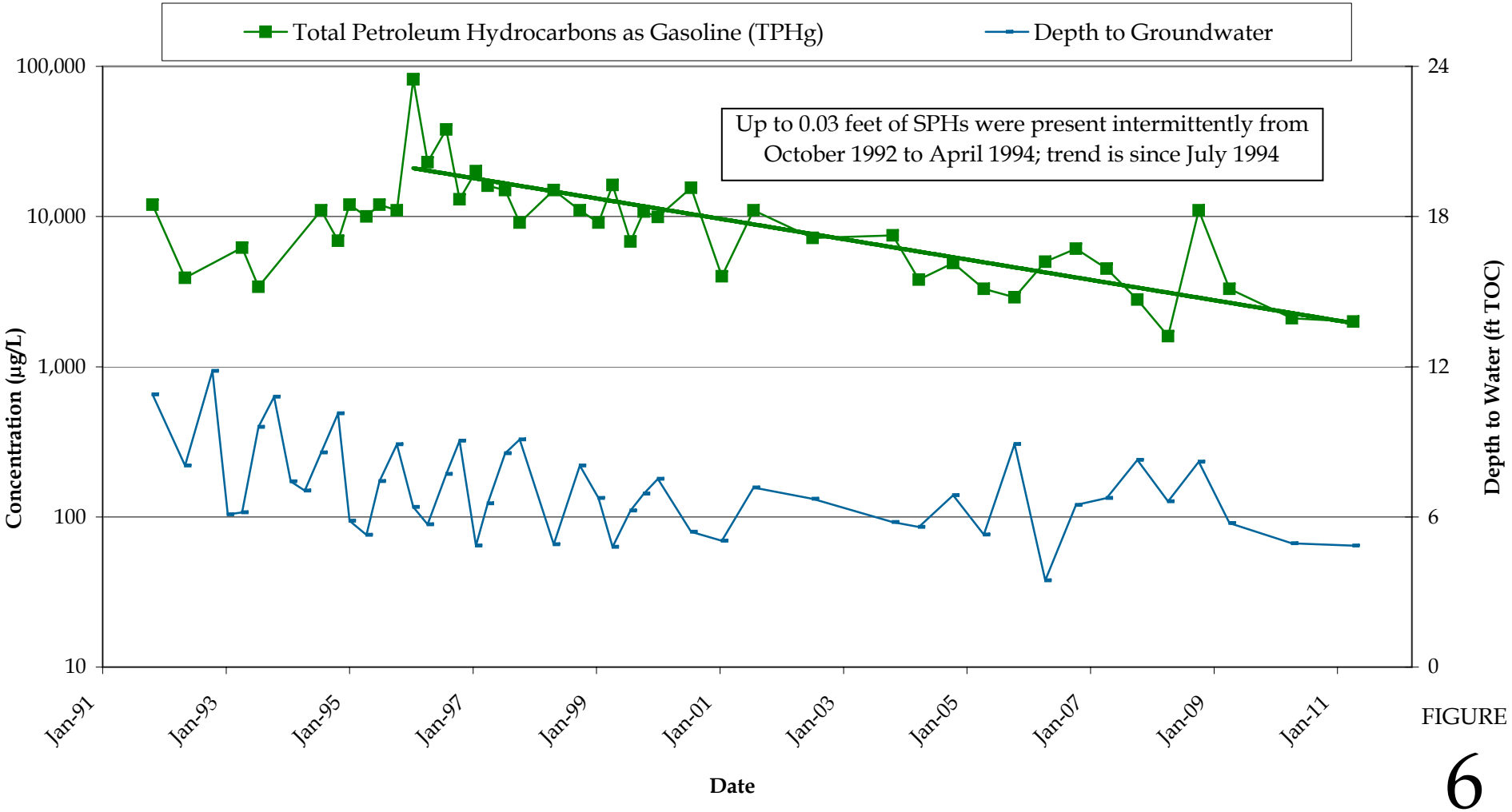
FIGURE

5

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-4:
TPHg Groundwater Concentrations and Depth to Water versus Time



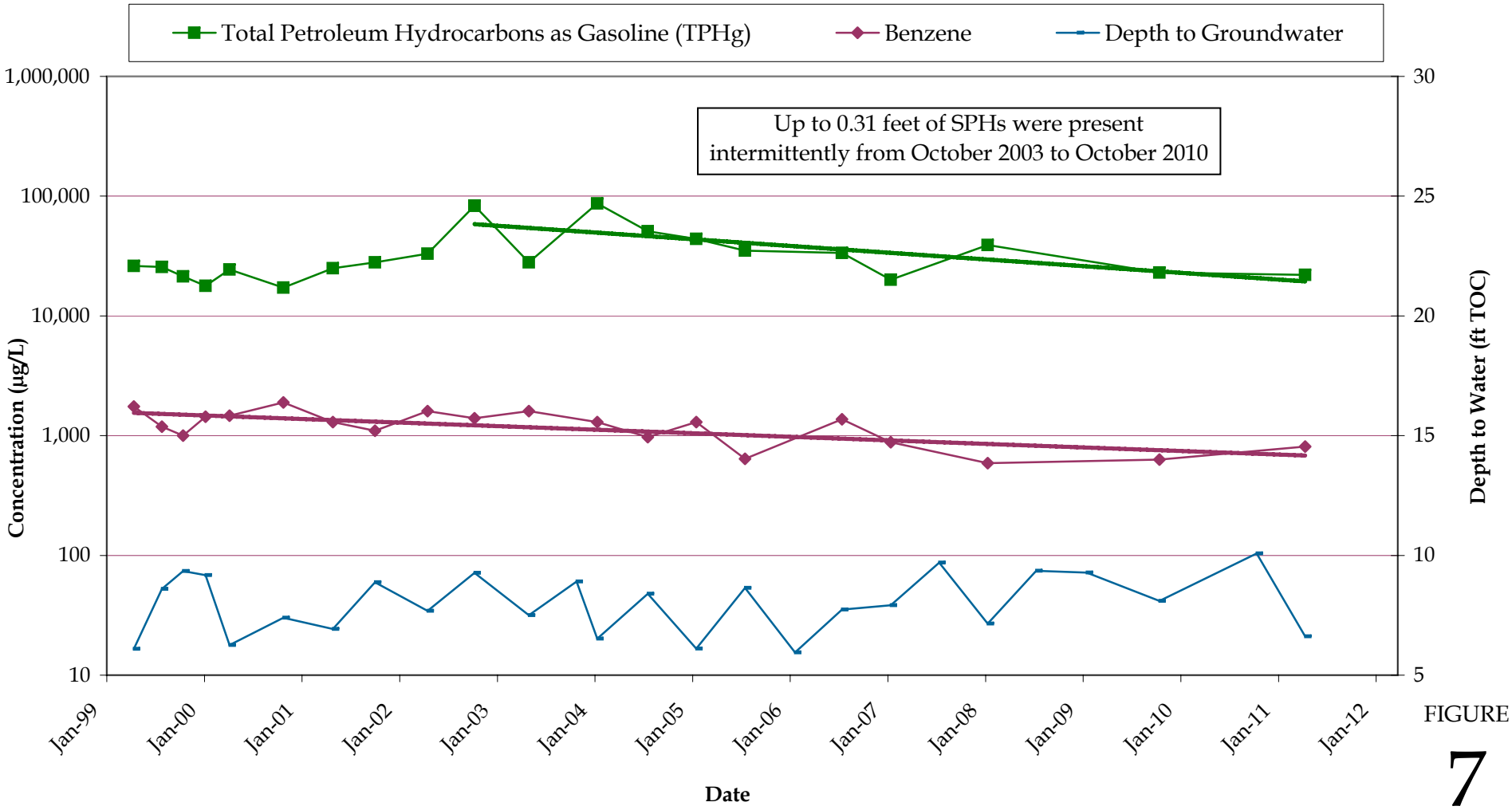
FIGURE

6

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-5:
TPHg Groundwater Concentrations and Depth to Water versus Time



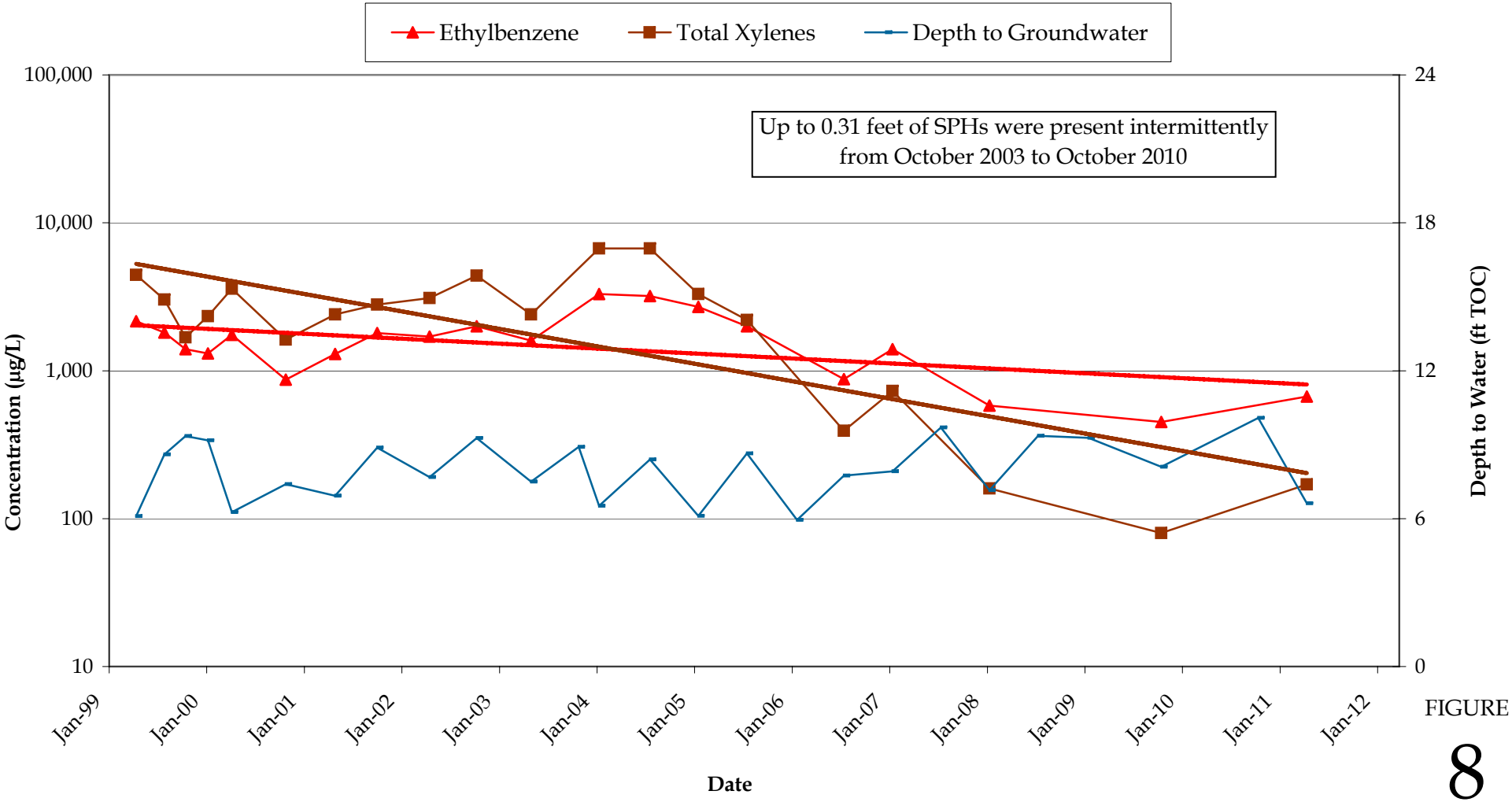
FIGURE

7

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-6R:
TPHg and Benzene Concentrations and Depth to Water versus Time



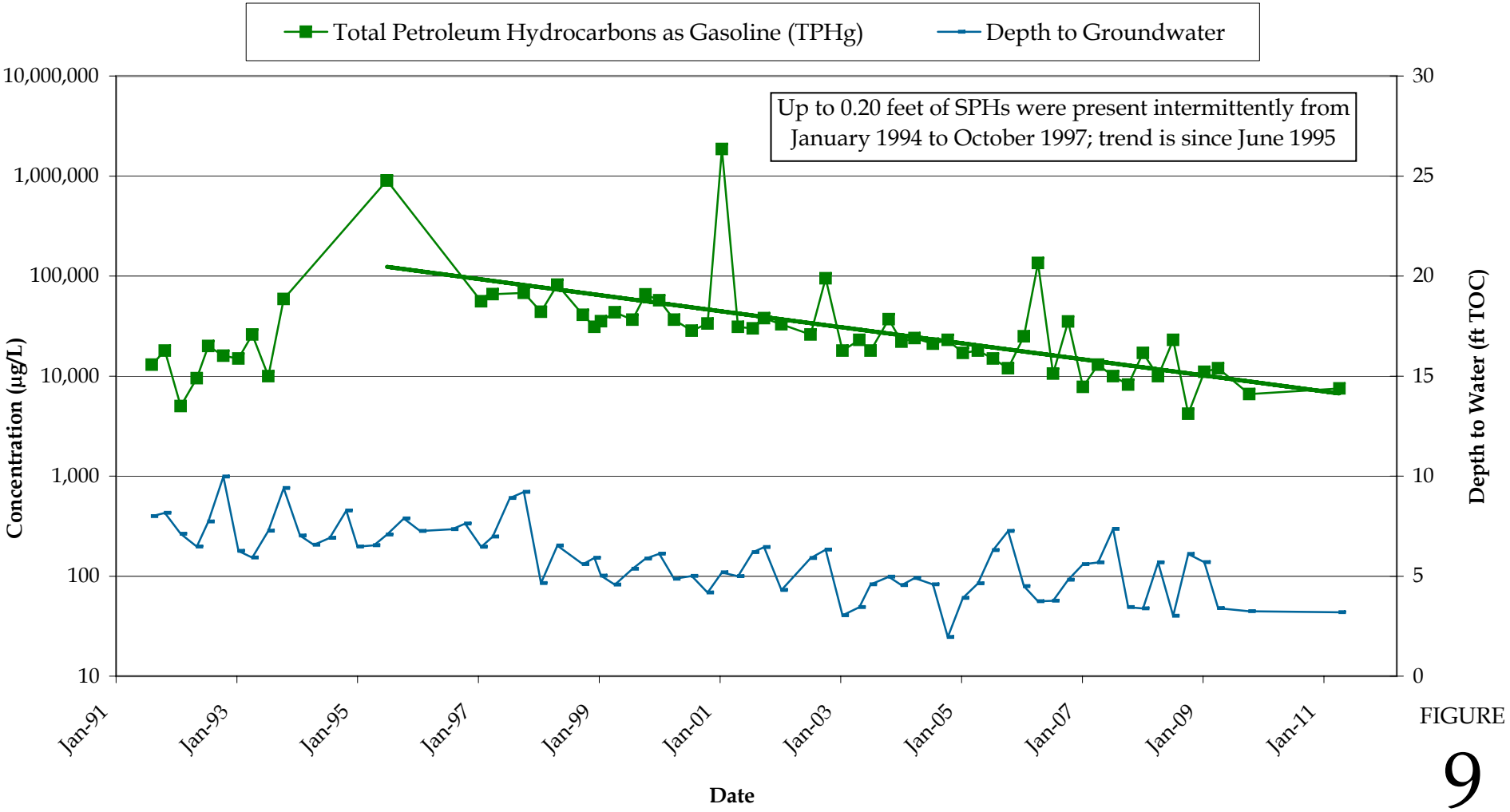
FIGURE

8

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-6R:
Ethylbenzene and Total Xylenes Concentrations and Depth to Water versus Time



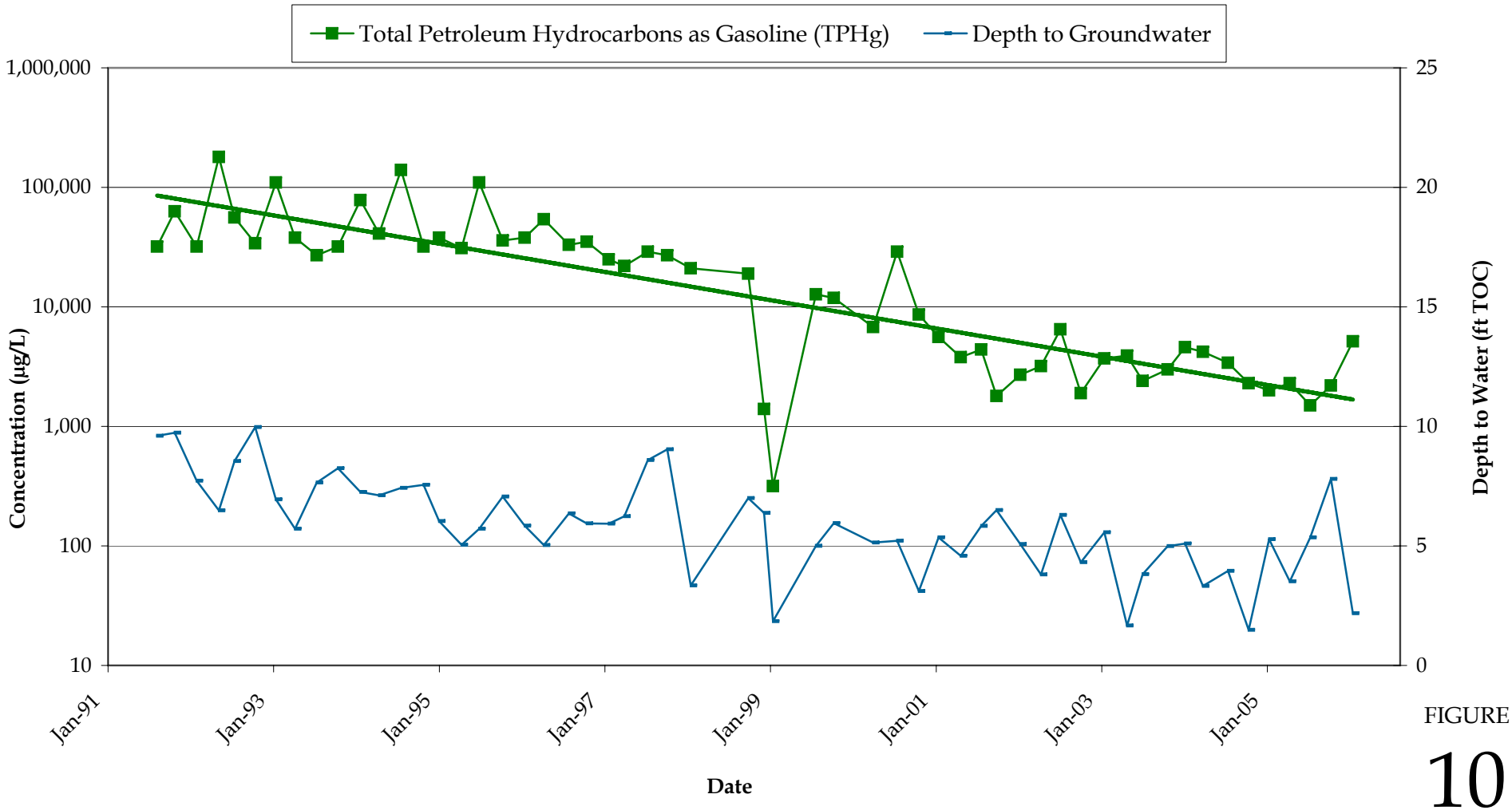
FIGURE

9

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-7:
TPHg Groundwater Concentrations and Depth to Water versus Time



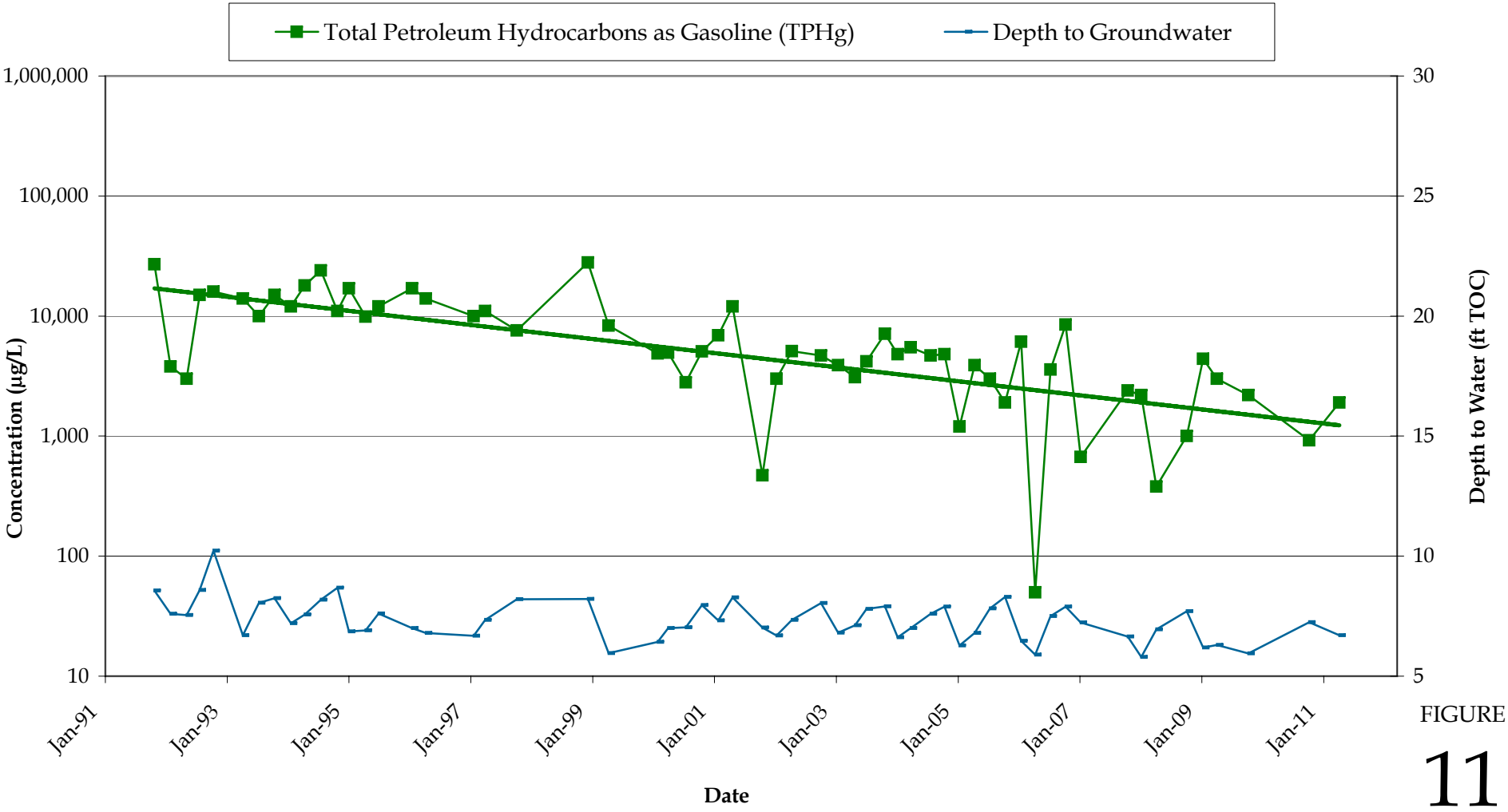
FIGURE

10

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-8:
TPHg Groundwater Concentrations and Depth to Water versus Time



FIGURE

11

Former Shell Service Station
3420 San Pablo Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

MW-10:
TPHg Groundwater Concentrations and Depth to Water versus Time

TABLES

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*B*	*T*	*E*	*X*	*MTBE*	*Total Lead*
B-1	8/8/1988	5 - 5.5	**1,400**	**1.9**	**42**	**43**	**120**	---	---
B-1	8/8/1988	9.5 - 10	80	---	---	---	---	---	---
B-1	8/8/1988	15 - 15.5	<5.0	---	---	---	---	---	---
B-1	8/8/1988	20 - 20.5	<5.0	---	---	---	---	---	---
B-2	8/8/1988	5 - 5.5	**550**	**1.5**	**16**	**35**	**33**	---	---
B-2	8/8/1988	10 - 10.5	**580**	0.7	3.3	**7.8**	**48**	---	---
B-3	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
B-4	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
B-5	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
MW-1	4/10/1989	5.5 - 6	**850**	**1.2**	**14**	**19**	**100**	---	4
MW-1	4/10/1989	10.5 - 11	80	<0.05	1.9	1.9	**16**	---	3
MW-2	4/10/1989	10.5 - 11	70	0.4	1.5	1.7	1.5	---	8
MW-3	4/10/1989	10.5 - 11	<0.2	<0.002	0.010	0.008	0.069	---	3
MW-4	4/10/1989	10.5 - 11	<0.2	<0.002	0.005	0.004	0.031	---	2
MW-5	1/19/1990	5.5 - 6	5.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-6	1/19/1990	5.5 - 6	<1.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-7	1/19/1990	5.5 - 6	14	0.078	<0.1	0.21	<0.1	---	---
MW-8	1/18/1990	5.5 - 6	<1.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-9	1/18/1990	10.5 - 11	6.1	<0.05	<0.1	0.39	0.14	---	---
MW-10	10/23/1991	5	1.4	0.015	0.006	0.010	0.008	---	---
MW-10	10/23/1991	10	1.8	0.06	<0.0050	0.027	0.0070	---	---
MW-11	10/23/1991	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---
MW-11	10/23/1991	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---
Disp-1-2.5	6/26/1997	2.5	8.4	0.054	0.046	0.0094	0.21	1.6	5.8
Disp-2-2.0	6/26/1997	2	51	0.075	1.6	0.38	1.6	7.9	9.6
TP-N-7	6/26/1997	NA	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<5.0
TP-S-7	6/26/1997	NA	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	6.4
P-1-2.5	6/26/1997	2.5	39	0.13	0.051	0.012	0.032	0.82	7.4
P-2-2.5	6/26/1997	2.5	17	0.035	0.079	0.063	0.11	0.33	7.4
P-3-2.5	6/26/1997	2.5	16	0.028	0.059	0.019	0.026	0.092	6.9
P-4-4.0	6/26/1997	4	19	0.041	0.053	<0.010	0.078	<0.050	7.4

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*B*	*T*	*E*	*X*	*MTBE*	*Total Lead*
P-5-4.0	6/26/1997	4	3.1	0.016	0.0054	<0.0050	0.018	0.028	7.4
P-6-2.5	6/26/1997	2.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	33
P-7-2.0	6/26/1997	2	4.5	0.040	0.0097	0.0095	0.053	<0.025	**2,000**
P-8-2.5	6/26/1997	2.5	120	<0.12	0.43	0.33	0.42	<0.62	8.2
SB-1-2	10/4/2006	2	<1.0	0.011	<0.0050	0.0058	0.017	0.0096	620
SB-1-5	10/4/2006	5	6.9	0.0066	<0.0050	<0.0050	<0.010	<0.0050	140
SB-1-8	10/4/2006	8	**46,000**	<25	<25	<25	<50	<25	250
SB-2-2	10/4/2006	2	**12,000**	**74**	<25	<25	**82**	<25	180
SB-2-5	10/4/2006	5	1.8	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<20
SB-2-8	10/4/2006	8	160	<0.12	<0.12	2.2	1.3	<0.12	<20
SB-3-2	10/4/2006	2	4.7	0.058	0.0075	0.018	0.079	0.15	58
SB-3-5	10/4/2006	5	**11,000**	<25	<25	<25	<50	<25	<20
SB-3-8	10/4/2006	8	27	<0.12	<0.12	<0.12	<0.25	<0.12	<20
SB-4-4.5	10/4/2006	4.5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<5
SB-5-4.5	10/4/2006	4.5	2.9	<0.0050	<0.0050	<0.0050	<0.010	0.059	<5
SB-6-4.5	10/4/2006	4.5	7.2	0.012	0.017	0.018	0.16	<0.0050	29
Shallow Soil (≤10 fbg) ESL[a]:			180	0.27	9.3	4.7	11	8.4	750
Deep Soil (>10 fbg) ESL[a]:			180	2.0	9.3	4.7	11	8.4	750

Notes:
All results in milligrams per kilogram (mg/kg) unless otherwise indicated.
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8015M
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8020
MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8020
Total lead analysis by EPA 6010B; prior to April 11, 1989 analyzed by EPA Method 7420
fbg = Feet below grade
<x = Not detected at reporting limit x
--- = Not analyzed
NA = Not available
ESL = Environmental screening level
Results in **bold** equal or exceed applicable ESL

a = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is not a 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

GROUNDWATER MONITORING WELL CONSTRUCTION DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	*Date Installed*	*Boring Diameter (inches)*	*Casing Diameter (inches)*	*Total Boring Depth (fbg)*	*Total Well Depth (fbg)*	*Screened Interval (fbg)*	*DTW Range (fbg)*	*Coarse-grained interval(s) from boring logs*	*Sampling Interval (feet)*	*Sample Length (feet)*	*Comments*
MW-1	04/11/1989	10	4	26.5	25	5-25	1.20-13.14	Gravel @ 23 - 26.5 fbg	5	1.5	
MW-2	04/10/1989	10	4	21.5	19	4-19	3.60-11.66	None	5	1.5	
MW-3	04/10/1989	10	4	31.5	30	7.5-27.5	5.03-13.10	Gravelly sand @ 24 -31.5 fbg	5	1.5	Destroyed 12/05/1997
MW-3R	06/18/1998	8	2	31.5	30	4-30	5.21-10.00	Silty sand @ 20-25.5 fbg; Silty gravel with sand 25.5-30 fbg; Silty sand with gravel 30-31.5 fbg	5	1.5	
MW-4	04/10/1989	10	4	31.5	25	5-25	5.03-12.43	Gravelly sand @ 24 -31.5 fbg	5	1.5	
MW-5	01/19/1990	10	4	26.5	25	5-25	2.11-11.83	Gravelly sand @ 21-26.5 fbg	5	1.5	
MW-6	01/19/1990	10	4	21.5	20	5-20	4.43-12.28	None	5	1.5	Destroyed 12/05/1997
MW-6R	06/18/1998	8	2	31.5	30	4-30	4.95-12.13	Silty sand @ 20-26 fbg; Silty gravel with sand 26-31 fbg; Silty sand 31-31.5 fbg	5	1.5	
MW-7	01/19/1990	10	4	21.5	20	5-20	1.95-9.97	None	5	1.5	
MW-8	01/18/1990	10	4	21.5	20	5-20	1.48-9.97	None	5	1.5	Destroyed 06/02/2006
MW-9	01/19/1990	10	4	21.5	20	5-20	3.48-12.19	None	5	1.5	
MW-10	10/23/1991	10	4	21.5	19.3	4.3-19.3	5.80-10.23	None	5	1.5	
MW-11	10/23/1991	10	4	21.5	19	4-19	3.69-12.40	Silty gravel @ 19.5-21.5 fbg	5	1.5	

DTW = Depth to water
fbg = Feet below grade

TABLE 3

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-1	08/06/1991	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	10.86	---	10.43
MW-1	10/23/1991	32,000	2,700	360	550	3,700	---	---	---	---	---	---	---	---	21.28	11.05	0.01	10.24
MW-1	01/28/1992	14,000	1,000	106	450	1,600	---	---	---	---	---	---	---	---	21.28	10.84	---	10.44
MW-1	05/05/1992	98,000	11,000	1,200	3,500	18,000	---	---	---	---	---	---	---	---	21.28	9.42	<0.01	11.86
MW-1	07/13/1992	11,000	1,100	130	740	1,300	---	---	---	---	---	---	---	---	21.28	11.36	---	9.92
MW-1	10/12/1992	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	13.14	0.09	8.21
MW-1	01/12/1993	---	110	---	---	---	---	---	---	---	---	---	---	---	21.28	7.52	0.02	13.78
MW-1	04/06/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	7.13	<0.01	14.16
MW-1	07/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	11.02	0.01	10.27
MW-1	10/13/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	12.18	0.01	9.11
MW-1	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	9.18	0.01	12.10
MW-1	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	21.28	8.72	0.02	12.58
MW-1	07/19/1994	17,000	420	140	530	1,300	---	---	---	---	---	---	---	---	21.28	8.76	---	12.52
MW-1	10/27/1994	23,000	1,200	130	990	960	---	---	---	---	---	---	---	---	21.28	10.49	---	10.79
MW-1	01/03/1995	31,000	610	160	1,200	5,000	---	---	---	---	---	---	---	---	21.28	6.15	---	15.13
MW-1	04/13/1995	20,000	340	42	680	2,900	---	---	---	---	---	---	---	---	21.28	5.24	---	16.04
MW-1	06/30/1995	16,000	450	62	460	1,200	---	---	---	---	---	---	---	---	21.28	7.24	---	14.04
MW-1	10/11/1995	8,400	660	47	510	850	8,000	---	---	---	---	---	---	---	21.28	9.48	---	11.80
MW-1	10/13/1995	7.400	730	54	490	1,100	8,200	---	---	---	---	---	---	---	21.28	---	---	---
MW-1	01/17/1996	24,000	570	110	820	2,900	15,000	---	---	---	---	---	---	---	21.28	6.48	---	14.80
MW-1	04/10/1996	20,000	120	11	420	1,400	15,000	---	---	---	---	---	---	---	21.28	5.38	---	15.90
MW-1	07/30/1996	7,900	240	22	170	300	12,000	---	---	---	---	---	---	---	21.28	7.61	---	13.67
MW-1	10/17/1996	6,600	1,000	20	120	130	10,000	---	---	---	---	---	---	1.4	21.28	8.66	---	12.62
MW-1	01/22/1997	13,000	170	<50	330	1,200	18,000	---	---	---	---	---	---	1.6	21.28	5.00	---	16.28
MW-1	04/01/1997	7,900	240	26	130	200	6,400	---	---	---	---	---	---	1.4	21.28	6.42	---	14.86
MW-1	07/14/1997	5,000	<20	<20	59	61	9,000	---	---	---	---	---	---	1.9	21.28	8.92	---	12.36
MW-1	10/08/1997	3,200	180	7.6	18	6.1	11,000	---	---	---	---	---	---	4.8	21.28	9.43	---	11.85
MW-1	01/19/1998	8,100	39	<20	280	660	1,100	---	---	---	---	---	---	2.6	21.28	1.20	---	20.08
MW-1	04/28/1998	2,900	62	<10	160	370	1,200	1,200	---	---	---	---	---	2.4	21.28	4.81	---	16.47
MW-1	09/30/1998	1,300	25	8.3	<5.0	12	2,000	---	---	---	---	---	---	1.6	21.05	9.90	---	11.15
MW-1	12/09/1998	21,000	240	<200	520	920	18,000	18,000	---	---	---	---	---	4.3	21.05	12.26	---	8.79
MW-1	01/18/1999	10,600	<100	<100	471	130	48,600	50,800	---	---	---	---	---	1.3	21.05	6.00	---	15.05
MW-1	04/12/1999	7,500	101	26.0	248	578	31,000	37,900	---	---	---	---	---	1.2	21.05	4.00	---	17.05
MW-1	07/27/1999	5,420	80.1	<50.0	123	143	24,700	33,200*	---	---	---	---	---	1.3	21.05	6.18	---	14.87
MW-1	10/14/1999	3,750	75.8	<12.5	30.3	37.0	17,200	20,600	---	---	---	---	---	1.3	21.05	6.83	---	14.22
MW-1	01/06/2000	5,550	82.2	<5.00	128	45.4	9,410	8,200	---	---	---	---	---	1.3	21.05	6.36	---	14.69
MW-1	04/05/2000	2,860	50.6	<10.0	98.2	36.2	4,120	3,150*	---	---	---	---	---	2.0	21.05	3.65	---	17.40

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-1	07/20/2000	3,600	37.9	36.0	34.2	40.4	3,140	3,430*	---	---	---	---	---	1.2	21.05	4.11	---	16.94
MW-1	10/24/2000	2,330	32.3	<10.0	10.5	27.1	4,900	4,500	---	---	---	---	---	1.4	21.05	5.18	---	15.87
MW-1	01/19/2001	2,000	25.9	24.9	12.5	29.7	2,610	3,070	---	---	---	---	---	1.8	32.01	3.90	---	28.11
MW-1	04/27/2001	2,200	14	<2.0	5.3	6.8	---	1,100	---	---	---	---	---	1.5	32.01	4.48	---	27.53
MW-1	07/26/2001	2,600	26	2.3	<2.0	5.4	---	890	---	---	---	---	---	1.2	32.01	6.28	---	25.73
MW-1	10/02/2001	1,900	54	<2.0	7.8	14	---	890	450	<2.0	<2.0	<2.0	<500	1.6	32.01	6.53	---	25.48
MW-1	01/15/2002	2,300	19	2.8	9.3	12	---	370	---	---	---	---	---	1.9	32.01	5.00	---	27.01
MW-1	04/17/2002	4,500	20	2.0	1.3	4.6	---	500	---	---	---	---	---	2.4	32.01	5.63	---	26.38
MW-1	07/11/2002	2,700	25	1.1	<1.0	2.1	---	500	---	---	---	---	---	1.5	32.01	6.10	---	25.91
MW-1	10/10/2002	2,200	20	1.0	1.8	3.5	---	580	---	---	---	---	---	2.5	32.01	6.68	---	25.33
MW-1	01/21/2003	3,100	27	12	30	14	---	810	---	---	---	---	---	1.7	32.01	4.35	---	27.66
MW-1	05/02/2003	4,100	36	<25	<25	<50	---	1,000	---	---	---	---	---	2.1	32.01	5.19	---	26.82
MW-1	07/10/2003	1,900	37	<12	<12	<25	---	600	---	---	---	---	---	---	32.01	5.61	---	26.40
MW-1	10/28/2003	4,300	97	<10	10	<20	---	1,800	---	---	---	---	---	---	32.01	5.78	---	26.23
MW-1	01/13/2004	3,000	53	10	29	<10	---	510	---	---	---	---	---	---	32.01	4.95	---	27.06
MW-1	04/01/2004	3,000	85	29	11	15	---	310	---	---	---	---	---	---	32.01	5.05	---	26.96
MW-1	07/21/2004	3,200	130	19	7.7	18	---	410	1,100	<20	<20	<20	---	---	32.01	5.90	---	26.11
MW-1	10/20/2004	3,600	200	8.4	12	21	---	320	---	---	---	---	---	---	32.01	5.63	---	26.38
MW-1	01/19/2005	2,800	55	<5.0	21	17	---	170	---	---	---	---	---	---	32.01	4.64	---	27.37
MW-1	04/20/2005	2,600	28	<5.0	11	<10	---	140	---	---	---	---	---	---	32.01	3.75	---	28.26
MW-1	07/20/2005	2,000	20	<1.0	1.6	2.3	---	110	220	<4.0	<4.0	<4.0	---	---	32.01	6.19	---	25.82
MW-1	10/19/2005	2,200	21	0.80	2.1	1.9	---	80	---	---	---	---	---	---	32.01	7.20	---	24.81
MW-1	01/24/2006	7,000	35.5	2.24	119	17.1	---	80.2	---	---	---	---	---	---	32.01	4.04	---	27.97
MW-1	04/19/2006	2,030	10.3	1.04	2.44	<0.500	---	27.2	---	---	---	---	---	---	32.01	2.74	---	29.27
MW-1	07/19/2006	4,310	18.1	<0.500	1.48	<0.500	---	34.8	<10.0	<0.500	<0.500	<0.500	---	---	32.01	4.74	---	27.27
MW-1	10/18/2006	4,370	15.0	0.520	4.73	2.06	---	49.1	---	---	---	---	---	---	32.01	6.03	---	25.98
MW-1	01/17/2007	410	<0.50	<0.50	<0.50	<1.0	---	24	---	---	---	---	---	---	32.01	5.40	---	26.61
MW-1	04/18/2007	1,400 h	9.2	0.35 i	0.94 i	0.92 i	---	37	---	---	---	---	---	---	32.01	6.13	---	25.88
MW-1	07/18/2007	1,100 h	25	0.34 i	3.4	<1.0	---	72	63	<2.0	<2.0	<2.0	---	---	32.01	7.13	---	24.88
MW-1	10/18/2007	1,300 h	70	0.85 i	14	1.08 i	---	160	---	---	---	---	---	---	32.01	7.13	---	24.88
MW-1	01/16/2008	4,000 h	22	<1.0	14	3.5	---	33	---	---	---	---	---	---	32.01	5.02	---	26.99
MW-1	04/16/2008	1,800	12	<1.0	1.5	1.5	---	39	---	---	---	---	---	---	32.01	6.26	---	25.75
MW-1	07/16/2008	1,600	5.3	<1.0	<1.0	<1.0	---	32	27	<2.0	<2.0	<2.0	---	---	32.01	6.60	---	25.41
MW-1	10/15/2008	1,200	4.1	<1.0	<1.0	<1.0	---	20	---	---	---	---	---	---	32.01	6.85	---	25.16
MW-1	01/21/2009	1,300	6.7	<1.0	<1.0	<1.0	---	28	---	---	---	---	---	---	32.01	6.20	---	25.81
MW-1	04/15/2009	1,600	4.1	1.2	1.5	<1.0	---	5.2	---	---	---	---	---	---	32.01	4.90	---	27.11
MW-1	10/21/2009	5,300	54	2.2	89	3.6	---	35	20	<2.0	<2.0	<2.0	---	---	32.01	5.51	---	26.50

TABLE 3

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-1	04/21/2010	1,900	4.3	<1.0	<1.0	<1.0	---	3.6	---	---	---	---	---	---	32.01	4.93	---	27.08
MW-1	10/20/2010	1,400	18	<1.0	1.4	<1.0	---	32	---	---	---	---	---	---	32.01	7.39	---	24.62
MW-1	**04/20/2011**	**1,100**	**3.1**	**<0.50**	**1.1**	**<1.0**	**---**	**3.1**	**---**	**---**	**---**	**---**	**---**	**---**	**32.01**	**3.90**	**---**	**28.11**
MW-2	08/06/1991	50,000	15,000	---	2,700	13,000	---	---	---	---	---	---	---	---	21.56	9.72	---	11.84
MW-2	10/23/1991	120,000	11,000	1,400	3,500	19,000	---	---	---	---	---	---	---	---	21.56	10.03	---	11.53
MW-2	01/28/1992	49,000	7,400	800	1,800	8,300	---	---	---	---	---	---	---	---	21.56	8.78	---	12.78
MW-2	05/05/1992	52,000	12,000	1,100	2,200	12,000	---	---	---	---	---	---	---	---	21.56	7.58	---	13.98
MW-2	07/13/1992	47,000	15,000	2,400	4,500	16,000	---	---	---	---	---	---	---	---	21.56	9.63	---	11.93
MW-2	10/12/1992	---	---	---	---	---	---	---	---	---	---	---	---	---	21.56	11.66	0.03	9.92
MW-2	01/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	21.56	7.13	0.01	14.44
MW-2	04/06/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	21.56	6.40	<0.01	15.17
MW-2	07/12/1993	59,000	12,000	950	2,400	11,000	---	---	---	---	---	---	---	---	21.56	8.75	---	12.81
MW-2	10/13/1993	54,000	14,000	1,200	3,700	22,000	---	---	---	---	---	---	---	---	21.56	10.28	---	11.28
MW-2	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	21.56	---	---	---
MW-2	04/13/1994	79,000	9,400	740	2,100	12,000	---	---	---	---	---	---	---	---	21.56	7.35	<0.01	14.22
MW-2	07/19/1994	63,000	13,000	810	1,900	13,000	---	---	---	---	---	---	---	---	21.56	8.24	---	13.32
MW-2	10/27/1994	64,000	8,800	480	2,100	10,000	---	---	---	---	---	---	---	---	21.56	10.26	---	13.32
MW-2	01/03/1995	67,000	9,800	720	2,800	11,000	---	---	---	---	---	---	---	---	21.56	6.44	---	15.12
MW-2	04/13/1995	83,000	10,000	490	2,600	13,000	---	---	---	---	---	---	---	---	21.56	5.89	---	15.67
MW-2	06/30/1995	65,000	12,000	1,800	2,400	12,000	---	---	---	---	---	---	---	---	21.56	7.41	---	14.15
MW-2	10/11/1995	68,000	8,800	840	3,000	13,000	1,400	---	---	---	---	---	---	---	21.56	8.02	---	13.54
MW-2	01/17/1996	79,000	12,000	640	2,700	14,000	2,200	---	---	---	---	---	---	---	21.56	7.42	---	14.14
MW-2	04/10/1996	84,000	7,200	310	1,700	7,800	2,900	---	---	---	---	---	---	---	21.56	6.91	---	14.65
MW-2	07/30/1996	26,000	6,800	210	1,300	5,500	4,500	---	---	---	---	---	---	---	21.56	7.63	---	13.93
MW-2	10/17/1996	46,000	9,800	340	2,000	6,500	4,900	---	---	---	---	---	---	1.8	21.56	8.27	---	13.29
MW-2	01/22/1997	52,000	6,200	220	1,400	6,600	3,000	---	---	---	---	---	---	1.9	21.56	7.09	---	14.47
MW-2	04/01/1997	69,000	6,000	380	2,400	11,000	3,800	---	---	---	---	---	---	2.0	21.56	6.91	---	14.65
MW-2	07/14/1997	53,000	7,700	260	1,600	5,200	2,400	---	---	---	---	---	---	1.2	21.56	9.93	---	11.63
MW-2	10/08/1997	56,000	8,500	320	1,600	5,100	4,200	---	---	---	---	---	---	2.1	21.56	10.43	---	11.13
MW-2	01/19/1998	64,000	10,000	230	2,400	12,000	2,700	---	---	---	---	---	---	2.4	21.56	3.60	---	17.96
MW-2	04/28/1998	45,000	9,800	310	2,700	11,000	2,400	2,000	---	---	---	---	---	2	21.56	4.81	---	15.71
MW-2	09/30/1998	42,000	7,400	200	2,600	9,800	1,800	---	---	---	---	---	---	1.6	21.58	7.20	---	14.38
MW-2	12/09/1998	60,000	7,000	270	1,600	7,000	2,100	---	---	---	---	---	---	4.6	21.58	7.11	---	14.47
MW-2	01/18/1999	45,000	7,960	151	1,750	6,410	1,310	---	---	---	---	---	---	1.8	21.58	6.83	---	14.75
MW-2	04/12/1999	47,400	7,680	131	1,840	6,400	<1,000	---	---	---	---	---	---	1.9	21.58	5.90	---	15.68
MW-2	07/27/1999	36,400	6,750	83.5	1,590	5,070	682	---	---	---	---	---	---	2.0	21.58	6.56	---	15.02

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-2	10/14/1999	45,300	6,990	144	1,850	4,930	1,070	---	---	---	---	---	---	1.5	21.58	8.90	---	12.68
MW-2	01/06/2000	44,100	5,820	107	1,720	4,590	841	---	---	---	---	---	---	1.4	21.58	7.27	---	14.31
MW-2	04/05/2000	32,000	6,680	<100	1,770	4,030	934	---	---	---	---	---	---	1.3	21.58	5.32	---	16.26
MW-2	07/20/2000	32,100	5,290	68.6	1,870	3,810	254	---	---	---	---	---	---	2.9	21.58	5.47	---	16.11
MW-2	10/24/2000	24,400	4,680	<50.0	1,460	2,380	682	---	---	---	---	---	---	2.2	21.58	5.88	---	15.70
MW-2	01/19/2001	29,200	4,980	127	2,820	4,320	<500	---	---	---	---	---	---	1.4	32.54	5.96	---	26.58
MW-2	04/27/2001	40,000	5,400	67	2,800	5,100	---	380	---	---	---	---	---	1.1	32.54	5.87	---	26.67
MW-2	07/26/2001	42,000	4,700	59	2,800	4,300	---	<250	---	---	---	---	---	1.0	32.54	6.48	---	26.06
MW-2	10/02/2001	36,000	4,200	64	2,400	2,700	---	<200	---	---	---	---	---	1.6	32.54	6.65	---	25.89
MW-2	01/15/2002	39,000	4,100	46	2,200	2,300	---	280	---	---	---	---	---	1.8	32.54	5.81	---	26.73
MW-2	04/17/2002	30,000	3,800	44	2,100	2,100	---	270	---	---	---	---	---	1.6	32.54	6.03	---	26.51
MW-2	07/11/2002	34,000	3,600	18	2,700	2,200	---	110	---	---	---	---	---	2.7	32.54	6.49	---	26.05
MW-2	10/10/2002	26,000	2,600	19	1,900	810	---	<100	---	---	---	---	---	2.4	32.54	6.82	---	25.72
MW-2	01/21/2003	30,000	3,000	24	2,000	1,400	---	140	---	---	---	---	---	1.6	32.54	6.00	---	26.54
MW-2	05/02/2003	23,000	2,800	28	1,400	880	---	<250	---	---	---	---	---	1.7	32.54	5.85	---	26.69
MW-2	07/10/2003	20,000	3,800	<50	2,500	1,500	---	180	---	---	---	---	---	---	32.54	6.16	---	26.38
MW-2	10/28/2003	35,000	5,400	59	2,800	1,400	---	140	---	---	---	---	---	---	32.54	6.30	---	26.24
MW-2	01/13/2004	39,000	6,400	55	3,000	1,400	---	240	---	---	---	---	---	---	32.54	5.93	---	26.61
MW-2	04/01/2004	29,000	4,200	<50	2,300	1,000	---	140	---	---	---	---	---	---	32.54	5.99	---	26.55
MW-2	07/21/2004	43,000	3,900	<50	2,700	860	---	93	<500	<200	<200	<200	---	---	32.54	6.05	---	26.49
MW-2	10/20/2004	33,000	5,100	<50	2,800	950	---	97	---	---	---	---	---	---	32.54	6.10	---	26.44
MW-2	01/19/2005	27,000	3,400	<50	2,000	580	---	120	---	---	---	---	---	---	32.54	5.41	---	27.13
MW-2	04/20/2005	37,000	3,400	<50	1,900	580	---	110	---	---	---	---	---	---	32.54	5.86	---	26.68
MW-2	07/20/2005	33,000	3,900	<50	2,300	590	---	86	<500	<200	<200	<200	---	---	32.54	8.39	---	24.15
MW-2	10/19/2005	12,000	2,100	15	1,500	430	---	80	---	---	---	---	---	---	32.54	7.96	---	24.58
MW-2	01/24/2006	44,600	3,260	20.3	2,220	458	---	107	---	---	---	---	---	---	32.54	4.54	---	28.00
MW-2	04/19/2006	<2,500	2,520	13.2	1,610	343	---	104	---	---	---	---	---	---	32.54	4.63	---	27.91
MW-2	07/19/2006	41,900	2,460	10.9	1,670	322	---	78.2	<10.0	<0.500	<0.500	<0.500	---	---	32.54	5.48	---	27.06
MW-2	10/18/2006	49,400	2,490	11.0	2,130	320	---	47.6	---	---	---	---	---	---	32.54	6.50	---	26.04
MW-2	01/17/2007	16,000	2,200	12	1,600	260	---	56	---	---	---	---	---	---	32.54	6.19	---	26.35
MW-2	04/18/2007	22,000 h	2,100	14 i	1,700	289	---	100	---	---	---	---	---	---	32.54	6.70	---	25.84
MW-2	07/18/2007	19,000 h	2,100	12 i	2,000	267	---	61	<200	<40	<40	<40	---	---	32.54	7.60	---	24.94
MW-2	10/18/2007	24,000 h	2,400	17 i	2,200	253	---	150	---	---	---	---	---	---	32.54	8.55	---	23.99
MW-2	01/16/2008	26,000 h	2,400	<20	1,600	200	---	130	---	---	---	---	---	---	32.54	6.08	---	26.46
MW-2	04/16/2008	20,000	2,100	<20	1,400	180	---	200	---	---	---	---	---	---	32.54	6.80	---	25.74
MW-2	07/16/2008	23,000	1,600	<20	84	170	---	<20	<200	<40	<40	<40	---	---	32.54	6.71	---	25.83
MW-2	10/15/2008	17,000	1,300	<20	820	98	---	49	---	---	---	---	---	---	32.54	7.60	---	24.94

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-2	01/21/2009	26,000	2,000	<20	1,200	130	---	130	---	---	---	---	---	---	32.54	6.71	---	25.83
MW-2	04/15/2009	28,000	2,200	<20	1,200	110	---	220	---	---	---	---	---	---	32.54	6.00	---	26.54
MW-2	10/21/2009	30,000	1,900	<20	1,200	130	---	110	<200	<40	<40	<40	---	---	32.54	7.12	---	25.42
MW-2	04/21/2010	16,000	2,100	<25	890	95	---	140	---	---	---	---	---	---	32.54	5.37	---	27.17
MW-2	10/20/2010	21,000	1,800	<20	730	97	---	110	---	---	---	---	---	---	32.54	7.90	---	24.64
MW-2	**04/20/2011**	**17,000**	**1,400**	**<12**	**460**	**76**	**---**	**82**	**---**	**---**	**---**	**---**	**---**	**---**	**32.54**	**5.46**	**---**	**27.08**
MW-3	08/06/1991	430	8	1	4	15	---	---	---	---	---	---	---	---	21.78	11.18	---	10.60
MW-3	10/23/1991	390	2.10	<0.3	0.48	2	---	---	---	---	---	---	---	---	21.78	11.69	---	10.09
MW-3	01/28/1992	190	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	9.99	---	11.79
MW-3	05/04/1992	190	<1	<1	<1	0.71	---	---	---	---	---	---	---	---	21.78	9.46	---	12.32
MW-3	07/20/1992	200a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	11.29	---	10.49
MW-3	10/12/1992	180a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	13.10	---	8.68
MW-3	01/12/1993	180	<0.5	2.3	0.9	5.6	---	---	---	---	---	---	---	---	21.78	7.32	---	14.46
MW-3	04/06/1993	280	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	7.44	---	14.34
MW-3	07/12/1993	310a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	10.62	---	11.16
MW-3	10/13/1993	150	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	12.05	---	9.73
MW-3	01/20/1994	180	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	9.62	---	12.16
MW-3	04/13/1994	270	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	9.15	---	12.63
MW-3	07/19/1994	190a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	10.13	---	11.65
MW-3	10/27/1994	160a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	11.66	---	10.12
MW-3	01/03/1995	100a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	6.89	---	14.89
MW-3	04/13/1995	120a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	6.79	---	14.99
MW-3	06/30/1995	180a	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	21.78	8.94	---	12.84
MW-3	10/11/1995	150	2.2	<0.5	<0.5	<0.5	2.3	---	---	---	---	---	---	---	21.78	10.62	---	11.16
MW-3	01/17/1996	120	<0.5	<0.5	<0.5	<0.5	7.8	---	---	---	---	---	---	---	21.78	7.18	---	14.60
MW-3	04/10/1996	160	<0.5	<0.5	<0.5	<0.5	12	---	---	---	---	---	---	---	21.78	6.76	---	15.02
MW-3	07/30/1996	57	<0.5	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	---	---	21.78	9.04	---	12.74
MW-3	10/17/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	---	2.0	21.78	9.04	---	12.74
MW-3	01/22/1997	<50	<0.5	<0.5	<0.5	<0.5	3.7	---	---	---	---	---	---	2.4	21.78	5.03	---	16.75
MW-3	04/01/1997	71	<0.50	<0.50	<0.50	<0.50	NA b	---	---	---	---	---	---	1.6	21.78	8.23	---	13.55
MW-3	07/14/1997	<50	<0.50	<0.50	<0.50	1.5	NA b	---	---	---	---	---	---	1.9	21.78	9.09	---	12.69
MW-3	10/08/1997	73	<0.50	<0.50	<0.50	<0.50	NA b	---	---	---	---	---	---	5.5	21.78	10.23	---	11.55
MW-3	12/05/1997	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3R	04/06/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	21.83	9.89	---	11.94
MW-3R	04/12/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	---	2.1	21.83	5.83	---	16.00

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-3R	07/27/1999	<50.0	<0.500	<0.500	<0.500	<0.500	4.15	---	---	---	---	---	---	2.0	21.83	9.59	---	12.24
MW-3R	10/14/1999	<50.0	<0.500	<0.500	<0.500	<0.500	9.43	---	---	---	---	---	---	0.6	21.83	10.00	---	11.83
MW-3R	01/06/2000	78	<0.500	<0.500	<0.500	<0.500	31	---	---	---	---	---	---	0.8	21.83	9.71	---	12.12
MW-3R	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	273	2,890*	---	---	---	---	---	1.5	21.83	6.90	---	14.93
MW-3R	07/20/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	---	1.1	21.83	6.94	---	14.89
MW-3R	10/24/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	21.83	8.90	---	12.93
MW-3R	01/19/2001	<50.0	<0.500	<0.500	<0.500	<0.500	79.2	---	---	---	---	---	---	2.0	32.79	7.04	---	25.75
MW-3R	04/27/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	7.38	---	25.41
MW-3R	07/26/2001	97	<0.50	<0.50	<0.50	<0.50	---	200	---	---	---	---	---	1.8	32.79	9.30	---	23.49
MW-3R	10/02/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	9.41	---	23.38
MW-3R	01/15/2002	55	<0.50	<0.50	<0.50	<0.50	---	32	---	---	---	---	---	0.7	32.79	6.05	---	26.74
MW-3R	04/17/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	7.70	---	25.09
MW-3R	07/11/2002	110	<0.50	<0.50	<0.50	<0.50	---	65	---	---	---	---	---	2.5	32.79	8.76	---	24.03
MW-3R	10/10/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	9.65	---	23.14
MW-3R	01/21/2003	65	<0.50	<0.50	<0.50	<0.50	---	13	---	---	---	---	---	1.6	32.79	5.21	---	27.58
MW-3R	05/02/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	6.08	---	26.71
MW-3R	07/10/2003	<50	<0.50	<0.50	<0.50	<1.0	---	11	---	---	---	---	---	---	32.79	8.20	---	24.59
MW-3R	10/28/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	8.57	---	24.22
MW-3R	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	---	3.9	---	---	---	---	---	---	32.79	5.79	---	27.00
MW-3R	04/01/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	7.22	---	25.57
MW-3R	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	---	2.7	<5.0	<2.0	<2.0	<2.0	---	---	32.79	8.55	---	24.24
MW-3R	10/20/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	8.30	---	24.49
MW-3R	01/19/2005	<50	<0.50	<0.50	<0.50	<1.0	---	2.0	---	---	---	---	---	---	32.79	6.10	---	26.69
MW-3R	04/20/2005	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	6.41	---	26.38
MW-3R	07/20/2005	<50	<0.50	<0.50	<0.50	<1.0	---	2.9	<5.0	<2.0	<2.0	<2.0	---	---	32.79	8.76	---	24.03
MW-3R	10/19/2005	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	9.87	---	22.92
MW-3R	01/24/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	---	---	32.79	5.96	---	26.83
MW-3R	04/19/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	6.07	---	26.72
MW-3R	07/19/2006	70.2	<0.500	<0.500	<0.500	<0.500	---	5.43	<10.0	<0.500	<0.500	<0.500	---	---	32.79	8.07	---	24.72
MW-3R	10/18/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	8.72	---	24.07
MW-3R	01/17/2007	<50	<0.50	<0.50	<0.50	<1.0	---	1.1	---	---	---	---	---	---	32.79	7.88	---	24.91
MW-3R	04/18/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	8.37	---	24.42
MW-3R	07/18/2007	<50 h	<0.50	<1.0	<1.0	<1.0	---	2.2	<10	<2.0	<2.0	<2.0	---	---	32.79	9.80	---	22.99
MW-3R	01/16/2008	<50 h	<0.50	<1.0	<1.0	<1.0	---	1.6	<10	<2.0	<2.0	<2.0	---	---	32.79	6.65	---	26.14
MW-3R	04/16/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	8.31	---	24.48
MW-3R	07/16/2008	<50	<0.50	<1.0	<1.0	<1.0	---	4.4	<10	<2.0	<2.0	<2.0	---	---	32.79	9.33	---	23.46
MW-3R	10/15/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	10.00	---	22.79

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-3R	01/21/2009	<50	<0.50	<1.0	<1.0	<1.0	---	3.0	---	---	---	---	---	---	32.79	8.20	---	24.59
MW-3R	04/15/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	32.79	7.05	---	25.74
MW-3R	10/21/2009	<50	<0.50	<1.0	<1.0	<1.0	---	1.8	<10	<2.0	<2.0	<2.0	---	---	32.79	7.61	---	25.18
MW-3R	04/21/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	---	---	32.79	5.70	---	27.09
MW-3R	10/20/2010	65	<0.50	<1.0	<1.0	<1.0	---	6.7	---	---	---	---	---	---	32.79	9.75	---	23.04
MW-3R	**04/20/2011**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**<1.0**	**---**	**---**	**---**	**---**	**---**	**---**	**32.79**	**5.90**	**---**	**26.89**
MW-4	08/06/1991	1,300	28	18	68	150	---	---	---	---	---	---	---	---	20.31	10.57	---	9.74
MW-4	10/23/1991	1,900	97	6.10	38	77	---	---	---	---	---	---	---	---	20.31	10.46	---	9.85
MW-4	01/28/1992	200	7.60	<0.5	3	3.30	---	---	---	---	---	---	---	---	20.31	9.54	---	10.77
MW-4	05/04/1992	690	98	3	13	<1	---	---	---	---	---	---	---	---	20.31	8.33	---	11.98
MW-4	07/13/1992	1,500	140	2.90	17	12	---	---	---	---	---	---	---	---	20.31	9.87	---	10.44
MW-4	10/12/1992	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	12.43	0.78	8.50
MW-4	01/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	7.12	1.00	13.99
MW-4	04/06/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	7.23	0.95	13.84
MW-4	07/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	10.08	0.03	10.25
MW-4	10/13/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	11.35	0.12	9.06
MW-4	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	9.06	0.02	11.26
MW-4	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	8.58	0.01	11.74
MW-4	07/19/1994	12,000	230	43	230	660	---	---	---	---	---	---	---	---	20.31	9.71	---	10.60
MW-4	10/27/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	10.60	0.03	9.73
MW-4	01/03/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	5.49	0.01	14.83
MW-4	04/13/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	20.31	6.53	0.03	13.80
MW-4	06/30/1995	7,400	140	<0.5	160	350	---	---	---	---	---	---	---	---	20.31	9.57	---	10.74
MW-4	10/11/1995	3,000	29	10	100	82	9,700	---	---	---	---	---	---	---	20.31	10.30	---	10.01
MW-4	01/17/1996	9,700	190	<0.5	190	410	4,500	---	---	---	---	---	---	---	20.31	6.68	---	13.63
MW-4	04/10/1996	2,800	16	<0.5	22	50	6,100	---	---	---	---	---	---	---	20.31	7.90	---	12.41
MW-4	07/30/1996	1,600	68	<12	58	39	8,500	---	---	---	---	---	---	2.8	20.31	8.73	---	11.58
MW-4	10/17/1996	4,800	120	<25	150	96	11,000	---	---	---	---	---	---	2.8	20.31	7.63	---	10.34
MW-4	01/22/1997	12,000	83	<20	170	240	4,300	---	---	---	---	---	---	2.6	20.31	5.26	---	15.05
MW-4	04/01/1997	4,800	65	<5.0	81	93	3,200	---	---	---	---	---	---	2.4	20.31	8.02	---	12.29
MW-4	07/14/1997	2,400	35	<10	30	20	6,000	---	---	---	---	---	---	2.0	20.31	10.05	---	10.26
MW-4	10/08/1997	2,900	66	<20	<20	<20	7,300	---	---	---	---	---	---	5.9	20.31	10.22	---	10.09
MW-4	01/19/1998	Inaccessible		---	---	---	---	---	---	---	---	---	---	---	20.31	---	---	---
MW-4	04/28/1998	Inaccessible		---	---	---	---	---	---	---	---	---	---	---	20.31	---	---	---
MW-4	09/30/1998	1,300	57	8.7	58	37	3,600	---	---	---	---	---	---	2.9	20.92	9.31	---	11.61
MW-4	12/09/1998	3,500	130	<5.0	100	36	3,200	4,500	---	---	---	---	---	2.2	20.92	9.30	---	11.62

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-4	01/18/1999	7,040	321	<25.0	273	<25.0	4,830	4,660	---	---	---	---	---	2.3	20.92	8.60	---	12.32
MW-4	04/12/1999	1,540	47.6	<10.0	24.4	<10.0	2,760	---	---	---	---	---	---	1.9	20.92	6.25	---	14.67
MW-4	07/27/1999	3,570	214	<25.0	58.3	31.0	5,440	7,280*	---	---	---	---	---	1.9	20.92	9.33	---	11.59
MW-4	10/14/1999	3,920	157	<25.0	103	<25.0	6,550	8,990	---	---	---	---	---	1.7	20.92	9.93	---	10.99
MW-4	01/06/2000	5,030	247	7.2	169	37.7	6,860	7,400	---	---	---	---	---	1.7	20.92	9.31	---	11.61
MW-4	04/05/2000	1,870	120	<5.00	15.1	<5.00	4,400	2,890*	---	---	---	---	---	1.8	20.92	6.00	---	14.92
MW-4	07/20/2000	6,740	114	36.4	71.9	28.2	1,900	---	---	---	---	---	---	2.1	20.92	6.10	---	14.82
MW-4	10/24/2000	2,120	108	8.28	12.5	<5.00	6,070	5,950	---	---	---	---	---	1.1	20.92	8.90	---	12.02
MW-4	01/19/2001	3,330	67.2	<5.00	7.18	<5.00	3,620	4,330	---	---	---	---	---	1.8	31.88	7.25	---	24.63
MW-4	04/27/2001	1,600	79	<10	<10	<10	---	3,900	---	---	---	---	---	1.4	31.88	7.41	---	24.47
MW-4	07/26/2001	2,700	140	<20	24	<20	---	4,700	---	---	---	---	---	1.8	31.88	8.20	---	23.68
MW-4	10/02/2001	4,600	170	<10	50	<10	---	6,300	2,600	<10	<10	<10	<500	2.1	31.88	8.55	---	23.33
MW-4	01/15/2002	1,000	34	<5.0	<5.0	9.8	---	2,800	---	---	---	---	---	2.7	31.88	6.53	---	25.35
MW-4	04/17/2002	1,400	92	<10	<10	11	---	4,100	---	---	---	---	---	2.4	31.88	7.00	---	24.88
MW-4	07/11/2002	1,800	82	<10	<10	11	---	4,500	---	---	---	---	---	2.1	31.88	8.49	---	23.39
MW-4	10/10/2002	7,400	230	<10	45	<10	---	6,600	---	---	---	---	---	2.5	31.88	9.05	---	22.83
MW-4	01/21/2003	1,400	27	<2.5	<2.5	<2.5	---	1,200	---	---	---	---	---	0.4	31.88	6.50	---	25.38
MW-4	05/02/2003	<2,500	80	<25	<25	<50	---	2,500	---	---	---	---	---	1.3	31.88	6.97	---	24.91
MW-4	07/10/2003	<2,500	93	<25	<25	<50	---	2,800	---	---	---	---	---	---	31.88	7.74	---	24.14
MW-4	10/28/2003	4,000	120	<10	<10	<20	---	2,100	---	---	---	---	---	---	31.88	8.43	---	23.45
MW-4	01/13/2004	2,000	45	<5.0	<5.0	<10	---	620	---	---	---	---	---	---	31.88	6.75	---	25.13
MW-4	04/01/2004	1,400	17	<2.5	<2.5	<5.0	---	540	---	---	---	---	---	---	31.88	6.40	---	25.48
MW-4	07/21/2004	3,100	120	<2.5	11	<5.0	---	900	2,200	<10	<10	<10	---	---	31.88	8.23	---	23.65
MW-4	10/20/2004	3,600	97	<2.5	9.7	<5.0	---	470	---	---	---	---	---	---	31.88	8.30	---	23.58
MW-4	01/19/2005	1,600	15	<2.5	<2.5	<5.0	---	220	---	---	---	---	---	---	31.88	5.83	---	26.05
MW-4	04/20/2005	1,300	8.8	<2.5	<2.5	<5.0	---	210	---	---	---	---	---	---	31.88	6.12	---	25.76
MW-4	07/20/2005	1,600	34	<2.5	3.8	<5.0	---	280	1,100	<10	<10	<10	---	---	31.88	8.35	---	23.53
MW-4	10/19/2005	2,400	74	1.1	7.2	<2.0	---	360	---	---	---	---	---	---	31.88	9.25	---	22.63
MW-4	01/24/2006	3,290	17.2	<0.500	3.02	<0.500	---	159	---	---	---	---	---	---	31.88	6.32	---	25.56
MW-4	04/19/2006	430	6.40	<0.500	0.610	<0.500	---	134	---	---	---	---	---	---	31.88	5.03	---	26.85
MW-4	07/19/2006	5,020	48.7	0.760	6.67	<0.500	---	234	582	<0.500	<0.500	<0.500	---	---	31.88	7.90	---	23.98
MW-4	10/18/2006	9,220	48.4	1.07	16.7	4.45	---	233	---	---	---	---	---	---	31.88	8.68	---	23.20
MW-4	01/17/2007	1,700	13	<2.5	<2.5	<5.0	---	120	---	---	---	---	---	---	31.88	7.83	---	24.05
MW-4	04/18/2007	1,200 h	9.2	0.50 i	1.3	1.13 i	---	120	---	---	---	---	---	---	31.88	7.99	---	23.89
MW-4	07/18/2007	2,100 h	21	0.71 i	2.6	1.22 i	---	150	730	<2.0	<2.0	<2.0	---	---	31.88	9.15	---	22.73
MW-4	10/18/2007	940 h	32	1.2	11	2.57 i	---	160	---	---	---	---	---	---	31.88	8.64	---	23.24
MW-4	01/16/2008	2,300 h	8.5	<1.0	<1.0	<1.0	---	110	---	---	---	---	---	---	31.88	6.98	---	24.90

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-4	04/16/2008	1,700	4.2	<1.0	1.0	<1.0	---	110	---	---	---	---	---	---	31.88	7.98	---	23.90
MW-4	07/16/2008	3,700	34	1.5	1.3	2.5	---	150	740	<2.0	<2.0	<2.0	---	---	31.88	9.12	---	22.76
MW-4	10/15/2008	3,700	18	<2.0	7.9	2.2	---	120	---	---	---	---	---	---	31.88	9.55	---	22.33
MW-4	01/21/2009	3,000	6.4	<1.0	1.9	1.1	---	86	---	---	---	---	---	---	31.88	7.90	---	23.98
MW-4	04/15/2009	2,000	2.2	<1.0	<1.0	<1.0	---	68	---	---	---	---	---	---	31.88	7.20	---	24.68
MW-4	10/21/2009	2,600	4.2	<1.0	1.3	<1.0	---	86	430	<2.0	<2.0	<2.0	---	---	31.88	7.45	---	24.43
MW-4	04/21/2010	1,000	2.3	<1.0	1.3	<1.0	---	46	---	---	---	---	---	---	31.88	5.60	---	26.28
MW-4	10/20/2010	3,100	2.3	<1.0	1.3	<1.0	---	83	---	---	---	---	---	---	31.88	9.16	---	22.72
MW-4	**04/20/2011**	**820**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**31**	**---**	**---**	**---**	**---**	**---**	**---**	**31.88**	**6.70**	**---**	**25.18**
MW-5	08/06/1991	9,100	210	27	240	660	---	---	---	---	---	---	---	---	20.91	10.23	---	10.68
MW-5	10/23/1991	12,000	92	18	230	450	---	---	---	---	---	---	---	---	20.91	10.89	---	10.02
MW-5	01/28/1992	3,300	130	10	180	220	---	---	---	---	---	---	---	---	20.91	8.45	---	12.46
MW-5	05/04/1992	3,900	95	<12.5	260	120	---	---	---	---	---	---	---	---	20.91	8.05	---	12.86
MW-5	07/13/1992	4,100	180	12	250	73	---	---	---	---	---	---	---	---	20.91	10.00	---	10.91
MW-5	10/12/1992	---	---	---	---	---	---	---	---	---	---	---	---	---	20.91	11.83	0.01	9.09
MW-5	01/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.91	6.10	<0.01	14.81
MW-5	04/06/1993	6,200	71	<0.5	53	150	---	---	---	---	---	---	---	---	20.91	6.18	---	14.73
MW-5	07/12/1993	3,400	130	<0.5	170	130	---	---	---	---	---	---	---	---	20.91	9.59	---	11.32
MW-5	10/13/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	20.91	10.80	0.03	10.13
MW-5	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.91	7.42	0.01	13.49
MW-5	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.91	7.05	0.01	13.87
MW-5	07/19/1994	11,000	180	13	180	260	---	---	---	---	---	---	---	---	20.91	8.57	---	12.34
MW-5	10/27/1994	6,900	82	<5	210	1,110	---	---	---	---	---	---	---	---	20.91	10.14	---	10.77
MW-5	01/03/1995	12,000	110	46	790	510	---	---	---	---	---	---	---	---	20.91	5.84	---	15.07
MW-5	04/13/1995	10,000	61	<20	330	140	---	---	---	---	---	---	---	---	20.91	5.28	---	15.63
MW-5	06/30/1995	12,000	180	8.60	440	340	---	---	---	---	---	---	---	---	20.91	7.43	---	13.48
MW-5	10/11/1995	11,000	<50	<50	440	340	5,100	---	---	---	---	---	---	---	20.91	8.90	---	12.01
MW-5	01/17/1996	82,000	330	120	960	1,400	820	---	---	---	---	---	---	---	20.91	6.40	---	14.51
MW-5	04/10/1996	23,000	<50	<50	360	190	770	---	---	---	---	---	---	---	20.91	5.70	---	15.21
MW-5	07/30/1996	38,000	3,000	<100	1,100	2,600	560	---	---	---	---	---	---	---	20.91	7.71	---	13.20
MW-5	10/17/1996	13,000	36	<10	210	160	720	---	---	---	---	---	---	1.4	20.91	9.04	---	11.87
MW-5	01/22/1997	20,000	63	<50	380	390	650	---	---	---	---	---	---	1.6	20.91	4.85	---	16.06
MW-5	04/01/1997	16,000	110	<50	390	320	2,200	---	---	---	---	---	---	1.4	20.91	6.54	---	14.37
MW-5	07/14/1997	15,000	70	<20	220	170	450	---	---	---	---	---	---	1.8	20.91	8.54	---	12.37
MW-5	10/08/1997	9,100	27	11	170	57	530	---	---	---	---	---	---	4.7	20.91	9.09	---	11.82
MW-5	01/19/1998	9,500	92	<50	200	77	1,100	---	---	---	---	---	---	2.5	20.91	2.11	---	18.80

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-5	04/28/1998	15,000	100	53	150	80	460	---	---	---	---	---	---	2.2	20.91	4.90	---	16.01
MW-5	09/30/1998	11,000	120	<100	240	200	<500	---	---	---	---	---	---	2.0	21.71	8.05	---	13.66
MW-5	12/09/1998	45,000	<200	<200	240	240	<1,000	---	---	---	---	---	---	4.7	21.71	8.62	---	13.09
MW-5	01/18/1999	9,120	13.8	<2.50	315	74.5	131	---	---	---	---	---	---	2.1	21.71	6.75	---	14.96
MW-5	04/12/1999	16,200	80.9	<50.0	163	<50.0	8,310	---	---	---	---	---	---	2.3	21.71	4.80	---	16.91
MW-5	07/27/1999	6,820	<5.00	<5.00	99.7	<5.00	216	---	---	---	---	---	---	2.1	21.71	6.25	---	15.46
MW-5	10/14/1999	10,800	47.8	<12.5	313	23.1	232	---	---	---	---	---	---	2.8	21.71	6.93	---	14.78
MW-5	01/06/2000	9,920	39.8	15.4	220	69.6	478	---	---	---	---	---	---	2.9	21.71	7.52	---	14.19
MW-5	04/05/2000	8,370	68.3	20.1	40.2	<10.0	1,570	---	---	---	---	---	---	0.4	21.71	5.31	---	16.40
MW-5	07/20/2000	15,500	60.5	181	104	108	460	---	---	---	---	---	---	1.7	21.71	5.40	---	16.31
MW-5	10/24/2000	5,170	24.3	12.6	16.5	9.79	130	---	---	---	---	---	---	1.3	21.71	5.59	---	16.12
MW-5	01/19/2001	4,000	<5.00	17.4	88.1	22.6	371	---	---	---	---	---	---	1.0	32.67	5.05	---	27.62
MW-5	04/27/2001	3,100	<1.0	<1.0	2.6	1.3	---	210	---	---	---	---	---	1.3	32.67	5.38	---	27.29
MW-5	07/26/2001	11,000	1.4	<1.0	13	2.2	---	46	---	---	---	---	---	1.6	32.67	7.17	---	25.50
MW-5	10/02/2001	5,300	6.2	3.4	60	11	---	<100	---	---	---	---	---	2.2	32.67	7.86	---	24.81
MW-5	01/15/2002	3,800	1.0	<0.50	1.7	0.60	---	120	---	---	---	---	---	1.7	32.67	4.35	---	28.32
MW-5	04/17/2002	4,600	0.61	<0.50	1.5	<0.50	---	140	---	---	---	---	---	0.5	32.67	6.04	---	26.63
MW-5	07/11/2002	7,200	1.8	0.58	5.9	0.78	---	130	---	---	---	---	---	4.2	32.67	6.72	---	25.95
MW-5	10/10/2002	4,300	3.2	<1.0	3.5	<1.0	---	86	---	---	---	---	---	2.5	32.67	6.99	---	25.68
MW-5	01/21/2003	4,300	2.4	<0.50	7.8	0.67	---	170	---	---	---	---	---	0.5	32.67	5.09	---	27.58
MW-5	05/02/2003	3,600 d	<10	<10	<10	<20	---	170	---	---	---	---	---	0.05	32.67	5.14	---	27.53
MW-5	07/10/2003	2,700	2.1	<1.0	4.8	<2.0	---	48	---	---	---	---	---	---	32.67	5.68	---	26.99
MW-5	10/28/2003	7,500	<5.0	<5.0	11	<10	---	63	---	---	---	---	---	---	32.67	5.79	---	26.88
MW-5	01/13/2004	3,800	<2.5	<2.5	6.9	<5.0	---	140	---	---	---	---	---	---	32.67	4.69	---	27.98
MW-5	04/01/2004	3,800	<5.0	<5.0	<5.0	<10	---	180	---	---	---	---	---	---	32.67	5.60	---	27.07
MW-5	07/21/2004	2,500	<5.0	<5.0	<5.0	<10	---	85	59	<20	<20	<20	---	---	32.67	6.50	---	26.17
MW-5	10/20/2004	4,900	<5.0	<5.0	<5.0	<10	---	120	---	---	---	---	---	---	32.67	6.87	---	25.80
MW-5	01/19/2005	3,200	<5.0	<5.0	<5.0	<10	---	110	---	---	---	---	---	---	32.67	4.73	---	27.94
MW-5	04/20/2005	3,300	<5.0	<5.0	<5.0	<10	---	53	---	---	---	---	---	---	32.67	5.29	---	27.38
MW-5	07/20/2005	2,100	<1.0	<1.0	1.0	<2.0	---	110	51	<4.0	<4.0	<4.0	---	---	32.67	7.00	---	25.67
MW-5	10/19/2005	2,900	1.7	<1.0	2.8	<2.0	---	140	---	---	---	---	---	---	32.67	8.91	---	23.76
MW-5	01/24/2006	4,890	0.670	2.41	4.89	<0.500	---	37.9	---	---	---	---	---	---	32.67	4.90	---	27.77
MW-5	04/19/2006	5,010	0.710	1.26	1.09	<0.500	---	67.1	---	---	---	---	---	---	32.67	3.46	---	29.21
MW-5	07/19/2006	9,180	<0.500	<0.500	0.790	<0.500	---	2.92 g	<10.0	<0.500	<0.500	<0.500	---	---	32.67	5.32	---	27.35
MW-5	10/18/2006	6,110	1.07	1.02	2.48	<0.500	---	36.5	---	---	---	---	---	---	32.67	6.48	---	26.19
MW-5	01/17/2007	1,300	<0.50	<0.50	0.74	<1.0	---	27	---	---	---	---	---	---	32.67	6.14	---	26.53
MW-5	04/18/2007	4,500 h	0.31 i	0.33 i	0.75 i	0.99 i	---	60	---	---	---	---	---	---	32.67	6.75	---	25.92

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-5	07/18/2007	4,600 h	0.80 i	<5.0	<5.0	0.91 i	---	69	42 i	<10	<10	<10	---	---	32.67	8.51	---	24.16
MW-5	10/18/2007	2,800 h	0.66	<1.0	0.32 i	<1.0	---	120	---	---	---	---	---	---	32.67	8.28	---	24.39
MW-5	01/16/2008	2,900 h	0.89	<1.0	2.6	<1.0	---	32	---	---	---	---	---	---	32.67	5.65	---	27.02
MW-5	04/16/2008	1,600	<0.50	<1.0	<1.0	<1.0	---	39	---	---	---	---	---	---	32.67	6.62	---	26.05
MW-5	07/16/2008	11,000	<5.0	<10	<10	<10	---	<10	<100	<20	<20	<20	---	---	32.67	6.99	---	25.68
MW-5	10/15/2008	11,000	<2.5	<5.0	<5.0	<5.0	---	42	---	---	---	---	---	---	32.67	8.20	---	24.47
MW-5	01/21/2009	3,300	<0.50	<1.0	<1.0	<1.0	---	29	---	---	---	---	---	---	32.67	7.11	---	25.56
MW-5	04/15/2009	3,300	<0.50	<1.0	<1.0	<1.0	---	11	---	---	---	---	---	---	32.67	5.75	---	26.92
MW-5	10/21/2009	1,700	<0.50	<1.0	<1.0	<1.0	---	32	28	<2.0	<2.0	<2.0	---	---	32.67	6.58	---	26.09
MW-5	04/21/2010	2,100	<0.50	<1.0	1.1	<1.0	---	8.3	---	---	---	---	---	---	32.67	4.94	---	27.73
MW-5	10/20/2010	6,800	<1.0	<2.0	<2.0	<2.0	---	24	---	---	---	---	---	---	32.67	7.96	---	24.71
MW-5	**04/20/2011**	**2,000**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**9.6**	**---**	**---**	**---**	**---**	**---**	**---**	**32.67**	**4.85**	**---**	**27.82**
MW-6	08/06/1991	28,000	1,400	200	1,300	4,200	---	---	---	---	---	---	---	---	22.32	10.61	---	11.71
MW-6	10/23/1991	53,000	1,400	230	1,800	6,700	---	---	---	---	---	---	---	---	22.32	11.68	---	10.64
MW-6	01/28/1992	87,000	1,200	470	2,000	6,600	---	---	---	---	---	---	---	---	22.32	8.90	---	13.42
MW-6	05/05/1992	230,000	<500	<500	3,200	11,000	---	---	---	---	---	---	---	---	22.32	8.01	---	14.31
MW-6	07/13/1992	2,700,000	<2,500	3,500	14,000	36,000	---	---	---	---	---	---	---	---	22.32	10.77	---	11.55
MW-6	10/12/1992	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	8.68	0.48	9.34
MW-6	01/12/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	6.40	<0.01	15.92
MW-6	04/06/1993	320,000	2,500	14,000	980	14,000	---	---	---	---	---	---	---	---	22.32	5.93	---	16.39
MW-6	07/12/1993	31,000	1,100	4,500	150	4,500	---	---	---	---	---	---	---	---	22.32	10.25	---	12.07
MW-6	10/13/1993	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	12.28	0.20	10.20
MW-6	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	9.14	0.02	13.20
MW-6	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	7.67	0.01	14.66
MW-6	07/19/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	10.07	0.07	12.31
MW-6	10/27/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	11.84	0.11	10.57
MW-6	01/03/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	7.80	0.02	14.54
MW-6	04/13/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	22.32	5.77	0.02	16.57
MW-6	06/30/1995	1,100,000	6,600	6,100	12,000	29,000	---	---	---	---	---	---	---	---	22.32	7.78	---	14.54
MW-6	10/11/1995	30,000	130	<50	1,400	4,200	710	---	---	---	---	---	---	---	22.32	10.06	---	12.26
MW-6	01/17/1996	450,000	510	1,400	2,700	11,000	630	---	---	---	---	---	---	---	22.32	6.91	---	15.41
MW-6	04/10/1996	22,000	47	<10	350	860	<50	---	---	---	---	---	---	---	22.32	5.92	---	16.40
MW-6	07/30/1996	38,000	3,000	<100	1,100	2,600	560	---	---	---	---	---	---	---	22.32	8.97	---	13.35
MW-6	10/17/1996	34,000	470	<100	1,300	3,900	<500	---	---	---	---	---	---	1.0	22.32	9.87	---	12.45
MW-6	01/22/1997	26,000	<100	<100	600	1,700	<500	---	---	---	---	---	---	1.3	22.32	4.43	---	17.89
MW-6	04/01/1997	30,000	96	33	840	2,600	190	---	---	---	---	---	---	1.4	22.32	6.84	---	15.48

TABLE 3

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-6	07/14/1997	29,000	200	<100	690	2,000	<500	---	---	---	---	---	---	2.3	22.32	10.30	---	12.02
MW-6	10/08/1997	55,000	500	110	640	1,500	900	---	---	---	---	---	---	0.0	22.32	10.46	---	11.86
MW-6	12/05/1997	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-6R	04/06/1999	---	---	---	---	---	---	---	---	---	---	---	---	---	22.19	12.13	---	10.06
MW-6R	04/12/1999	26,100	1,750	68.5	2,160	4,450	765	---	---	---	---	---	---	2.4	22.19	6.10	---	16.09
MW-6R	07/27/1999	25,600	1,190	30.5	1,810	3,030	163	---	---	---	---	---	---	2.5	22.19	8.60	---	13.59
MW-6R	10/14/1999	21,400	999	<50.0	1,400	1,680	<500	---	---	---	---	---	---	2.0	22.19	9.35	---	12.84
MW-6R	01/06/2000	17,800	1,440	<50.0	1,310	2,340	301	---	---	---	---	---	---	2.1	22.19	9.18	---	13.01
MW-6R	04/05/2000	24,400	1,470	63.1	1,750	3,590	496	---	---	---	---	---	---	0.4	22.19	6.26	---	15.93
MW-6R	07/20/2000	17,200	1,070	42.9	1,260	2,490	725	---	---	---	---	---	---	2.6	22.19	6.79	---	15.40
MW-6R	10/24/2000	17,200	1,890	107	869	1,620	1,320	---	---	---	---	---	---	1.1	22.19	7.40	---	14.79
MW-6R	01/19/2001	15,000	1,120	40.2	1,240	2,230	1,670	---	---	---	---	---	---	1.4	33.15	6.16	---	26.99
MW-6R	04/27/2001	25,000	1,300	24	1,300	2,400	---	400	---	---	---	---	---	1.0	33.15	6.93	---	26.22
MW-6R	07/26/2001	31,000	1,500	31	1,800	3,000	---	370	---	---	---	---	---	1.4	33.15	9.12	---	24.03
MW-6R	10/02/2001	28,000	1,100	28	1,800	2,800	---	160	---	---	---	---	---	2.1	33.15	8.88	---	24.27
MW-6R	01/15/2002	17,000	1,400	19	900	1,500	---	650	---	---	---	---	---	2.1	33.15	5.46	---	27.69
MW-6R	04/17/2002	33,000	1,600	33	1,700	3,100	---	220	---	---	---	---	---	2.2	33.15	7.68	---	25.47
MW-6R	07/11/2002	25,000	1,200	21	1,300	1,900	---	240	---	---	---	---	---	1.6	33.15	8.75	---	24.40
MW-6R	10/10/2002	83,000 c	1,400	34	2,000	4,400	---	290	---	---	---	---	---	1.0	33.15	9.27	---	23.88
MW-6R	01/21/2003	20,000	1,200	18	1,100	1,700	---	340	---	---	---	---	---	1.2	33.15	6.95	---	26.20
MW-6R	05/02/2003	28,000	1,600	32	1,600	2,400	---	300	---	---	---	---	---	1.6	33.15	7.50	---	25.65
MW-6R	07/10/2003	19,000	1,600	<25	1,400	2,000	---	730	---	---	---	---	---	---	33.15	8.60	---	24.55
MW-6R	10/28/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	8.91	0.26	24.45
MW-6R	11/24/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	8.47	0.15	24.80
MW-6R	01/13/2004	87,000	1,300	<50	3,300	6,700	---	160	---	---	---	---	---	---	33.15	6.52	---	26.63
MW-6R	04/01/2004	39,000	1,300	<50	2,400	3,500	---	160	---	---	---	---	---	---	33.15	6.90	---	26.25
MW-6R	07/21/2004	51,000	970	<50	3,200	6,700	---	120	<500	<200	<200	<200	---	---	33.15	8.40	---	24.75
MW-6R	10/20/2004	140,000	1,700	<50	4,300	7,400	---	210	---	---	---	---	---	---	33.15	8.61	<.01	24.54
MW-6R	01/19/2005	44,000	1,300	<50	2,700	3,300	---	140	---	---	---	---	---	---	33.15	6.11	---	27.04
MW-6R	04/20/2005	26,000	340	<50	800	920	---	<50	---	---	---	---	---	---	33.15	7.01	---	26.14
MW-6R	07/20/2005	35,000	640	<50	2,000	2,200	---	83	<500	<200	<200	<200	---	---	33.15	8.64	---	24.51
MW-6R	10/19/2005	57,000	1,100	<50	2,600	2,400	---	100	---	---	---	---	---	---	33.15	10.10	---	23.05
MW-6R	01/24/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	5.95	0.04	27.23
MW-6R	04/19/2006	62,200	1,040	9.41	1,430	1,280	---	130	---	---	---	---	---	---	33.15	4.95	0.01	28.21
MW-6R	07/19/2006	33,500	1,370	6.34	878	393	---	362 g	<10.0	<0.500	<0.500	<0.500	---	---	33.15	7.74	---	25.41
MW-6R	10/18/2006	127,000	1,220	9.07	2,150	1,330	---	130	---	---	---	---	---	---	33.15	8.74	---	24.41

TABLE 3

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-6R	01/17/2007	20,000	880	<12	1,400	730	---	75	---	---	---	---	---	---	33.15	7.92	---	25.23
MW-6R	04/18/2007	30,000 h	790	5.7	600	257.5	---	180	---	---	---	---	---	---	33.15	8.19	---	24.96
MW-6R	07/18/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	9.70	0.10	23.53
MW-6R	10/18/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	9.39	0.16	23.89
MW-6R	01/16/2008	39,000 h	590	<5.0	580	160	---	150	---	---	---	---	---	---	33.15	7.15	---	26.00
MW-6R	04/16/2008	3,800	150	1.4	170	83.5	---	27	---	---	---	---	---	---	33.15	8.18	---	24.97
MW-6R	07/16/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	9.36	0.06	23.84
MW-6R	10/15/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	10.12	0.31	23.28
MW-6R	01/21/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	9.28	0.05	23.91
MW-6R	04/15/2009	28,000	850	<10	790	290	---	120	---	---	---	---	---	---	33.15	7.30	---	25.85
MW-6R	10/21/2009	23,000	630	<10	450	80	---	120	<100	<20	<20	<20	---	---	33.15	8.10	---	25.05
MW-6R	04/21/2010	37,000	740	<10	950	230	---	82	---	---	---	---	---	---	33.15	6.53	---	26.62
MW-6R	10/20/2010	---	---	---	---	---	---	---	---	---	---	---	---	---	33.15	10.08	0.16	23.20
MW-6R	**02/10/2011**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**33.15**	**7.30**	**---**	**25.85**
MW-6R	**04/20/2011**	**22,000**	**810**	**<12**	**670**	**170**	**---**	**92**	**---**	**---**	**---**	**---**	**---**	**---**	**33.15**	**6.62**	**---**	**26.53**
MW-7	08/06/1991	13,000	4,300	76	770	730	---	---	---	---	---	---	---	---	20.36	8.00	---	12.36
MW-7	10/23/1991	18,000	3,200	31	660	770	---	---	---	---	---	---	---	---	20.36	8.16	---	12.20
MW-7	01/28/1992	5,000	1,200	<10	220	54	---	---	---	---	---	---	---	---	20.36	7.11	---	13.25
MW-7	05/05/1992	9,500	3,100	72	620	880	---	---	---	---	---	---	---	---	20.36	6.47	---	13.89
MW-7	07/13/1992	20,000	4,200	130	1,600	1,100	---	---	---	---	---	---	---	---	20.36	7.73	---	12.63
MW-7	10/12/1992	16,000	2,500	170	560	170	---	---	---	---	---	---	---	---	20.36	9.97	---	11.68
MW-7	01/12/1993	15,000	2,300	<50	690	440	---	---	---	---	---	---	---	---	20.36	6.26	---	14.10
MW-7	04/06/1993	26,000	5,400	<0.5	1,200	3,000	---	---	---	---	---	---	---	---	20.36	5.92	---	14.44
MW-7	07/12/1993	10,000	3,000	100	510	530	---	---	---	---	---	---	---	---	20.36	7.27	---	13.09
MW-7	10/13/1993	59,000	13,000	4,400	4,400	20,000	---	---	---	---	---	---	---	---	20.36	9.40	---	10.96
MW-7	01/20/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	7.03	0.05	13.37
MW-7	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	6.56	0.16	13.93
MW-7	07/19/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	6.91	0.20	13.61
MW-7	10/27/1994	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	8.28	0.04	12.11
MW-7	01/03/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	6.48	0.02	13.90
MW-7	04/13/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	6.54	0.02	13.84
MW-7	06/30/1995	900,000	11,000	8,500	14,000	52,000	---	---	---	---	---	---	---	---	20.36	7.08	---	13.28
MW-7	10/11/1995	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	7.88	0.04	12.51
MW-7	01/17/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	7.26	0.04	13.13
MW-7	04/10/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	6.98	0.05	13.42
MW-7	07/30/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	7.34	0.03	13.04

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-7	10/17/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	7.63	0.02	12.75
MW-7	01/22/1997	56,000	2,000	520	1,400	8,400	1,800	---	---	---	---	---	---	0.5	20.36	6.46	---	13.90
MW-7	04/01/1997	66,000	3,600	460	2,400	10,000	2,300	---	---	---	---	---	---	1.6	20.36	6.97	---	13.39
MW-7	07/14/1997	---	---	---	---	---	---	---	---	---	---	---	---	---	20.36	8.90	0.03	11.48
MW-7	10/08/1997	68,000	3,200	470	2,400	9,700	3,300	---	---	---	---	---	---	2.1	20.36	9.21	0.01	11.15
MW-7	01/19/1998	44,000	1,800	220	1,700	7,800	1,600	---	---	---	---	---	---	1.6	20.36	4.65	---	15.71
MW-7	04/28/1998	82,000	1,500	<500	1,200	8,900	<2,500	---	---	---	---	---	---	1.3	20.36	6.53	---	13.83
MW-7	09/30/1998	41,000	2,300	290	2,200	7,000	1,400	---	---	---	---	---	---	1.4	20.35	5.59	---	14.76
MW-7	12/09/1998	31,000	530	130	1,100	4,300	<500	---	---	---	---	---	---	4.9	20.35	5.91	---	14.44
MW-7	01/18/1999	35,300	975	175	1,360	5,750	256	---	---	---	---	---	---	1.2	20.35	5.02	---	15.33
MW-7	04/12/1999	43,300	728	161	1,820	6,190	<500	---	---	---	---	---	---	1.3	20.35	4.57	---	15.78
MW-7	07/27/1999	36,600	863	68.3	1,540	4,370	593	---	---	---	---	---	---	1.2	20.35	5.36	---	14.99
MW-7	10/14/1999	65,600	1,140	157	2,230	7,060	1,090	---	---	---	---	---	---	1.8	20.35	5.87	---	14.48
MW-7	01/06/2000	57,100	1,060	142	1,540	5,980	634	---	---	---	---	---	---	1.8	20.35	6.12	---	14.23
MW-7	04/05/2000	36,500	843	<100	1,460	4,220	1,140	---	---	---	---	---	---	1.4	20.35	4.87	---	15.48
MW-7	07/20/2000	28,400	263	251	457	1,300	690	---	---	---	---	---	---	1.7	20.35	5.01	---	15.34
MW-7	10/24/2000	33,500	464	<200	1,600	3,830	<1,000	---	---	---	---	---	---	1.5	20.35	4.17	---	16.18
MW-7	01/19/2001	1,860,000	<2,000	<2,000	<2,000	5,790	<10,000	---	---	---	---	---	---	1.2	31.31	5.18	---	26.13
MW-7	04/27/2001	31,000	150	20	1,400	3,000	---	190	---	---	---	---	---	1.4	31.31	4.99	---	26.32
MW-7	07/26/2001	30,000	340	20	1,500	2,600	---	380	---	---	---	---	---	1.1	31.31	6.20	---	25.11
MW-7	10/02/2001	38,000	480	9.0	970	2,600	---	300	---	---	---	---	---	1.5	31.31	6.45	---	24.86
MW-7	01/15/2002	33,000	160	6.6	810	1,300	---	130	---	---	---	---	---	2.0	31.31	4.31	---	27.00
MW-7	04/17/2002	28,000	160	6.1	1,000	1,700	---	140	---	---	---	---	---	1.2	31.31	4.12	---	27.19
MW-7	07/11/2002	26,000	200	<5.0	830	1,300	---	170	---	---	---	---	---	3.0	31.31	5.90	---	25.41
MW-7	10/10/2002	95,000 c	380	11	1,500	3,900	---	330	---	---	---	---	---	2.9	31.31	6.32	---	24.99
MW-7	01/21/2003	18,000	100	2.6	530	780	---	96	---	---	---	---	---	0.9	31.31	3.04	---	28.27
MW-7	05/02/2003	23,000	99	<10	490	620	---	<100	---	---	---	---	---	0.91	31.31	3.45	---	27.86
MW-7	07/10/2003	18,000	200	<5.0	460	1,100	---	52	---	---	---	---	---	---	31.31	4.59	---	26.72
MW-7	10/28/2003	37,000	290	<10	830	1,200	---	98	---	---	---	---	---	---	31.31	4.97	---	26.34
MW-7	01/13/2004	22,000	94	<10	410	680	---	97	---	---	---	---	---	---	31.31	4.55	---	26.76
MW-7	04/01/2004	24,000	250	<10	440	660	---	210	---	---	---	---	---	---	31.31	4.91	---	26.40
MW-7	07/21/2004	21,000	440	<10	460	640	---	110	<100	<40	<40	<40	---	---	31.31	4.58	---	26.73
MW-7	10/20/2004	23,000	430	<10	410	640	---	40	---	---	---	---	---	---	31.31	1.95	---	29.36
MW-7	01/19/2005	17,000	97	<10	240	370	---	150	---	---	---	---	---	---	31.31	3.91	---	27.40
MW-7	04/20/2005	18,000	160	<10	260	320	---	80	---	---	---	---	---	---	31.31	4.64	---	26.67
MW-7	07/20/2005	15,000	800	<10	200	250	---	660	290	<40	<40	<40	---	---	31.31	6.29	---	25.02
MW-7	10/19/2005	12,000	1,200	<5.0	120	150	---	760	---	---	---	---	---	---	31.31	7.25	---	24.06

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-7	01/24/2006	24,900	604	3.14	135	216	---	259	---	---	---	---	---	---	31.31	4.50	---	26.81
MW-7	04/19/2006	135,000	378	1.82	66.0	177	---	74.0	---	---	---	---	---	---	31.31	3.74	---	27.57
MW-7	07/19/2006	10,600	33.0	<0.500	13.0	27.5	---	<0.500	<10.0	<0.500	<0.500	<0.500	---	---	31.31	3.77	---	27.54
MW-7	10/18/2006	35,200	295	2.44	133	105	---	36.1	---	---	---	---	---	---	31.31	4.82	---	26.49
MW-7	01/17/2007	7,800	84	<2.5	83	60	---	20	---	---	---	---	---	---	31.31	5.60	---	25.71
MW-7	04/18/2007	13,000 h	180	1.8	120	90.5	---	56	---	---	---	---	---	---	31.31	5.68	---	25.63
MW-7	07/18/2007	10,000 h	190	<5.0	68	40.4 i	---	88	77	<10	<10	<10	---	---	31.31	7.35	---	23.96
MW-7	10/18/2007	8,200 h	56	<5.0	6.0	17.3 i	---	17	---	---	---	---	---	---	31.31	3.45	---	27.86
MW-7	01/16/2008	17,000 h	37	<2.0	21	15	---	<2.0	---	---	---	---	---	---	31.31	3.39	---	27.92
MW-7	04/16/2008	10,000	51	2.1	29	17.2	---	28	---	---	---	---	---	---	31.31	5.68	---	25.63
MW-7	07/16/2008	23,000	46	<50	<50	<50	---	<50	<500	<100	<100	<100	---	---	31.31	3.02	---	28.29
MW-7	10/15/2008	4,200	17	<1.0	1.3	4.6	---	4.9	---	---	---	---	---	---	31.31	6.10	---	25.21
MW-7	01/21/2009	11,000	15	1.7	15	4.2	---	<1.0	---	---	---	---	---	---	31.31	5.69	---	25.62
MW-7	04/15/2009	12,000	11	<10	11	<10	---	<10	---	---	---	---	---	---	31.31	3.40	---	27.91
MW-7	10/21/2009	6,600	43	<5.0	<5.0	<5.0	---	29	<50	<10	<10	<10	---	---	31.31	3.25	---	28.06
MW-7	04/21/2010	14,000	3.6	<1.0	3.5	1.1	---	5.4	---	---	---	---	---	---	31.31	4.38	---	26.93
MW-7	10/20/2010	7,100	4.1	<5.0	<5.0	<5.0	---	5.5	---	---	---	---	---	---	31.31	3.11	---	28.20
MW-7	**04/20/2011**	**7,500**	**<2.5**	**<2.5**	**<2.5**	**<5.0**	**---**	**<5.0**	**---**	**---**	**---**	**---**	**---**	**---**	**31.31**	**3.19**	**---**	**28.12**
MW-8	08/06/1991	32,000	3,700	1,100	1,400	6,100	---	---	---	---	---	---	---	---	20.95	9.60	---	11.35
MW-8	10/23/1991	63,000	4,800	1,300	1,300	6,900	---	---	---	---	---	---	---	---	20.95	9.73	---	11.22
MW-8	01/28/1992	32,000	1,900	750	1,400	6,300	---	---	---	---	---	---	---	---	20.95	7.72	---	13.23
MW-8	05/05/1992	180,000	2,200	2,000	2,700	13,000	---	---	---	---	---	---	---	---	20.95	6.48	---	14.47
MW-8	07/13/1992	56,000	4,500	1,500	2,700	9,100	---	---	---	---	---	---	---	---	20.95	8.55	---	12.40
MW-8	10/12/1992	34,000	2,400	550	1,400	6,400	---	---	---	---	---	---	---	---	20.95	9.97	---	10.98
MW-8	01/12/1993	110,000	2,100	1,200	2,400	12,000	---	---	---	---	---	---	---	---	20.95	6.94	---	14.01
MW-8	04/06/1993	38,000	2,500	840	1,100	4,900	---	---	---	---	---	---	---	---	20.95	5.72	---	15.23
MW-8	07/12/1993	27,000	2,800	990	1,200	5,300	---	---	---	---	---	---	---	---	20.95	7.65	---	13.30
MW-8	10/13/1993	32,000	3,300	1,300	1,600	8,400	---	---	---	---	---	---	---	---	20.95	8.25	---	12.70
MW-8	01/20/1994	78,000	1,900	670	1,300	6,600	---	---	---	---	---	---	---	---	20.95	7.25	---	13.70
MW-8	04/13/1994	41,000	1,300	720	1,200	6,000	---	---	---	---	---	---	---	---	20.95	7.12	---	13.83
MW-8	07/19/1994	140,000	1,800	1,400	2,000	9,000	---	---	---	---	---	---	---	---	20.95	7.43	---	13.52
MW-8	10/27/1994	32,000	1,200	670	1,200	5,700	---	---	---	---	---	---	---	---	20.95	7.55	---	13.40
MW-8	01/03/1995	38,000	1,000	700	1,500	7,500	---	---	---	---	---	---	---	---	20.95	6.04	---	14.91
MW-8	04/13/1995	31,000	1,200	570	1,000	5,300	---	---	---	---	---	---	---	---	20.95	5.04	---	15.91
MW-8	06/30/1995	110,000	2,000	1,500	2,000	9,700	---	---	---	---	---	---	---	---	20.95	5.72	---	15.23
MW-8	10/11/1995	36,000	170	60	1,300	6,300	510	---	---	---	---	---	---	---	20.95	7.06	---	13.89

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-8	01/17/1996	38,000	1,000	520	1,100	6,200	950	---	---	---	---	---	---	---	20.95	5.84	---	15.11
MW-8	04/10/1996	54,000	650	260	850	4,700	<250	---	---	---	---	---	---	---	20.95	5.03	---	15.92
MW-8	07/30/1996	33,000	780	330	830	4,200	1,700	---	---	---	---	---	---	---	20.95	6.36	---	14.59
MW-8	10/17/1996	35,000	750	300	1,100	5,000	1,200	---	---	---	---	---	---	1.6	20.95	5.94	---	15.01
MW-8	01/22/1997	25,000	260	78	420	2,400	120	---	---	---	---	---	---	1.8	20.95	5.93	---	15.02
MW-8	04/01/1997	22,000	680	180	550	2,500	260	---	---	---	---	---	---	1.8	20.95	6.24	---	14.71
MW-8	07/14/1997	29,000	870	200	850	3,100	500	---	---	---	---	---	---	1.4	20.95	8.59	---	12.36
MW-8	10/08/1997	27,000	1,000	190	960	3,000	170	---	---	---	---	---	---	4.6	20.95	9.04	---	11.91
MW-8	01/19/1998	21,000	660	160	740	3,300	170	---	---	---	---	---	---	2.2	20.95	3.34	---	17.61
MW-8	04/28/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	20.95	---	---	---
MW-8	09/30/1998	19,000	370	230	880	3,800	410	---	---	---	---	---	---	1.2	21.15	7.00	---	14.15
MW-8	12/09/1998	1,400	92	90	74	260	<250	---	---	---	---	---	---	3.6	21.15	6.38	---	14.77
MW-8	01/18/1999	317	<0.500	<0.500	3.04	0.984	3.92	---	---	---	---	---	---	2.0	21.15	1.85	---	19.30
MW-8	04/12/1999	8,300	35.6	24.4	144	466	<100	---	---	---	---	---	---	1.6	21.15	3.65	---	17.50
MW-8	07/27/1999	12,700	<5.00	5.47	281	1,130	50.3	---	---	---	---	---	---	1.4	21.15	5.00	---	16.15
MW-8	10/14/1999	11,900	86.7	16.9	210	469	<100	---	---	---	---	---	---	1.2	21.15	5.95	---	15.20
MW-8	01/06/2000	5,930	65	12.4	106	129	203.0	---	---	---	---	---	---	1.3	21.15	6.19	---	14.96
MW-8	04/05/2000	6,770	100	<50.0	61.3	150	322	---	---	---	---	---	---	2.1	21.15	5.14	---	16.01
MW-8	07/20/2000	28,900	109	307	119	235	337	---	---	---	---	---	---	2.1	21.15	5.21	---	15.94
MW-8	10/24/2000	8,620	99.0	12.8	152	366	225	---	---	---	---	---	---	1.0	21.15	3.11	---	18.04
MW-8	01/19/2001	5,590	49.4	6.50	26.0	57.4	99.5	---	---	---	---	---	---	1.8	32.11	5.35	---	26.76
MW-8	04/27/2001	3,800	<0.50	<0.50	14	31	---	<5.0	---	---	---	---	---	0.7	32.11	4.58	---	27.53
MW-8	07/26/2001	4,400	0.88	0.59	7.0	14	---	<5.0	---	---	---	---	---	0.9	32.11	5.83	---	26.28
MW-8	10/02/2001	1,800	9.8	<0.50	23	16	---	<5.0	---	---	---	---	---	1.2	32.11	6.50	---	25.61
MW-8	01/15/2002	2,700	1.2	1.5	0.93	1.7	---	12	---	---	---	---	---	1.6	32.11	5.07	---	27.04
MW-8	04/17/2002	3,200	2.2	<1.0	9.0	14	---	<10	---	---	---	---	---	1.0	32.11	3.80	---	28.31
MW-8	07/11/2002	6,500	23	1.0	12	19	---	<10	---	---	---	---	---	1.9	32.11	6.29	---	25.82
MW-8	10/10/2002	1,900	5.3	<0.50	30	33	---	7.6	---	---	---	---	---	2.4	32.11	4.32	---	27.79
MW-8	01/21/2003	3,700	1.4	<1.0	3.9	6.6	---	<10	---	---	---	---	---	0.6	32.11	5.57	---	26.54
MW-8	05/02/2003	3,900 d	<5.0	<5.0	<5.0	<10	---	<50	---	---	---	---	---	0.23	32.11	1.67	---	30.44
MW-8	07/10/2003	2,400	<2.5	<2.5	<2.5	<5.0	---	<2.5	---	---	---	---	---	---	32.11	3.81	---	28.30
MW-8	10/28/2003	3,000	<2.5	3.1	4.6	6.1	---	<2.5	---	---	---	---	---	---	32.11	4.99	---	27.12
MW-8	01/13/2004	4,600	3.6	<2.5	14	20	---	2.5	---	---	---	---	---	---	32.11	5.10	---	27.01
MW-8	04/01/2004	4,200	3.9	<2.5	7.1	8.8	---	<2.5	---	---	---	---	---	---	32.11	3.32	---	28.79
MW-8	07/21/2004	3,400	<2.5	<2.5	4.1	<5.0	---	<2.5	<25	<10	<10	<10	---	---	32.11	3.95	---	28.16
MW-8	10/20/2004	2,300	<2.5	<2.5	<2.5	<5.0	---	<2.5	---	---	---	---	---	---	32.11	1.48	---	30.63
MW-8	01/19/2005	2,000	<2.5	<2.5	<2.5	<5.0	---	<2.5	---	---	---	---	---	---	32.11	5.28	---	26.83

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-8	04/20/2005	2,300	<2.5	<2.5	<2.5	<5.0	---	<2.5	---	---	---	---	---	---	32.11	3.52	---	28.59
MW-8	07/20/2005	1,500	2.0	0.77	1.4	1.3	---	<0.50	<5.0	<2.0	<2.0	<2.0	---	---	32.11	5.35	---	26.76
MW-8	10/19/2005	2,200	4.0	0.96	2.5	3.1	---	<0.50	---	---	---	---	---	---	32.11	7.80	---	24.31
MW-8	01/24/2006	5,150	0.600	<0.500	3.33	<0.500	---	<0.500	---	---	---	---	---	---	32.11	2.18	---	29.93
MW-8	06/02/2006	Well destroyed		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-9	08/06/1991	11,000	1,700	95	520	1,400	---	---	---	---	---	---	---	---	21.19	10.33	---	10.86
MW-9	10/23/1991	20,000	1,000	47	<0.3	940	---	---	---	---	---	---	---	---	21.19	11.13	---	10.06
MW-9	01/28/1992	3,500	120	<10	280	36	---	---	---	---	---	---	---	---	21.19	9.02	---	12.17
MW-9	05/04/1992	7,700	1,200	<50	380	630	---	---	---	---	---	---	---	---	21.19	7.67	---	13.52
MW-9	07/20/1992	11,000	910	<50	220	1,200	---	---	---	---	---	---	---	---	21.19	10.26	---	10.93
MW-9	10/12/1992	2,100	340	15	77	44	---	---	---	---	---	---	---	---	21.19	12.19	---	9.00
MW-9	01/12/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	21.19	---	---	---
MW-9	04/06/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	21.19	---	---	---
MW-9	07/12/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	21.19	---	---	---
MW-9	10/13/1993	2,900	140	<5	<5	120	---	---	---	---	---	---	---	---	21.19	11.17	---	10.02
MW-9	01/20/1994	1,700	380	6.90	150	400	---	---	---	---	---	---	---	---	21.19	8.03	---	13.16
MW-9	04/13/1994	6,000	1,000	<20	450	420	---	---	---	---	---	---	---	---	21.19	7.81	---	13.38
MW-9	07/19/1994	12,000	1,400	<5	740	1,200	---	---	---	---	---	---	---	---	21.19	8.96	---	12.23
MW-9	10/27/1994	10,000	1,200	160	280	860	---	---	---	---	---	---	---	---	21.19	11.00	---	10.19
MW-9	01/03/1995	4,400	680	7.70	180	370	---	---	---	---	---	---	---	---	21.19	6.60	---	14.59
MW-9	04/13/1995	1,700	270	<10	69	170	---	---	---	---	---	---	---	---	21.19	6.73	---	14.46
MW-9	06/30/1995	14,000	2,200	18	900	2,600	---	---	---	---	---	---	---	---	21.19	7.32	---	13.87
MW-9	10/11/1995	9,600	35	12	360	980	590	---	---	---	---	---	---	---	21.19	8.10	---	13.09
MW-9	01/17/1996	2,800	150	7.41	54	130	170	---	---	---	---	---	---	---	21.19	5.75	---	15.44
MW-9	04/10/1996	5,200	290	<5	92	220	240	---	---	---	---	---	---	---	21.19	5.17	---	16.02
MW-9	07/30/1996	5,100	960	<10	380	770	670	---	---	---	---	---	---	---	21.19	8.10	---	13.09
MW-9	10/17/1996	15,000	2,100	<25	590	1,300	1,500	---	---	---	---	---	---	2.4	21.19	9.12	---	12.07
MW-9	01/22/1997	5,600	690	<5.0	140	310	620	---	---	---	---	---	---	2.2	21.19	4.72	---	16.47
MW-9	04/01/1997	4,000	590	<10	140	200	600	---	---	---	---	---	---	2.2	21.19	6.86	---	14.33
MW-9	07/14/1997	7,100	860	<10	51	230	950	---	---	---	---	---	---	3.8	21.19	10.04	---	11.15
MW-9	10/08/1997	1,500	57	<2.0	2.0	13	540	---	---	---	---	---	---	8.2	21.19	11.38	---	9.81
MW-9	01/19/1998	2,500	280	<20	79	61	620	---	---	---	---	---	---	1.4	21.19	3.88	---	17.31
MW-9	04/28/1998	2,200	330	<20	91	110	640	---	---	---	---	---	---	1.6	21.19	5.87	---	15.32
MW-9	09/30/1998	2,800	490	<5.0	87	240	1,200	---	---	---	---	---	---	4.0	21.19	8.25	---	12.94
MW-9	12/09/1998	3,700	370	<5.0	83	130	1,100	---	---	---	---	---	---	2.9	21.19	8.07	---	13.12
MW-9	01/18/1999	9,670	1,110	<5.00	442	571	786	---	---	---	---	---	---	3.2	21.19	7.54	---	13.65

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-9	04/12/1999	3,140	272	<10.0	41.6	114	542	---	---	---	---	---	---	1.7	21.19	5.60	---	15.59
MW-9	07/27/1999	3,580	247	<1.00	67.7	137	432	---	---	---	---	---	---	1.6	21.19	7.30	---	13.89
MW-9	10/14/1999	3,200	199	<10.0	74.1	88.9	468	---	---	---	---	---	---	1.4	21.19	7.26	---	13.93
MW-9	01/06/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	---	1.5	21.19	8.31	---	12.88
MW-9	04/05/2000	2,790	156	<5.00	39.1	57.8	399	---	---	---	---	---	---	0.9	21.19	5.40	---	15.79
MW-9	07/20/2000	5,530	283	14.9	379	728	92.7	---	---	---	---	---	---	2.1	21.19	5.70	---	15.49
MW-9	10/24/2000	3,090	110	<5.00	46.4	63.3	362	---	---	---	---	---	---	1.0	21.19	5.90	---	15.29
MW-9	01/19/2001	6,060	180	<5.00	181	164	231	---	---	---	---	---	---	1.2	32.15	5.39	---	26.76
MW-9	04/27/2001	2,700	56	<0.50	26	46	---	150	---	---	---	---	---	1.2	32.15	5.38	---	26.77
MW-9	07/26/2001	4,200	50	<0.50	28	53	---	180	---	---	---	---	---	1.0	32.15	6.45	---	25.70
MW-9	10/02/2001	11,000	150	<2.0	120	140	---	180	---	---	---	---	---	1.4	32.15	6.10	---	26.05
MW-9	01/15/2002	1,200	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	1.2	32.15	4.77	---	27.38
MW-9	04/17/2002	2,200	24	<0.50	26	27	---	96	---	---	---	---	---	0.6	32.15	5.57	---	26.58
MW-9	07/11/2002	4,600	21	<0.50	17	33	---	140	---	---	---	---	---	2.1	32.15	6.64	---	25.51
MW-9	10/10/2002	2,800	8.8	<0.50	3.2	9.5	---	160	---	---	---	---	---	2.4	32.15	7.41	---	24.74
MW-9	01/21/2003	470	1.9	<0.50	1.7	1.1	---	13	---	---	---	---	---	1.0	32.15	5.47	---	26.68
MW-9	05/02/2003	770	2.9	<0.50	1.5	1.8	---	82	---	---	---	---	---	0.96	32.15	5.40	---	26.75
MW-9	07/10/2003	1,700	4.9	<2.5	3.0	5.2	---	100	---	---	---	---	---	---	32.15	6.59	---	25.56
MW-9	10/28/2003	2,400	<5.0	<5.0	<5.0	<10	---	180	---	---	---	---	---	---	32.15	6.94	---	25.21
MW-9	01/13/2004	550	<0.50	0.54	<0.50	<1.0	---	23	---	---	---	---	---	---	32.15	5.62	---	26.53
MW-9	04/01/2004	440	<0.50	<0.50	<0.50	<1.0	---	19	---	---	---	---	---	---	32.15	5.94	---	26.21
MW-9	07/21/2004	1,100	<0.50	<0.50	<0.50	<1.0	---	110	34	<2.0	<2.0	<2.0	---	---	32.15	6.60	---	25.55
MW-9	10/20/2004	730	<0.50	<0.50	<0.50	<1.0	---	56	---	---	---	---	---	---	32.15	4.48	---	27.67
MW-9	01/19/2005	320	<0.50	<0.50	<0.50	<1.0	---	3.0	---	---	---	---	---	---	32.15	4.56	---	27.59
MW-9	04/20/2005	100	<0.50	0.56	<0.50	<1.0	---	5.8	---	---	---	---	---	---	32.15	5.21	---	26.94
MW-9	07/20/2005	400	<0.50	1.4	<0.50	<1.0	---	45	20	<2.0	<2.0	<2.0	---	---	32.15	6.90	---	25.25
MW-9	10/19/2005	400	<0.50	<0.50	<0.50	<1.0	---	44	---	---	---	---	---	---	32.15	7.75	---	24.40
MW-9	01/24/2006	666	<0.500	3.24	<0.500	<0.500	---	2.96	---	---	---	---	---	---	32.15	4.64	---	27.51
MW-9	04/19/2006	<50.0	<0.500	<0.500	0.610	<0.500	---	28.4	---	---	---	---	---	---	32.15	3.48	---	28.67
MW-9	07/19/2006	660	<0.500	<0.500	<0.500	<0.500	---	49.2	<10.0	<0.500	<0.500	<0.500	---	---	32.15	5.63	---	26.52
MW-9	10/18/2006	994	<0.500	<0.500	<0.500	<0.500	---	39.9	---	---	---	---	---	---	32.15	6.58	---	25.57
MW-9	01/17/2007	100	<0.50	<0.50	<0.50	<1.0	---	17	---	---	---	---	---	---	32.15	6.03	---	26.12
MW-9	04/18/2007	400 h	0.29 i	<1.0	0.41 i	0.36 i	---	35	---	---	---	---	---	---	32.15	6.51	---	25.64
MW-9	07/18/2007	320 h	0.17 i	<1.0	<1.0	<1.0	---	34	24	<2.0	<2.0	<2.0	---	---	32.15	6.88	---	25.27
MW-9	10/18/2007	89 h	1.1	<1.0	0.55 i	<1.0	---	27	---	---	---	---	---	---	32.15	7.95	---	24.20
MW-9	01/16/2008	370 h	<0.50	<1.0	<1.0	<1.0	---	28	---	---	---	---	---	---	32.15	5.90	---	26.25
MW-9	04/16/2008	120	<0.50	<1.0	<1.0	<1.0	---	23	---	---	---	---	---	---	32.15	6.52	---	25.63

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-9	07/16/2008	360	<0.50	<1.0	<1.0	<1.0	---	29	21	<2.0	<2.0	<2.0	---	---	32.15	7.41	---	24.74
MW-9	10/15/2008	220	<0.50	<1.0	<1.0	<1.0	---	24	---	---	---	---	---	---	32.15	7.70	---	24.45
MW-9	01/21/2009	200	<0.50	<1.0	<1.0	<1.0	---	19	---	---	---	---	---	---	32.15	6.59	---	25.56
MW-9	04/15/2009	68	<0.50	<1.0	<1.0	<1.0	---	6.0	---	---	---	---	---	---	32.15	5.59	---	26.56
MW-9	10/21/2009	130	<0.50	<1.0	<1.0	<1.0	---	15	12	<2.0	<2.0	<2.0	---	---	32.15	6.90	---	25.25
MW-9	04/21/2010	Unable to access		---	---	---	---	---	---	---	---	---	---	---	32.15	---	---	---
MW-9	10/20/2010	260	<0.50	<1.0	<1.0	<1.0	---	11	---	---	---	---	---	---	32.15	7.75	---	24.40
MW-9	**04/20/2011**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**—**	**1.3**	**—**	**—**	**—**	**—**	**—**	**—**	**32.15**	**5.07**	**—**	**27.08**
MW-10	10/23/1991	27,000	1,600	110	1,800	510	---	---	---	---	---	---	---	---	19.74	8.57	---	11.17
MW-10	01/28/1992	3,800	360	14	170	39	---	---	---	---	---	---	---	---	19.74	7.60	---	12.14
MW-10	05/04/1992	3,000	360	<12.5	140	26	---	---	---	---	---	---	---	---	19.74	7.54	---	12.20
MW-10	07/20/1992	15,000	400	<25	180	67	---	---	---	---	---	---	---	---	19.74	8.59	---	11.15
MW-10	10/12/1992	16,000	320	<50	360	100	---	---	---	---	---	---	---	---	19.74	10.23	---	9.51
MW-10	01/12/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.74	---	---	---
MW-10	04/06/1993	14,000	370	<0.5	880	210	---	---	---	---	---	---	---	---	19.74	6.70	---	13.04
MW-10	07/12/1993	10,000	440	58	890	220	---	---	---	---	---	---	---	---	19.74	8.05	---	11.69
MW-10	10/13/1993	15,000	1,000	51	810	170	---	---	---	---	---	---	---	---	19.74	8.25	---	11.49
MW-10	01/20/1994	12,000	820	56	1,100	350	---	---	---	---	---	---	---	---	19.74	7.20	---	12.54
MW-10	04/13/1994	18,000	760	36	700	130	---	---	---	---	---	---	---	---	19.74	7.57	---	12.17
MW-10	07/19/1994	24,000	400	2.30	800	22	---	---	---	---	---	---	---	---	19.74	8.18	---	11.56
MW-10	10/27/1994	11,000	360	43	310	89	---	---	---	---	---	---	---	---	19.74	8.68	---	11.06
MW-10	01/03/1995	17,000	770	38	690	160	---	---	---	---	---	---	---	---	19.74	6.86	---	12.88
MW-10	04/13/1995	9,900	650	16	280	40	---	---	---	---	---	---	---	---	19.74	6.91	---	12.83
MW-10	06/30/1995	12,000	750	20	480	130	---	---	---	---	---	---	---	---	19.74	7.61	---	12.13
MW-10	01/17/1996	17,000	870	260	93	830	---	---	---	---	---	---	---	---	19.74	7.00	---	12.74
MW-10	04/10/1996	14,000	470	38	110	370	---	---	---	---	---	---	---	---	19.74	6.80	---	---
MW-10	07/30/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	19.74	---	---	---
MW-10	10/17/1996	---	---	---	---	---	---	---	---	---	---	---	---	---	19.74	---	---	---
MW-10	01/22/1997	10,000	520	<20	64	32	180	---	---	---	---	---	---	3.1	19.74	6.68	---	13.06
MW-10	04/01/1997	11,000	590	<20	53	32	210	---	---	---	---	---	---	2.8	19.74	7.34	---	12.40
MW-10	07/14/1997	6,600	410	13	28	11	89	---	---	---	---	---	---	1.4	19.74	8.10	---	11.64
MW-10	10/08/1997	7,600	220	13	65	22	190	---	---	---	---	---	---	6.4	19.74	8.20	---	11.54
MW-10	01/19/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.74	---	---	---
MW-10	04/28/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.74	---	---	---
MW-10	09/30/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	8.11	---	11.65
MW-10	12/09/1998	28,000	150	<100	240	160	<500	---	---	---	---	---	---	2.7	19.76	8.21	---	11.55

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	*Date*	*TPHg* (µg/L)	*B* (µg/L)	*T* (µg/L)	*E* (µg/L)	*X* (µg/L)	*MTBE 8020* (µg/L)	*MTBE 8260* (µg/L)	*TBA* (µg/L)	*DIPE* (µg/L)	*ETBE* (µg/L)	*TAME* (µg/L)	*Ethanol* (µg/L)	*DO Reading* (ppm)	*TOC* (ft MSL)	*Depth to Water* (ft TOC)	*SPH Thickness* (ft)	*GW Elevation* (ft MSL)
MW-10	01/18/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	---	---	---
MW-10	04/12/1999	8,320	71.2	27.4	138	456	<100	---	---	---	---	---	---	1.8	19.76	5.96	---	13.80
MW-10	07/27/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	---	---	---
MW-10	10/14/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	---	---	---
MW-10	01/06/2000	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	---	---	---
MW-10	02/01/2000	4880	40.2	5.27	27.0	8.42	75.5	23.9	---	---	---	---	---	1.6	19.76	6.43	---	13.33
MW-10	04/05/2000	4,950	97.6	6.72	20.2	5.39	104	---	---	---	---	---	---	1.7	19.76	7.00	---	12.76
MW-10	07/20/2000	2,800	166	191	27.6	88.7	81.5	---	---	---	---	---	---	1.0	19.76	7.03	---	12.73
MW-10	10/24/2000	5,070	79.6	46.6	34.2	11.7	242	---	---	---	---	---	---	1.9	19.76	7.96	---	11.80
MW-10	01/19/2001	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	19.76	---	---	---
MW-10	01/30/2001	6,920	362	14.2	22.7	<10.0	138	---	---	---	---	---	---	2.2	30.75	7.32	---	23.43
MW-10	04/27/2001	12,000	35	<2.5	37	6.5	---	51	---	---	---	---	---	1.2	30.75	8.28	---	22.47
MW-10	07/26/2001	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/02/2001	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/23/2001	470	3.5	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	1.8	30.75	7.02	---	23.73
MW-10	01/15/2002	3,000	5.4	<0.50	7.9	2.1	---	12	---	---	---	---	---	2.7	30.75	6.69	---	24.06
MW-10	04/17/2002	5,100	7.9	<1.0	9.3	2.6	---	15	---	---	---	---	---	0.6	30.75	7.34	---	23.41
MW-10	07/11/2002	5,700	38	2.2	7.8	3.5	---	43	---	---	---	---	---	2.0	30.75	7.85	---	22.90
MW-10	10/10/2002	4,700	53	2.1	3.8	2.8	---	80	---	---	---	---	---	3.3	30.75	8.04	---	22.71
MW-10	01/21/2003	3,900	11	1.0	7.5	2.3	---	51	---	---	---	---	---	1.7	30.75	6.81	---	23.94
MW-10	05/02/2003	3,100	1.4	<0.50	4.6	1.4	---	41	---	---	---	---	---	0.75	30.75	7.12	---	23.63
MW-10	07/10/2003	4,200	17	<1.2	6.2	<2.5	---	51	---	---	---	---	---	---	30.75	7.80	---	22.95
MW-10	10/28/2003	7,100	20	<5.0	8.4	<10	---	120	---	---	---	---	---	---	30.75	7.91	---	22.84
MW-10	01/13/2004	4,800	18	<2.5	6.3	<5.0	---	99	---	---	---	---	---	---	30.75	6.62	---	24.13
MW-10	04/01/2004	5,500	6.0	<5.0	<5.0	<10	---	59	---	---	---	---	---	---	30.75	7.00	---	23.75
MW-10	07/21/2004	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	07/29/2004	4,700	22	<5.0	5.5	<10	---	95	<50	<20	<20	<20	---	---	30.75	7.60	---	23.15
MW-10	10/20/2004	4,800	23	<5.0	<5.0	<10	---	110	---	---	---	---	---	---	30.75	7.90	---	22.85
MW-10	01/19/2005	1,200	1.1	<0.50	<0.50	<1.0	---	30	---	---	---	---	---	---	30.75	6.28	---	24.47
MW-10	04/20/2005	3,900	3.9	<0.50	2.7	<1.0	---	9.0	---	---	---	---	---	---	30.75	6.80	---	23.95
MW-10	07/20/2005	3,000	8.1	1.2	2.1	1.4	---	35	19	29	<2.0	<2.0	---	---	30.75	7.82	---	22.93
MW-10	10/19/2005	1,900	2.9	0.62	0.85	<1.0	---	39	---	---	---	---	---	---	30.75	8.30	---	22.45
MW-10	01/24/2006	6,110	0.710	<0.500	2.01	<0.500	---	20.1	---	---	---	---	---	---	30.75	6.47	---	24.28
MW-10	04/19/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	2.64	---	---	---	---	---	---	30.75	5.89	---	24.86
MW-10	07/19/2006	3,590	7.86	<0.500	0.780	<0.500	---	21.5	<10.0	<0.500	<0.500	<0.500	---	---	30.75	7.50	---	23.25
MW-10	10/18/2006	8,470	4.81	0.910	1.51	2.05	---	51.7	---	---	---	---	---	---	30.75	7.90	---	22.85
MW-10	01/17/2007	670	<0.50	<0.50	<0.50	<1.0	---	14	---	---	---	---	---	---	30.75	7.23	---	23.52

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-10	04/18/2007	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	07/18/2007	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/18/2007	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/26/2007	2,400 h	0.17 i	0.32 i	0.66 i	<1.0	---	28	---	---	---	---	---	---	30.75	6.65	---	24.10
MW-10	01/16/2008	2,200 h	<0.50	<1.0	<1.0	<1.0	---	16	---	---	---	---	---	---	30.75	5.80	---	24.95
MW-10	04/16/2008	380	<0.50	<1.0	<1.0	<1.0	---	4.6	---	---	---	---	---	---	30.75	6.95	---	23.80
MW-10	07/16/2008	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/15/2008	1,000	2.7	<1.0	1.4	<1.0	---	19	---	---	---	---	---	---	30.75	7.70	---	23.05
MW-10	01/21/2009	4,400	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	---	---	30.75	6.19	---	24.56
MW-10	04/15/2009	3,000	<5.0	<10	<10	<10	---	<10	---	---	---	---	---	---	30.75	6.30	---	24.45
MW-10	10/21/2009	2,200	0.71	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	---	---	30.75	5.95	---	24.80
MW-10	04/21/2010	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	30.75	---	---	---
MW-10	10/20/2010	920	<0.50	<1.0	<1.0	<1.0	---	4.3	---	---	---	---	---	---	30.75	7.25	---	23.50
MW-10	**04/20/2011**	**1,900**	**<0.50**	**0.50**	**<0.50**	**<1.0**	**---**	**<1.0**	**---**	**---**	**---**	**---**	**---**	**---**	**30.75**	**6.70**	**---**	**24.05**
MW-11	10/23/1991	140	<12	<0.3	0.37	0.56	---	---	---	---	---	---	---	---	22.06	8.06	---	8.06
MW-11	01/28/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	8.74	---	3.32
MW-11	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	8.29	---	13.77
MW-11	07/13/1992	140	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	10.50	---	11.56
MW-11	10/12/1992	75	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	12.40	---	9.66
MW-11	01/12/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	04/06/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	07/12/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	10/13/1993	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	11.47	---	10.59
MW-11	01/20/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	9.09	---	12.97
MW-11	04/13/1994	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	8.02	---	14.04
MW-11	07/19/1994	50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	9.82	---	12.24
MW-11	10/27/1994	60*	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	11.66	---	10.40
MW-11	01/03/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	6.15	---	15.91
MW-11	04/13/1995	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	6.00	---	16.06
MW-11	06/30/1995	70	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	---	---	22.06	8.31	---	13.75
MW-11	10/11/1995	60	53	<0.5	<0.5	0.80	3.0	---	---	---	---	---	---	---	22.06	10.30	---	11.76
MW-11	01/17/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	---	---	---	---	---	---	---	22.06	6.45	---	15.61
MW-11	04/10/1996	<50	<0.5	<0.5	<0.5	<0.5	3.9	---	---	---	---	---	---	---	22.06	6.05	---	16.01
MW-11	07/30/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	---	---	22.06	8.92	---	13.14
MW-11	10/17/1996	3,000	28	23	29	210	76	---	---	---	---	---	---	---	22.06	9.24	---	12.82
MW-11	01/22/1997	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	---	---	---	---	---	3.7	22.06	5.12	---	16.94

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO Reading (ppm)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)
MW-11	04/01/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	2.8	22.06	7.41	---	14.65
MW-11	07/14/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	1.9	22.06	9.74	---	12.32
MW-11	10/08/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	2.4	22.06	10.23	---	11.83
MW-11	01/19/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	3.2	22.06	3.69	---	18.37
MW-11	04/28/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	3.0	22.06	5.83	---	16.23
MW-11	09/30/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	12/09/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	01/18/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	04/12/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	22.06	---	---	---
MW-11	04/26/1999	63	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	3.6	22.06	5.80	---	16.26
MW-11	07/27/1999	<50.0	<0.500	<0.500	<0.500	<0.500	6.02	---	---	---	---	---	---	2.0	22.06	8.30	---	13.76
MW-11	10/14/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	---	2.4	22.06	8.99	---	13.07
MW-11	01/06/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	---	2.9	22.06	9.93	---	12.13
MW-11	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	3.53	---	---	---	---	---	---	1.8	22.06	5.90	---	16.16
MW-11	07/20/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	---	1.7	22.06	6.13	---	15.93
MW-11	10/24/2000	---	---	---	---	---	---	---	---	---	---	---	---	---	22.06	7.45	---	14.61
MW-11	01/19/2001	<50.0	<0.500	<0.500	<0.500	<0.500	4.29	---	---	---	---	---	---	1.6	32.99	5.95	---	27.04
MW-11	04/27/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	6.12	---	26.87
MW-11	07/26/2001	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	2.1	32.99	7.65	---	25.34
MW-11	10/02/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	6.17	---	26.82
MW-11	01/15/2002	69	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	1.5	32.99	4.95	---	28.04
MW-11	04/17/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	6.35	---	26.64
MW-11	07/11/2002	58	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	2.3	32.99	7.47	---	25.52
MW-11	10/10/2002	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	8.45	---	24.54
MW-11	01/21/2003	57	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	---	1.4	32.99	5.45	---	27.54
MW-11	05/02/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	5.14	---	27.85
MW-11	07/10/2003	<50	<0.50	<0.50	<0.50	<1.0	---	2.1	---	---	---	---	---	---	32.99	7.41	---	25.58
MW-11	10/28/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	7.78	---	25.21
MW-11	01/13/2004	56 d	<0.50	0.50	<0.50	<1.0	---	2.9	---	---	---	---	---	---	32.99	5.85	---	27.14
MW-11	04/01/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	6.02	---	26.97
MW-11	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	---	2.2	<5.0	<2.0	<2.0	<2.0	---	---	32.99	7.52	---	25.47
MW-11	10/20/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	7.20	---	25.79
MW-11	01/19/2005	<50	<0.50	<0.50	<0.50	<1.0	---	1.8	---	---	---	---	---	---	32.99	4.50	---	28.49
MW-11	04/20/2005	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	5.09	---	27.90
MW-11	07/20/2005	53 f	<0.50	<0.50	<0.50	<1.0	---	2.9	<5.0	<2.0	<2.0	<2.0	---	---	32.99	7.31	---	25.68
MW-11	10/19/2005	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	8.60	---	24.39
MW-11	01/24/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	1.38	---	---	---	---	---	---	32.99	4.38	---	28.61

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	*Date*	*TPHg* (µg/L)	*B* (µg/L)	*T* (µg/L)	*E* (µg/L)	*X* (µg/L)	*MTBE 8020* (µg/L)	*MTBE 8260* (µg/L)	*TBA* (µg/L)	*DIPE* (µg/L)	*ETBE* (µg/L)	*TAME* (µg/L)	*Ethanol* (µg/L)	*DO Reading (ppm)*	*TOC (ft MSL)*	*Depth to Water (ft TOC)*	*SPH Thickness (ft)*	*GW Elevation (ft MSL)*
MW-11	04/19/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	3.86	---	29.13
MW-11	07/19/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	2.22	<10.0	<0.500	<0.500	<0.500	---	---	32.99	7.07	---	25.92
MW-11	10/18/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	7.36	---	25.63
MW-11	01/17/2007	<50	<0.50	<0.50	<0.50	<1.0	---	0.92	---	---	---	---	---	---	32.99	6.34	---	26.65
MW-11	07/18/2007	<50 h	<0.50	<1.0	<1.0	<1.0	---	1.9	<10	<2.0	<2.0	<2.0	---	---	32.99	8.30	---	24.69
MW-11	01/16/2008	<50 h	<0.50	<1.0	<1.0	<1.0	---	1.6	<10	<2.0	<2.0	<2.0	---	---	32.99	5.39	---	27.60
MW-11	04/16/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	6.89	---	26.10
MW-11	07/16/2008	<50	<0.50	<1.0	<1.0	<1.0	---	1.5	<10	<2.0	<2.0	<2.0	---	---	32.99	8.31	---	24.68
MW-11	10/15/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	8.70	---	24.29
MW-11	01/21/2009	51	<0.50	<1.0	<1.0	<1.0	---	1.2	---	---	---	---	---	---	32.99	7.13	---	25.86
MW-11	04/15/2009	---	---	---	---	---	---	---	---	---	---	---	---	---	32.99	5.89	---	27.10
MW-11	10/21/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	---	---	32.99	7.15	---	25.84
MW-11	04/21/2010	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	32.99	---	---	---
MW-11	10/20/2010	76	<0.50	<1.0	<1.0	<1.0	---	1.5	---	---	---	---	---	---	32.99	8.75	---	24.24
MW-11	**04/20/2011**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**1.3**	**---**	**---**	**---**	**---**	**---**	**---**	**32.99**	**5.16**	**---**	**27.83**

Notes:
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to April 27, 2001, analyzed by EPA Method 8015 unless otherwise noted.
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to April 27, 2001, analyzed by EPA Method 8020.
MTBE = Methyl tertiary-butyl ether analyzed by method 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
Ethanol analyzed by EPA Method 8260B
DO = Dissolved oxygen
TOC = Top of casing elevation, in feet relative to mean sea level
SPH = Separate-phase hydrocarbon
GW = Groundwater
µg/L = Micrograms per liter
ppm = Parts per million
MSL = Mean sea level
ft = Feet
<x = Not detected at reporting limit x
--- = Not applicable

GROUNDWATER DATA
FORMER SHELL SERVICE STATION
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA

Well ID	*Date*	*TPHg* (µg/L)	*B* (µg/L)	*T* (µg/L)	*E* (µg/L)	*X* (µg/L)	*MTBE 8020* (µg/L)	*MTBE 8260* (µg/L)	*TBA* (µg/L)	*DIPE* (µg/L)	*ETBE* (µg/L)	*TAME* (µg/L)	*Ethanol* (µg/L)	*DO Reading* *(ppm)*	*TOC* *(ft MSL)*	*Depth to Water* *(ft TOC)*	*SPH Thickness* *(ft)*	*GW Elevation* *(ft MSL)*

a = Chromatogram pattern indicates an unidentified hydrocarbon.
b = MTBE could not be quantified due to co-eluting compounds.
c = The highest recovery value for TPH has been reported, but this should be considered an estimate. Repeated analysis yielded inconsistent results.
d = Hydrocarbon does not match pattern of laboratory's standard.
e = SPH present in well measured at less than 0.01 feet. Visual inspection revealed the presence of distinct phases within the sample, indicating the possible presence of undissolved hydrocarbons.
f = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.
g = Secondary ion abundances were outside method requirements. Identification based on analytical judgment.
h = Analyzed by EPA Method 8015B (M).
i = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
* = Analyzed outside the EPA recommended holding time.

When SPHs are present, groundwater elevation is adjusted using the equation:
Corrected Groundwater Elevation = Top of Casing Elevation - Depth to water + (0.8 x Hydrocarbon Thickness).
Resurvey of wells was performed on August 28, 1998 by Virgil Chavez Land Surveying of Vallejo, CA..
All wells except MW-11 surveyed February 26, 2001 by Virgil Chavez Land Surveying of Vallejo, CA.

APPENDIX A

SITE HISTORY

SITE HISTORY

1984 Dispenser Leak: During dispenser replacement in December 1984, gasoline-saturated soil was discovered beneath the pump island area. Product lines were tested, and super unleaded and regular gasoline systems failed. A review of inventory records indicated a loss of approximately 2,500 gallons of super-unleaded and 1,500 gallons of regular gasoline. No separate-phase hydrocarbons (SPHs) were recovered. Delta Environmental Consultants' (Delta's) January 19, 1989 *Hydrogeologic Assessment Work Plan* presents this information.

1985 Underground Storage Tank (UST) Replacement: In January 1985, the steel USTs and product lines were replaced with double-walled fiberglass tanks and product lines. The UST replacement is summarized in Delta's January 19, 1989 *Hydrogeologic Assessment Work Plan.*

1988 Subsurface Investigation: In August 1988, Ensco Environmental Services, Inc. (Ensco) drilled five soil borings (B-1 though B-5) to a maximum depth of 20.5 feet below grade (fbg). Soil samples contained up to 1,400 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and 1.9 mg/kg benzene. The maximum detections of TPHg and benzene were both in a soil sample collected from B-1, near the USTs, at 5 fbg. Investigation details are provided in Ensco's September 12, 1988 *Soil and Ground-water Investigation* report.

1989 Subsurface Investigation: In April 1989, Delta installed four on-site monitoring wells (MW-1 though MW-4). Soil samples collected from the well borings contained up to 850 mg/kg TPHg and 1.2 mg/kg benzene. The maximum concentrations of TPHg and benzene were both detected in a soil sample from 5.5 fbg in well boring MW-1, located adjacent to soil boring B-1. Delta conducted slug tests on the four new wells and obtained calculated hydraulic conductivities ranging from 2.13 to 3.45 feet per day. Delta's August 22, 1989 *Phase I Hydrogeologic Assessment Report* presents well installation details.

1990 Subsurface Investigation and Well Survey: In January 1990, Delta installed four additional on-site monitoring wells (MW-5 though MW-8) and one off-site well (MW-9). Soil samples collected from the well borings contained up to 14 mg/kg TPHg and 0.078 mg/kg benzene. In addition, Delta reviewed California Department of Water Resources (DWR) well records and identified 5 municipal, 3 domestic, and 17 industrial water-producing wells within one mile of the site. Delta's June 20, 1990 *Phase II Hydrogeologic Assessment Report* provides well installation and well survey details.

1991 Subsurface Investigation: In October 1991, Delta installed two off-site groundwater monitoring wells (MW-10 and MW-11). Soil samples collected from the well borings contained up to 1.8 mg/kg TPHg and 0.06 mg/kg benzene. The maximum concentrations of TPHg and benzene were both detected in a soil sample collected from well boring MW-10 at 10 fbg. Well installation details are presented in Delta's December 12, 1991 *Additional Ground Water Monitoring Well Installation and Quarterly Ground Water Monitoring Report, Fourth Quarter 1991.*

1991 - 2011 SPH Recovery: Between October 1991 and October 1997, SPHs were observed for various periods in monitoring wells MW-1, MW-2, and MW-4 through MW-7. Since October 2003, SPHs have been observed intermittently in MW-6R. Bailing, skimming, and absorbent cartridges have removed an estimated 24.6 pounds of SPHs (through second quarter 2011). SPH removal is summarized in various periodic groundwater monitoring reports from the first quarter 1993 through the fourth quarter 1997 and from the third quarter 2007 through the present.

1993 Soil Vapor Extraction (SVE) Test: In November 1993, Weiss Associates (WA) conducted an SVE test using wells MW-1, MW-2, MW-4, and MW-6. Initially, a 15-minute test was conducted at each well, and wells MW-1 and MW-6 were selected for longer term testing. Testing at applied vacuums ranging from 40 to 64 inches of water resulted in vapor flow rates from 8 to 19 standard cubic feet per minute. Based on laboratory analytical results, the hydrocarbon concentrations in soil vapor ranged from 1,400 to 4,500 parts per million by volume (ppmv) TPHg. No benzene was detected in the extracted soil vapor. A methane concentration of 9,000 ppmv was detected in vapors from MW-6. Mass removal rates from 7 to 32 pounds TPHg per day were estimated from the results. WA stated that vapor flow rates would be limited by groundwater upwelling in the extraction wells as a result of the applied vacuum. The pilot test data are presented in WA's January 27, 1994 *Soil Vapor Extraction Test Results* letter, which is included in Appendix A of their April 8, 1994 groundwater monitoring report.

1997 Waste Oil UST, Dispenser, and Piping Removal: In June 1997, Armer-Norman & Associates removed a 550-gallon waste oil UST, two dispensers, and associated piping from the site. Cambria Environmental Technology, Inc. (Cambria) collected two soil samples from the sidewalls of the waste oil tank excavation and 10 soil samples from beneath the former dispensers and product piping. The soil samples contained up to 120 mg/kg TPHg (P-8 at 2.5 fbg), 0.13 mg/kg benzene (P-1 at 2.5 fbg), 7.9 mg/kg methyl tertiary-butyl ether (MTBE; Disp-2 at 2 fbg), and 2,000 mg/kg lead (P-7 at 2 fbg). Cambria's December 5, 1997 *Waste Oil Tank Removal and Gasoline Dispenser/Pipeline Removal Soil Sampling Report* presents these results.

1997 Well Destruction: In December 1997, Cambria destroyed monitoring wells MW-3 and MW-6 to accommodate the new site building, as reported in Cambria's March 18, 1998 *Well Abandonment Report.*

1997 - 1998 Station Renovation: In December 1997, the station building and two adjacent residential buildings were demolished, and the site was re-graded in preparation for future construction. During 1998, Winmax Construction Corporation constructed a new station building which included installing perforated plastic piping into the gravel base beneath the foundation of the site building to remove hydrocarbon vapors should they accumulate beneath the building. Pea gravel from above the USTs, and soil excavated during grading and footing excavation was sampled, profiled for disposal, and transported to an appropriate disposal facility. Groundwater was pumped from the building foundation excavations to allow construction.

1998 Risk-Based Corrective Action (RBCA) Analysis: In June 1998, Cambria prepared a RBCA analysis for the site to determine the potential risks posed by residual hydrocarbons in soil and groundwater underlying the site. Cambria's Tier 2 risk assessment demonstrated that the risk associated with exposure to hydrocarbons in soil and groundwater beneath the new on-site building was acceptable. The analysis found that no further remediation action was warranted. Cambria's June 22, 1998 *Risk-Based Corrective Action* presents details of this analysis.

1998 Subsurface Investigation: In June 1998, Cambria installed two groundwater monitoring wells (MW-3R and MW-6R) to replace monitoring wells MW-3 and MW-6 which were destroyed to make way for the new station building. Because soil data had been collected during previous well installations, no soil samples were submitted for chemical analysis during this investigation. Cambria's July 1, 1998 *Well Installation Report* provides well installation details.

2001 Sensitive Receptor Survey (SRS), Conduit Study, and Site Conceptual Model (SCM): In 2001, Cambria reviewed DWR well records within a one-half mile radius of the site. The nearest well identified in the survey was a 97-foot-deep irrigation well located approximately 700 feet west of the site. In January 2002, a representative for the property owner indicated to Cambria that the well had not been used in decades and was scheduled for destruction. The site where the well was located, the former City of Paris Cleaners at 3516 Adeline Street, is also an open Leaking Underground Fuel Tank site overseen by Alameda County Environmental Health (ACEH).

Cambria also performed a utility conduit survey to determine the location of potential preferential groundwater pathways in the site vicinity. Cambria reviewed maps and plans from the City of Oakland Engineering Department and the East Bay Municipal Utility District (EBMUD) and conducted a site visit to visually identify utilities in the vicinity. Utility survey results indicated that San Pablo Avenue is underlain by two southward flowing 8-inch-diameter sanitary sewer pipes, an 18-inch-diameter southward-flowing storm drain, and two water lines. A water line and a westward-flowing, 8-inch-diameter sanitary sewer line is located beneath 35th Street. Three electrical utility vault boxes, possibly associated with traffic control signals, and one Pacific Bell utility vault are located in the sidewalk near the southeast corner of San Pablo Avenue and 35th Street. EBMUD utility vault boxes are located in the sidewalks of both 35th Street (near the northeastern corner of the site) and San Pablo Avenue (near the southern edge of the property). Two cable television utility vaults are located in the sidewalk of 35th Street near the northwest corner of the property. City of Oakland engineering maps of the area indicate that the sanitary sewer lines are typically buried at approximately 6 to 7 fbg and that the flow-line elevation of the sanitary sewer line beneath 35th Street ranges from 23.82 to 25.22 feet above mean sea level (ft MSL). Storm drains in the area are typically buried at approximately 7 to 9 fbg, and the flow-line elevation of the storm drain beneath San Pablo Avenue is approximately 21 ft MSL. The exact depths to water mains were not available, but according to EBMUD, the tops of the water main pipes are typically 8 fbg. Based on this information, the back-filled trenches of the sanitary sewer, storm drain, and water lines are likely to be deeper at times than shallow groundwater and may potentially affect groundwater flow.

Cambria's July 6, 2001 *Second Quarter 2001 Monitoring Report* included an SCM, which summarized the environmental conditions and findings of the well survey and conduit study.

2002 Subsurface Investigation: In October 2002, Cambria attempted to install a shallow groundwater well within San Pablo Avenue opposite the southerly site property line to further define the horizontal extent of MTBE. A concrete road base was encountered, and Cambria could not complete the well installation. Cambria contacted the City of Oakland Department of Public Works for more information about the street construction of the concrete road base. Due to safety considerations, Cambria did not make an additional attempt to install this well through the concrete road base. Cambria's *First Quarter 2003 Monitoring Report* discusses the attempted well installation effort.

2004 Groundwater Extraction (GWE): In January 2004, Cambria coordinated a one-time GWE event, using a vacuum truck to remove SPHs and groundwater from well MW-6R

prior to the monitoring event. Approximately 71 gallons of water with SPHs were removed in 40 minutes of extraction. The GWE event is described in Cambria's April 19, 2004 *First Quarter 2004 Monitoring Report.*

2004 Agency Response Letter: Cambria's April 12, 2004 *Agency Response* letter addressed comments in ACEH's March 9, 2004 letter. ACEH's letter requested a feasibility study and corrective action plan (FS/CAP) and sought a response to five technical comments. Cambria recommended that prior to preparing an FS/CAP, a revised SCM (to update the 2001 SCM) should be developed.

2004 - 2005 Updated SRS and SCM: In March 2004, Cambria updated the 2001 SRS. As part of the SRS, Cambria reviewed DWR well records within a one-half mile radius of the site and identified four possible receptor wells. The closest identified well to the site was a 97-foot-deep well of unknown use located approximately 700 feet west and cross-gradient of the site. As stated above, in January 2002, a representative for the property owner indicated to Cambria that the well had not been used in decades and was scheduled for destruction. A down-gradient well identified approximately 2,500 feet to the southwest of the site is a 215-fbg well of unknown use or ownership. Site inspection of the approximate location in 2004 indicated three vacant lots and one unidentified building. Two wells were identified approximately 2,000 feet up gradient from the site: a 108-fbg well of unknown use, reportedly originally owned by a bakery, located to the northwest and a 510-fbg well of unknown use, reportedly originally owned by a laundry. The exact location of the laundry well is uncertain due to incomplete records, but it is believed to be located to the north-northwest. From this revised well survey and SRS, Cambria concluded that there are no known water-production wells or known shallow or deep groundwater users within one-half mile of the site.

Cambria's December 19, 2005 *SCM Report*, which included the SRS data, recommended continued groundwater monitoring, a risk evaluation, and investigation of on-site water use or leaks for the source of groundwater mounding observed at the site.

2006 Water Leak Investigation and Risk Evaluation: In January 2006, Blaine Tech Services, Inc. (BTS) observed water leaking into a long vertical crack in well MW-8's casing. BTS removed the well box to attempt to repair the well casing and discovered a leak in the adjacent station sprinkler system. Due to the length of the vertical crack in MW-8 (more than 6 feet), BTS was unable to repair the well. Cambria concluded this leak and cracks observed in the top of wells MW-5 and MW-9 were a possible cause of groundwater mounding at the site. BTS was able to repair wells MW-5 and MW-9.

In order to further evaluate potential risks from residual soil and groundwater impacts at this site to human health and environment, Cambria identified and evaluated plausible routes of exposure and possible receptors near or on site. For applicable scenarios, Cambria evaluated the available analytical data in comparison with the applicable environmental screening levels (ESLs) published in the San Francisco Bay Regional Water Quality Control Board's *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater* (Interim Final - February 2005). Based on this evaluation, Cambria recommended a soil vapor investigation in the area of the station building.

These activities are detailed in Cambria's March 28, 2006 *Groundwater Monitoring Report - First Quarter 2006, Water Leak Investigation, and Risk Evaluation.*

2006 Well Destruction: In June 2006, Cambria destroyed well MW-8 due to the large irreparable crack discussed above. Cambria's June 23, 2006 *Groundwater Monitoring Report - Second Quarter 2006 and Well Destruction Report (MW-8)* presents well destruction details.

2006 Subsurface Investigation: In October 2006, Cambria drilled three soil borings (SB-1 through SB-3) to assess residual lead concentrations near former dispenser piping and three soil borings (SB-4 through SB-6) to evaluate soil gas concentrations near the station building. Soil samples collected from the borings near the former dispenser piping contained up to 46,000 mg/kg TPHg, 74 mg/kg benzene, 0.15 mg/kg MTBE, and 620 mg/kg lead. These data indicated that the elevated lead concentrations observed historically in sample P-7 at 2 fbg (2,000 mg/kg) are not horizontally or vertically extensive. Soil samples collected from the borings near the station building contained up to 7.2 mg/kg TPHg, 0.012 mg/kg benzene, 0.059 mg/kg MTBE, and 29 mg/kg lead. No TPHg, BTEX, or MTBE was detected in soil vapor samples collected from these borings; however, the samples were analyzed beyond recommended hold time. CRA's December 14, 2006 *Site Investigation Report* provides investigation details.

Groundwater Monitoring: Groundwater monitoring has been conducted at the site since August 1991. SPHs were observed intermittently in wells MW-1, MW-2, MW-4, MW-5, MW-6, and MW-7 from 1991 to 1997. SPHs have been observed intermittently in well MW-6R from 2003 to the present.

APPENDIX B

CROSS SECTIONS AND BORING LOGS

08/09/05

Geologic Cross Section A-A'

A — North-Northwest — A'

South-Southeast

B-B'

C-C'

35th Street

34th Street

PL

MW-8 32.49 (proj. 16' E)

MW-2 32.97 (proj. 25' W)

MW-7 32.05 (proj. 29 E)

Shell dispensers

MW-1 32.50

B-4 (proj. 27' W)

B-5 (proj. 18' W)

MW-5 33.00

MW-3 NS (proj. 25' E)

Arco dispensers

SB2 (proj. 29' E)

Arco dispensers

B-3 (proj. 13' E)

B-4 (proj. 9' W)

MW-1 NS (proj. 5' W)

6"Ø SD

sidewalk

SS lateral

Shell USTs

Arco USTs

CH

CL

SW

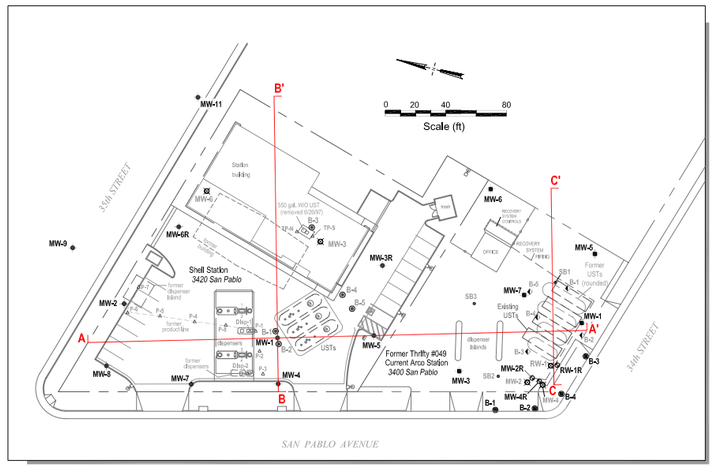
GC

Elevation (in feet above mean sea level)

35 30 25 20 15 10 5 MSL -5 -10 -15 -20

Depth (in feet below grade)

0 5 10 15 20 25 30 35 40 45 50



EXPLANATION

= Low Permeability Soils
- CH - Inorganic Clay
- CL - Clay
- SC - Clayey Sand

= Moderate Permeability Soils
- ML - Clayey Silt
- SM - Silty Sand

= High Permeability Soils
- SP - Poorly Graded Sand
- SW - Well Graded Sand
- GC - Gravels

= Fill (Tank Pit)

Well ID — Well Designation
Elev. — Top of Well Vault Elevation
NS — Not surveyed

Groundwater Monitoring Well
Well Screen Interval
Bottom of boring
Groundwater Table
Initial Groundwater level
Depth of Groundwater - 7/21/2004

10 — Scale (ft) — 0 30

FIGURE

B-1

Shell-branded Service Station
3420 San Pablo Avenue
Oakland, California

CAMBRIA

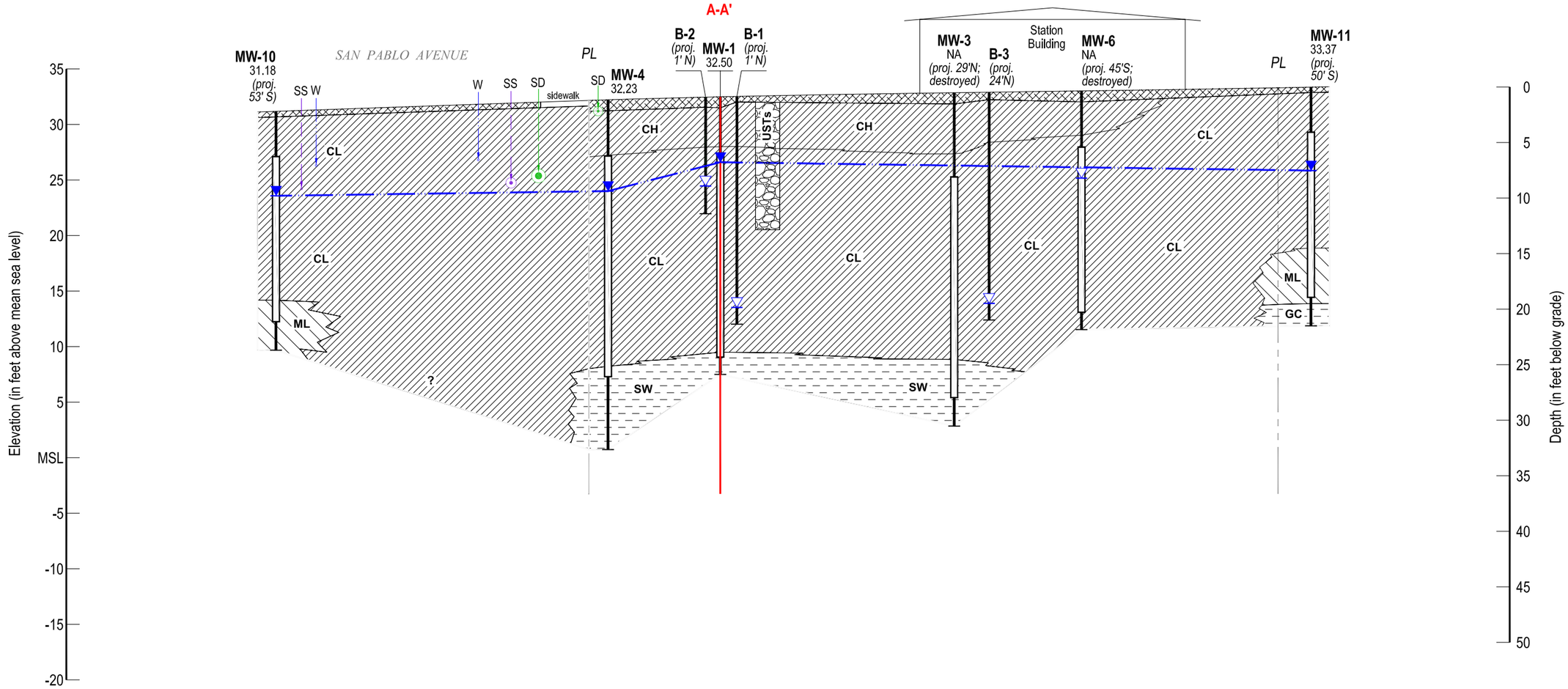
G:\OAKLAND 3420 SAN PABLO\FIGURES\X-SECT A-A'.DWG

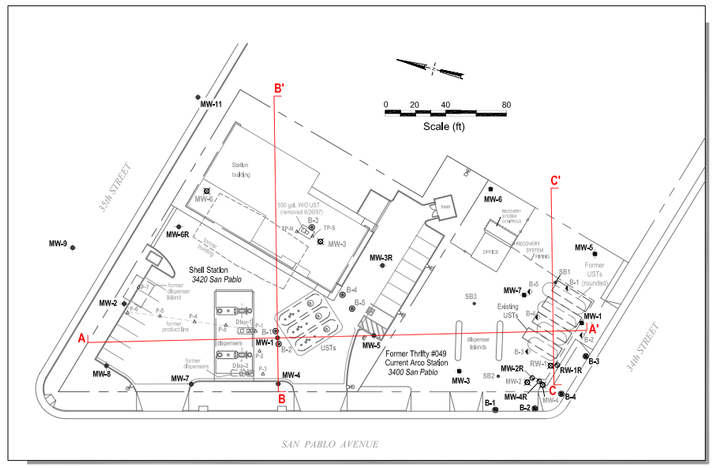
08/09/05

Geologic Cross Section B-B'

B West-Northwest — East-Southeast B'

A-A'





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- **SP** - Poorly Graded Sand
- **SW** - Well Graded Sand
- **GC** - Gravels

= Fill (Tank Pit)

Well ID — Well Designation
Elev. — Top of Well Vault Elevation
NS — Not surveyed

Groundwater Monitoring Well
Well Screen Interval
Bottom of boring
Groundwater Table
Initial Groundwater level
Depth of Groundwater - 7/21/2004

10
Scale (ft)
0 30

FIGURE
B-2

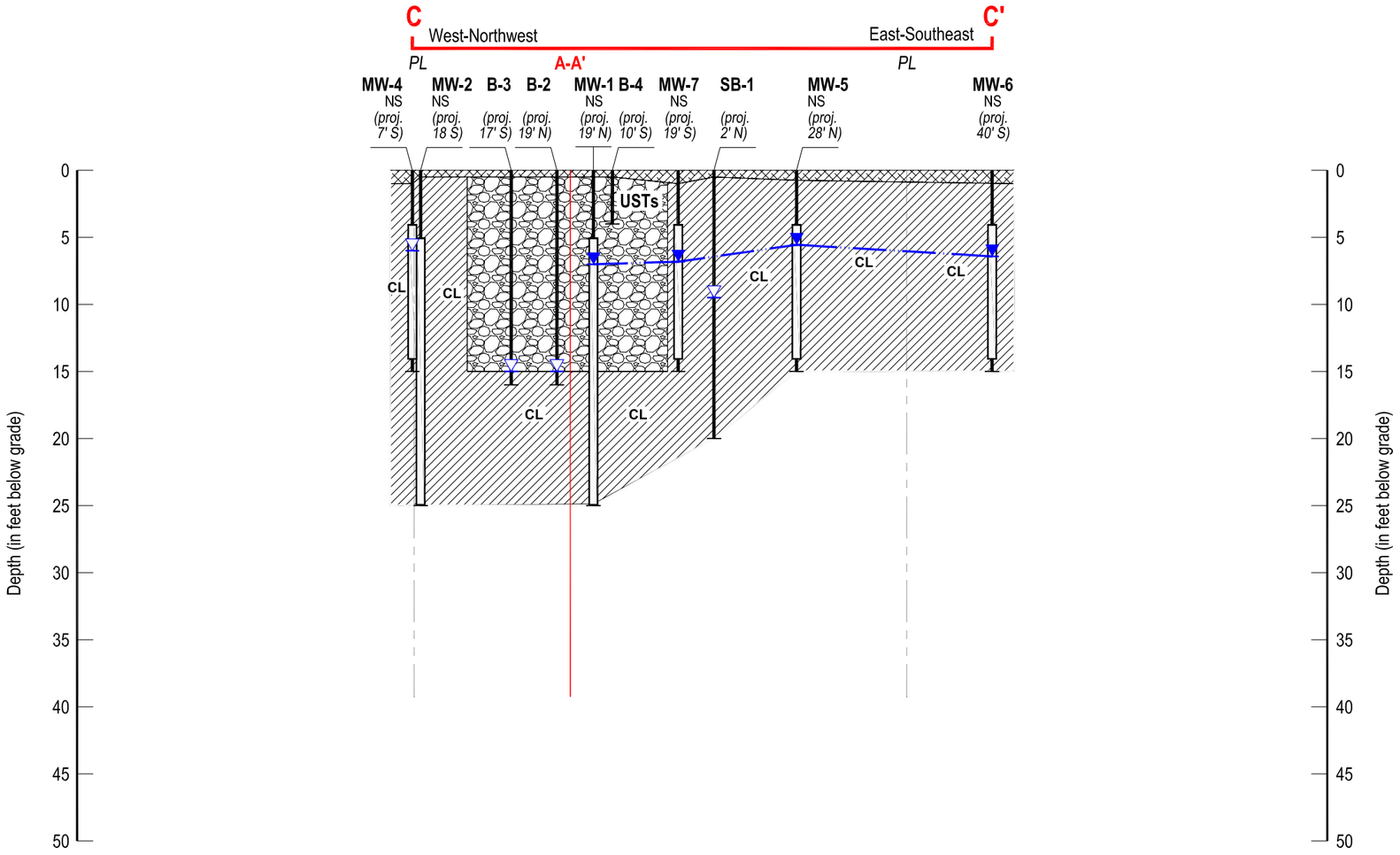
Shell-branded Service Station
3420 San Pablo Avenue
Oakland, California

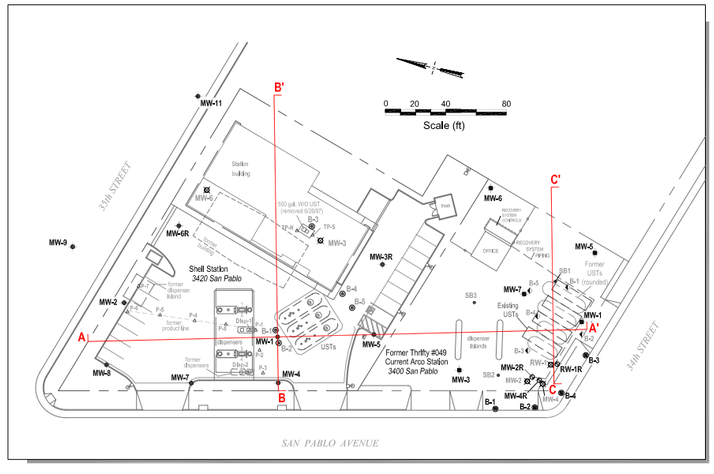
CAMBRIA

G:\OAKLAND 3420 SAN PABLO\FIGURES\X-SECT B-B'.DWG

08/18/05

Geologic Cross Section C-C'





EXPLANATION

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= Moderate Permeability Soils
- **ML** - Clayey Silt
- **SM** - Silty Sand

= High Permeability Soils
- **SP** - Poorly Graded Sand
- **SW** - Well Graded Sand
- **GC** - Gravels

= Fill (Tank Pit)

Well ID — Well Designation
Elev. — Top of Well Vault Elevation
NS — Not surveyed

Groundwater Monitoring Well
Well Screen Interval
Bottom of boring
Groundwater Table
Initial Groundwater level
Depth of Groundwater - 7/21/2004

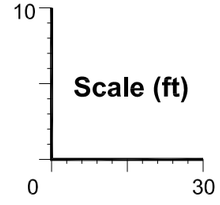


FIGURE
B-3

Shell-branded Service Station
3420 San Pablo Avenue
Oakland, California

CAMBRIA

G:\OAKLAND 3420 SAN PABLO\FIGURES\X-SECT C-C'.DWG

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
3420 SAN PABLO AVE.
OAKLAND, CA

PROJECT NUMBER: 1859G

BORING NO. B-1

DATE DRILLED: 8/8/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt - 2", baserock - 4"		
1-4			CL	SILTY CLAY, very dark gray (7.5YR 3/0), slight petroleum odor, moderately high plasticity, stiff, moist		
5	B-1-1	27	CH	SILTY CLAY, dark gray (10YR 4/1), some angular brown gravel sized fragments, petroleum odor, moderately high plasticity, very stiff, moist.		155
6-9			CL	SILTY CLAY, olive gray to gray (5Y 5/2 to 7.5Y 5/0), localized fine grained sands, some angular gravel up to 1.5" across, petroleum odor, moderate plasticity, very stiff, moist		
10	B-1-2	32				150
11-13						-
14			CL	SANDY CLAY, mottled browns (10YR 5/4 to 10YR 5/8),some fine to medium sands and angular, medium gravels, no petroleum odor, stiff, moist to very moist		
15	B-1-3	13				0
16-17						
18-19			CL	SILTY CLAY, mottled reddish yellow to light yellow (7.5YR 6/8 to 2.5Y 6/4), locally sandy areas, some gravels, no petroleum odor, very stiff, moist to very moist	▽	
				8/8/88, Groundwater encountered - 19 ft.		
20	B-1-4	32				0
21				Bottom of boring =20.5 feet		

SUPERVISED AND APPROVED BY R.G./C.E.G.

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
3420 SAN PABLO AVE.
OAKLAND, CA

PROJECT NUMBER: 1859G

BORING NO. B-2

DATE DRILLED: 8/8/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt - 2", baserock - 9"		
1-4			CH	SILTY CLAY, very dark gray (7.5 3/0), some fine grained sands and gravels, moderately high plasticity, petroleum odor, stiff, moist		
5	B-2-1	30	CL	SILTY CLAY to SANDY CLAY, gray (2.5Y 5/0), fine grained sands, some subangular gravels up to 0.5" across, petroleum odor, very stiff, moist		230
7-9			CL	SILTY CLAY, mottled light gray to grayish brown (7.5YR 6/0 to 10YR 5/2), some medium to coarse grained sands and gravels up to 0.5" across, petroleum odor, very stiff, moist	▽ 8/8/88, Groundwater encountered - 8 ft.	
10	B-2-2	30				210
				Bottom of boring = 10.5 feet		
11-21						

SUPERVISED AND APPROVED BY R.G./C.E.G.

environmental services, inc.

SHELL STATION
3420 SAN PABLO AVE.
OAKLAND, CA

BORING NO: B-3

DATE DRILLED: 8/8/88

PROJECT NUMBER: 1859G

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt - 2", baserock - 6"		
1-4			CH	SILTY CLAY, very dark gray (7.5YR 3/0), localized fine grained sands, no petroleum odor, moderately high plasticity, stiff, moist		
5	B-3-1	30	CH	SILTY CLAY, mottled strong brown to brownish yellow (7.5YR 6/6 to 7.5YR 6/5), localized fine grained sands and angular to subangular gravels up to 0.5" across, no petroleum odor, moderately high plasticity, very stiff, moist		0
10	B-3-2	25				0
13			CL	SANDY CLAY, mottled brownish yellow to yellowish brown (10YR 6/6 to 10YR 5/8), fine grained sands, no petroleum odor, stiff, moist to very moist		-
15	B-3-3	16				0
16-19			CL-SC	SANDY CLAY to CLAYEY SAND, mottled light gray to dark brown (10YR 7/1 to 10YR 3/8), fine grained sands up to 60%, no petroleum odor, stiff to medium dense, wet		
				8/8/88, Groundwater encountered - 19 ft.	▽	
20	B-3-4	16				0
21				Bottom of boring = 20.5 feet		

SUPERVISED AND APPROVED BY R.G./C.E.G. [signature]

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
3420 SAN PABLO AVE.
OAKLAND, CA

BORING NO: B-4

DATE DRILLED: 8/8/88

PROJECT NUMBER: 1859G

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt - 2", baserock - 4"		
1-4			CH	SILTY CLAY, very dark gray (7.5YR 3/0), localized fine grained sands, no petroleum odor, moderately high plasticity, stiff, moist		
5	B-4-1	24	CL	SANDY CLAY, mottled gray to strong brown (7.5YR 5/0 to 7.5YR 5/6), fine to medium grained sands up to 40%, angular to subangular gravels up to 0.5" across, locally very sandy and gravelly, no petroleum odor, very stiff, moist		0
6-8						
9			CL	SANDY CLAY, mottled brown to yellowish brown (10YR 5/3 to 10YR 5/6), fine grained sand, locally very sandy and very clayey, no petroleum odor, hard, moist		
10	B-4-2	35				0
11-13						-
14				Localized very gravelly beds, very stiff		
15	B-4-3	18		Root holes containing free water		0
16-18						
19				8/8/88, Groundwater encountered - 19 ft.	▽	
20	B-4-4	30				0
21				Bottom of boring = 20.5 feet		

SUPERVISED AND APPROVED BY R.G./C.E.G.

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
3420 SAN PABLO AVE.
OAKLAND, CA

PROJECT NUMBER: 1859G

BORING NO. B-5

DATE DRILLED: 8/8/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Asphalt - 2", baserock - 4"		
1-4			CH	SILTY CLAY, very dark gray (7.5YR 3/0), localized fine grained sands, no petroleum odor, moderately high plasticity, stiff, moist		
5	B-5-1	28	CL	SANDY CLAY, mottled grayish brown to yellowish brown (10YR 5/2 to 10YR 5/6), fine to coarse sand up to 40%, locally abundant gravels up to 0.5" across, no petroleum odor, very stiff, moist		0
6-9			CL	SANDY CLAY, mottled gray to brownish yellow (10YR 5/1 to 10YR 6/6), fine grained sands up to 30%, root holes, no petroleum odor, low plasticity, hard, moist		
10	B-5-2	38				0
11-13						-
14			CL	SANDY CLAY, mottled yellow browns (10YR 5/4 to 10YR 5/8), fine grained sands up to 40%, locally abundant gravels up to 0.5" across, no petroleum odor, stiff, moist to very moist, free water in root holes		
15	B-5-3	13				0
16-18					▽	
19				8/8/88, Groundwater encountered - 19 ft.		
20	B-5-4	23		Decreasing sand, very stiff		0
21				Bottom of boring = 20.5 feet		

SUPERVISED AND APPROVED BY R.G./C.E.G.

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-1	SHEET 1 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 8:00		COMPLETED: 4-11-89/10:30
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 100.00 (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLER NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE REC (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: UNITS: Tip	GENERAL OBSERVATION NOTES Odor
					1	ASPHALT AND ROAD BASE		
					2	CLAY; very dark gray, highly plastic, slightly moist, no sand (CH)		
					3			
					4			
CA	MW1 1	9/ 12/ 15	5.0- 6.5	18	5	SANDY CLAY; dark greenish gray, moderately plastic, slightly moist, sand fine to coarse, some gravel toward the bottom of the unit (CL)	1100	Strong odor
					6			
					7			
					8			
					9			
CA	MW1 2	12/ 15/ 18	10.0- 11.5	18	10		375	Slight odor
					11			
					12			
					13			
					14			
CA	MW1 3	6/6/ 9	15.0- 16.5	17	15	SILTY CLAY; dark yellowish brown, moderately plastic, very moist, stiff, some gravel at the bottom of unit (CL)	30	Slight odor
					16			
					17			
					18			
					19			
CA	MW1 4	11/ 15/ 21	20.0- 21.5	15	20		3	Very slight odor
					21			
					22			
					23			

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST
SIGNATURE
TYPED NAME

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-1	SHEET 2 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 8:00/4-11-89		COMPLETED: 10:30/4-11-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 100.00 (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE REC (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION / INSTRUMENT: / UNITS: Tip	GENERAL OBSERVATION NOTES
CA	MW1 6	12/ 14/ 20	25.0- 26.5	6	25	GRAVELLY SAND; brown, very coarse sand, saturated, gravel 1/2 inch to 1/4 inch, minor plastic fines (SW)	Lost sample	No odor
					26			
					27	Total Depth 25.0 feet		
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			
					41			
					42			
					43			
					44			
					45			
					46			
					47			

WATER LEVEL DATA				PROFESSIONAL GEOLOGIST
DATE				
TIME				SIGNATURE
GWL				
CASING DEPTH				TYPED NAME

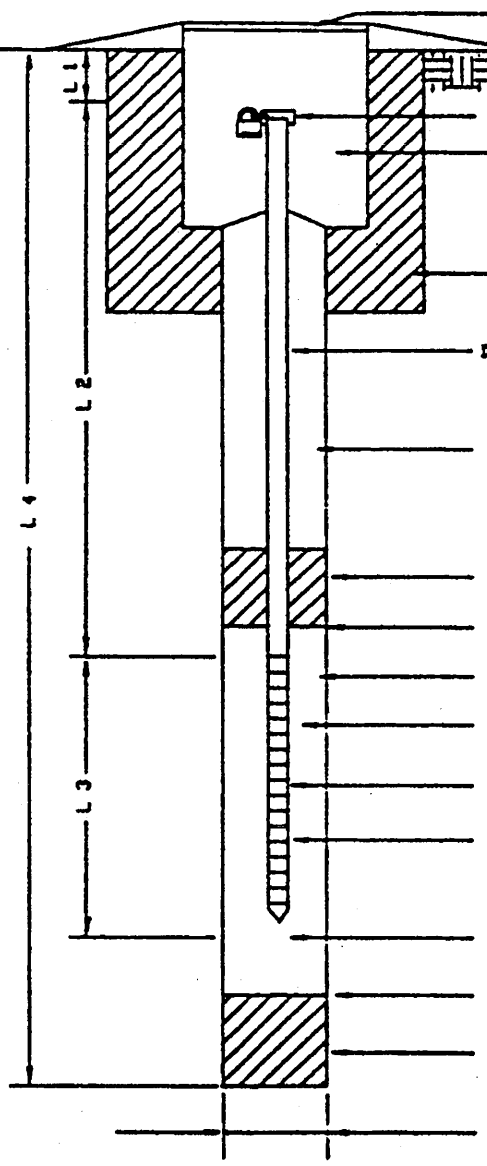
INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT Oakland Shell

DELTA NO. 40-88-666

MONITORING WELL NO. MW-1

ELEVATIONS: TOP OF RISER 100.0 relative
GROUND LEVEL _____



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	15-inch galvanized
TOTAL LENGTH	12 inches
LENGTH ABOVE GROUND	0 foot
THICKNESS AND TYPE OF SEAL	18 inches, concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4-inch PVC SCH 40 Flush-threaded
TYPE OF BACKFILL AROUND RISER	Concrete with 5% bentonite
THICKNESS AND TYPE OF SEAL	2 feet, bentonite pellets
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	2 feet
TYPE OF FILTER AROUND SCREEN	16/40 clementine
MONITORING WELL MATERIAL	PVC SCH 40
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inches 20 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	25 feet
DEPTH TO THE BOTTOM OF FILTER SAND	25 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 5 FT.
L 3 = 20 FT.
L 4 = 25 FT.

INSTALLATION COMPLETED:
DATE: 4-11-1989
TIME: 10:30

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
4-17-1989	13:25	6.30

* MEASURE POINT: Top of Casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-2	SHEET 1 OF 1
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 8:00/4-10-89		COMPLETED: 9:45/4-10-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 100.29 (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLER NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE RECOV (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: UNITS: Tip	GENERAL OBSERVATION NOTES
					1	ASPHALT AND ROAD BASE		
					2	CLAY; very dark gray, highly plastic, slightly moist, no sand (CH)		
					3			
					4			
CA	MW2 1	6/ 19/ 19	5.0- 6.5	18	5	SANDY CLAY; dark greenish gray, moderately low plasticity, slightly moist, sand grades to gravel at bottom of the unit (CL)	25	Moderate odor
					6			
					7			
					8			
					9			
CA	MW2 2	9/ 10/ 14	10.0- 11.5	17	10		75	Moderate odor
					11			
					12			
					13			
					14			
CA	MW2 3	4/5/ 7	15.0- 16.5	16	15		0	No odor
					16	SILTY CLAY; dark yellowish brown, moderately low plasticity, moist stiff gravel toward bottom of the unit (CL)		
					17			
					18			
					19			
CA	MW2 4	12/ 26/ 35	20.0- 21.5	17	20	Total Depth 20.0 feet	0	No odor
					21			
					22			
					23			

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST

SIGNATURE

TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

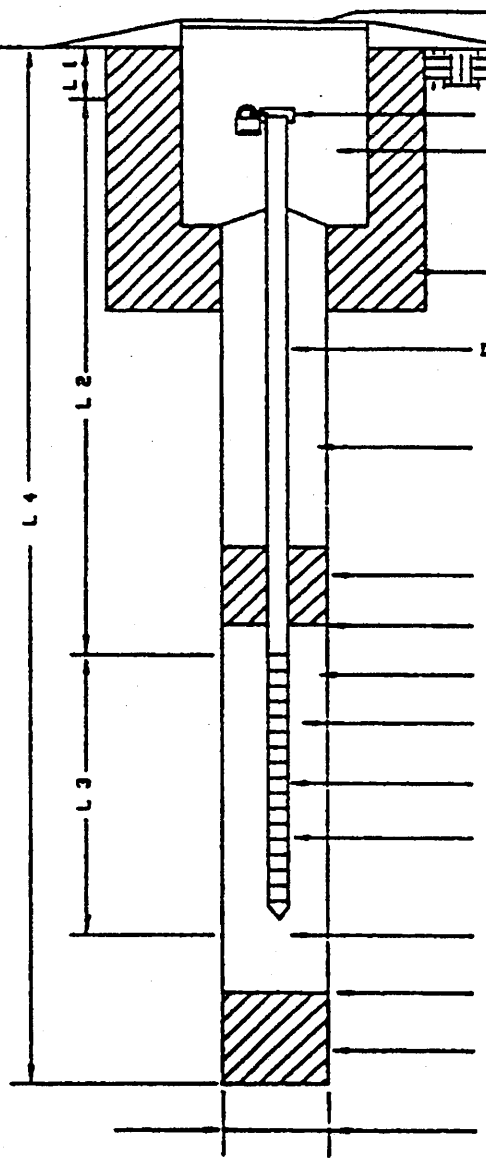
PROJECT Oakland Shell

MONITORING WELL NO. MW-2

ELEVATIONS: TOP OF RISER 100.29 relati

DELTA NO. 40-88-666

GROUND LEVEL



DIAMETER AND MATERIAL	15-inch galvanized
TOTAL LENGTH	12 inches
LENGTH ABOVE GROUND	0 foot
THICKNESS AND TYPE OF SEAL	18 inches, concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4-inch PVC SCH 40 Flush-threaded
TYPE OF BACKFILL AROUND RISER	Concrete with 5% bentonite
THICKNESS AND TYPE OF SEAL	2 feet, bentonite pellets
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	2 feet
TYPE OF FILTER AROUND SCREEN	16/40 clementine
MONITORING WELL MATERIAL	PVC SCH 40
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inches 20 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	19 feet
DEPTH TO THE BOTTOM OF FILTER SAND	19 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25/4 FT.

L 2 = FT.

L 3 = 15 FT.

L 4 = 19 FT.

INSTALLATION COMPLETED:

DATE: 4-10-1989

TIME: 9:45

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL ▼
4-17-1989	13:15	6.46

▼ MEASURE POINT: Top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-3	SHEET 1 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 11:00/4-10-89		COMPLETED: 1:00/4-10-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 100.00 (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLER NUMBER	BLOWN COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOV(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION / INSTRUMENT: UNITS: Tip	GENERAL OBSERVATION NOTES
					1	ASPHALT AND ROAD BASE		
					2	CLAY; very dark gray, highly plastic, slightly moist, no sand (CH)		
					3			
					4			
CA	MW3-1	8/13/13	5.0-6.5	18	5		0	No odor
					6	SILTY CLAY; olive brown with light olive brown mottles, moderately high plasticity, slighty moist (CL)		
					7			
					8			
					9			
CA	MW3-2	13/23/21	10.0-11.5	18	10		0	No odor
					11			
					12			
					13			
					14	SANDY CLAY; yellowish brown, moderately low plasticity, moist, fine sands (CL)		
CA	MW3-3	11/14/15	15.0-16.5	17	15		0	No odor
					16			
					17			
					18			
					19			
CA	MW3-4	3/8/15	20.0-21.5	15	20		0	No odor
					21			
					22			
					23			

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST

SIGNATURE

TYPED NAME

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-3	SHEET 2 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 11:00/4-10-89		COMPLETED: 1:00/4-10-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 100.50' (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLER NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE RECOV (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: UNITS:	GENERAL OBSERVATION NOTES Odor
CA	MW3-5	25/25/42	25.0-26.5	14	25	GRAVELLY SAND; brown, coarse sand, gravel, saturated, minor plastic fines (SW)	0	No odor
CA	MW3-6	18/23/39	30.0-31.5	15	30	Total Depth 30.0 feet	0	No odor

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST

SIGNATURE

TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

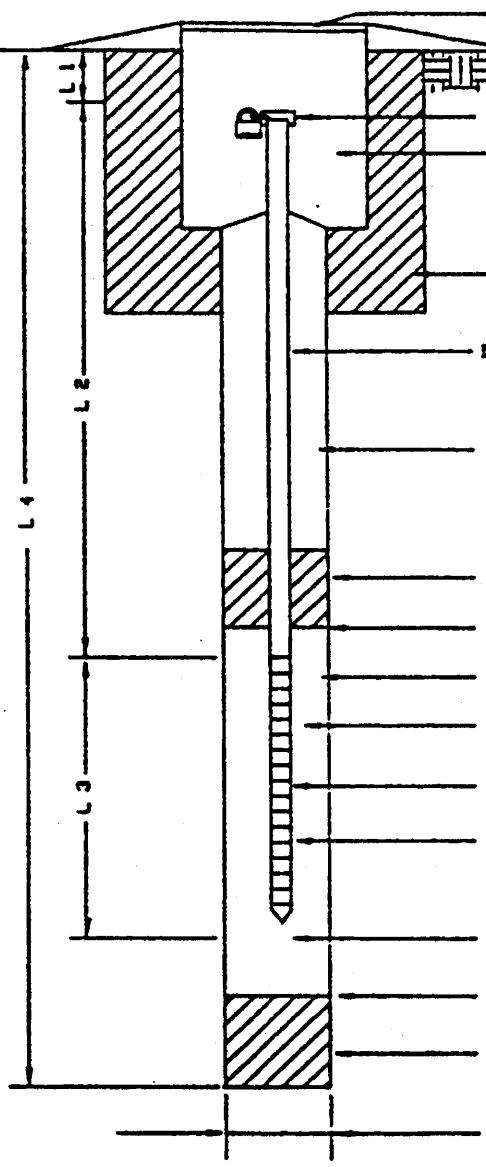
PROJECT: Oakland Shell

DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-3

ELEVATIONS: TOP OF RISER 100.50 relativ

GROUND LEVEL: _____



15-inch galvanized	
12 inches	
0 foot	
15-inch concrete	
4-inch PVC SCH 40 Flush-threaded	
Concrete with 5% bentonite	
2 feet, bentonite pellets	
2 feet	
16/40 clementine	
PVC SCH 40	
0.01 inch	
4 inches 20 feet	
27.5 feet	
27.5 feet	
N/A	
10 inches	

L 1 = 0.25 FT.

L 2 = 7.5 FT.

L 3 = 20 FT.

L 4 = 27.5 FT.

INSTALLATION COMPLETED:

DATE: 4-10-89

TIME: 13:00

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
4-17-1989	13:20	5.81

* MEASURE POINT: Top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-4	SHEET 1 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 2:30/4-10-89		COMPLETED: 6:30/4-10-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 99.03' (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE REC V (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION / INSTRUMENT: / UNITS:	GENERAL OBSERVATION NOTES Odor
					1	ASPHALT AND ROAD BASE		
					2	LEAN CLAY; very dark gray, highly plastic, slightly moist, no sand (CH)		
					3			
					4			
CA	MW4-1	17/25/32	5.0-6.5	18	5		7	Slight odor
					6	SILTY CLAY; dark greenish gray, medium plasticity, slightly moist, some gravel (CL)		
					7			
					8			
					9			
CA	MW4-2	6/8/12	10.0-11.5	17	10	SILTY CLAY; dark yellowish brown, dark greenish-gray, mottles, moderately plastic, moist (CL)	0	No odor
					11			
					12			
					13			
					14			
CA	MW4-3	8/9/12	14.0-16.5	17	15	SANDY CLAY; yellowish brown, moderately plastic, moist, fine sand, grades to a coarse sand at the bottom of the unit (CL)	0	No odor
					16			
					17			
					18			
					19			
CA	MW4-4	9/8/24	20.0-21.5	15	20		0	No odor
					21			
					22			
					23			

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST
SIGNATURE
TYPED NAME

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-4	SHEET 2 OF 2
3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-55
	START: 2:30/4-10-89		COMPLETED: 6:30/4-10-89
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 99.03 (relative)		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INT (ft)	SAMPLE REC (in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: UNITS:	GENERAL OBSERVATION NOTES Odor
CA	MW4-5	25/24/30	25.0-26.5	16	23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	GRAVELLY SAND; brown, coarse sand, saturated, gravel 1/2" to 1", some plastic fines (SW)	0	No odor
CA	MW4-6	19/22/37	30.0-31.5	17		Total Depth 31.5	0	No odor

WATER LEVEL DATA			
DATE			
TIME			
GWL			
CASING DEPTH			

PROFESSIONAL GEOLOGIST

SIGNATURE

TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

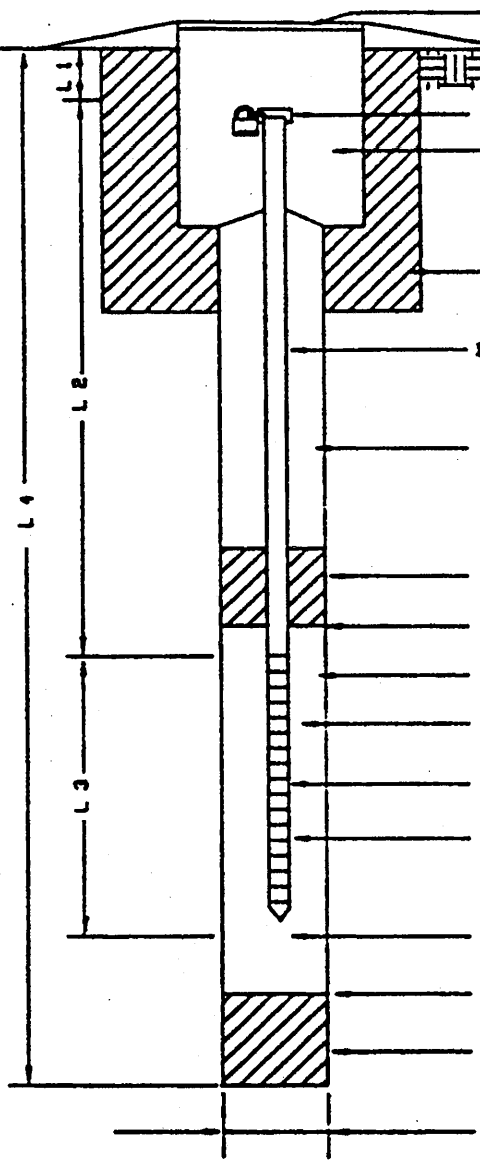
PROJECT Oakland Shell

DELTA NO. 40-88-666

MONITORING WELL NO. MW-4

ELEVATIONS: TOP OF RISER 99.03 relati

GROUND LEVEL



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	15-inch galvanized
TOTAL LENGTH	12 inches
LENGTH ABOVE GROUND	0 foot
THICKNESS AND TYPE OF SEAL	18-inch concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4-inch PVC Flush-threaded
TYPE OF BACKFILL AROUND RISER	Concrete with 5% bentonite
THICKNESS AND TYPE OF SEAL	2 feet, bentonite pellets
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	2 feet
TYPE OF FILTER AROUND SCREEN	16/40 clementine
MONITORING WELL MATERIAL	PVC SCH 40
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inches 20 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	25 feet
DEPTH TO THE BOTTOM OF FILTER SAND	25 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.

L 2 = 5 FT.

L 3 = 20 FT.

L 4 = 25 FT.

INSTALLATION COMPLETED:

DATE: 4-10-1989

TIME: 18:30

MONITORING WELL WATER LEVEL MEASUREMENTS		
DATE	TIME	WATER LEVEL *
4-17-1989	13:30	6.30

* MEASURE POINT: Top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-5	SHEET 1 OF 2
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-75
	START: 12:15/01-19-90		COMPLETED: 2:40/01-19-90
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 20.91		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOVERY(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
					1	Asphalt road base		
					2	CLAY; very dark gray, highly plastic, slightly moist (CH)		
					3			
					4			
CA	MW-5-1	9/12/38	5.0-6.5	18	5	SANDY CLAY; yellowish brown, moderately plastic, slightly moist (CL)	50	Slight odor
					6			
					7			
					8			
					9			
CA	MW-5-2	12/16/9	10.0-11.5	18	10	Saturated	0	No odor
					11			
					12			
					13			
					14			
CA	MW-5-3	5/7/11	15.0-16.5	18	15		0	No odor
					16			
					17	SILTY CLAY; dark yellowish brown, moderately plastic, saturated (CL)		
					18			
					19			
CA	MW-5-4	4/4/7	20.0-21.5	18	20		0	No odor
					21			
					22			
					23			

WATER LEVEL DATA			
DATE	02-02		
TIME	2:40		
GWL	7.89		
CASING DEPTH	25'		

GEOLOGIST
Hal Hansen
SIGNATURE
Hal Hansen
TYPED NAME

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-5	SHEET 2 OF 2
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling	DRILLING METHOD: H.S.A.	
	DRILLER: Randy Reidhead	DRILLING RIG: CME-75	
	START: 12:15/01-19-90	COMPLETED: 2:40/01-19-90	
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 20.91	LOGGED BY: Hal Hansen	

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOVERY(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION / INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
CA	MW-5-5	26/47/50 for 4"	25.0-26.5	12	25	GRAVELLY SAND; brown, course sand, saturated, minor plastic fines (SW)	1	No odor
					26			
					27	Total Depth at 26.5 feet		
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			
					41			
					42			
					43			
					44			
					45			
					46			
					47			

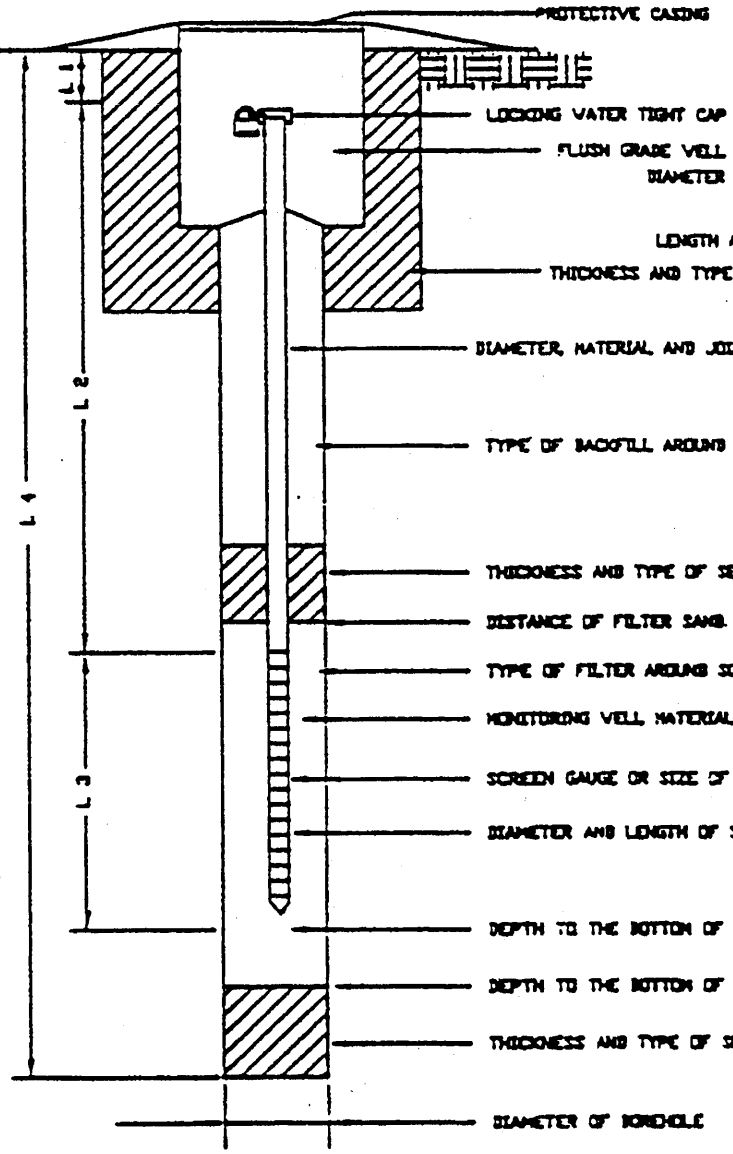
WATER LEVEL DATA			
DATE	02-02		
TIME	2:40		
GWL	7.89		
CASING DEPTH	25'		

GEOLOGIST
Hal Hansen
SIGNATURE
Hal Hansen
TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Ave
DELTA NO. 40-88-666

MONITORING WELL NO. MW-5
ELEVATIONS: TOP OF RISER 20.91
GROUND LEVEL 21.29



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	12 inch steel
TOTAL LENGTH	9 inches
LENGTH ABOVE GROUND	1/4 inch
THICKNESS AND TYPE OF SEAL	1-foot concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4 inch PVC, flush thread
TYPE OF BACKFILL AROUND RISER	sand cement
THICKNESS AND TYPE OF SEAL	1 foot bentonite
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	1 foot
TYPE OF FILTER AROUND SCREEN	#3 clemintine
MONITORING WELL MATERIAL	sch 40, PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inch 20 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	25 feet
DEPTH TO THE BOTTOM OF FILTER SAND	25 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 4.75 FT.
L 3 = 20.0 FT.
L 4 = 25.0 FT.

INSTALLATION COMPLETED:
DATE: 1-19-90
TIME: 240

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
2-2-90	11:59	7.89

* MEASURE POINT: Top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-6	SHEET 1 OF 1
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-75
	START: 9:00/01-19-90		COMPLETED: 1:00/01-19-90
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 22.32		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOWS COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOVERY(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
					1	Asphalt road base		
					2	CLAY; very dark gray, highly plastic, slightly moist (CH)		
					3			
					4			
CA	MW-6-1	10/12/38	5.0-6.5	18	5	SANDY CLAY; greenish gray, moderately plastic, slightly moist (CL)	0	No odor
					6			
					7			
					8			
					9			
CA	MW-6-2	9/13/20	10.0-11.5	18	10	Color change to yellowish brown	14	Slight odor
					11			
					12			
					13	Saturated		
					14			
CA	MW-6-3	5/8/11	15.0-16.5	18	15	SILTY CLAY; yellowish brown, moderately plastic, saturated (CL)	0	No odor
					16			
					17			
					18			
					19			
CA	MW-6-4	4/7/11	20.0-21.5	18	20	Total Depth at 21.5 feet	0	No odor
					21			
					22			
					23			

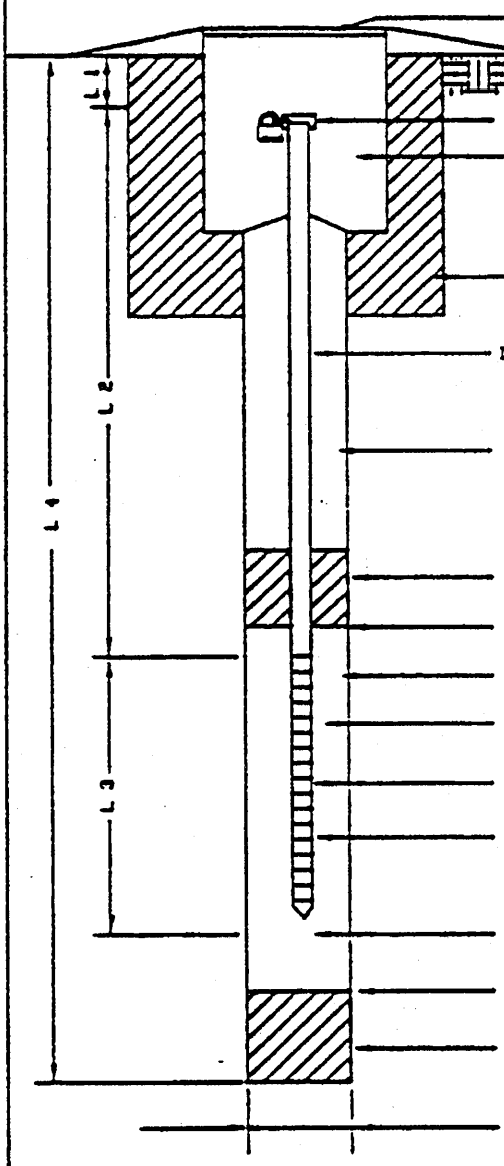
WATER LEVEL DATA			
DATE	02-02		
TIME	11:41		
GWL	7.86		
CASING DEPTH	20'		

GEOLOGIST
Hal Hansen
SIGNATURE
Hal Hansen
TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Ave
DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-6
ELEVATIONS: TOP OF RISER 22.32
GROUND LEVEL 22.63



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	12 inch steel
TOTAL LENGTH	9 inches
LENGTH ABOVE GROUND	1/4 inch
THICKNESS AND TYPE OF SEAL	1 foot concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4 inch, PVC, flush thread
TYPE OF BACKFILL AROUND RISER	sand cement
THICKNESS AND TYPE OF SEAL	1 foot bentonite
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	1 foot
TYPE OF FILTER AROUND SCREEN	#3 clemintine
MONITORING WELL MATERIAL	sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inch 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	20 feet
DEPTH TO THE BOTTOM OF FILTER SAND	20 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 4.75 FT.
L 3 = 15.0 FT.
L 4 = 20.0 FT.

INSTALLATION COMPLETED:
DATE: 1-19-90
TIME: 10:00

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
2-2-90	11:41	7.86

* MEASURE POINT: Top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-7	SHEET 1 OF 1
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling	DRILLING METHOD: H.S.A.	
	DRILLER: Randy Reidhead	DRILLING RIG: CME-75	
	START: 11:00/01-19-90	COMPLETED: 12:00/01-19-90	
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 20.36	LOGGED BY: Hal Hansen	

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOV(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
					1	Asphalt road base		
					2	CLAY; very dark gray, highly plastic, slightly moist (CH)		
					3			
					4			
CA	MW-7-1	16/22/30	5.0-6.5	18	5	SANDY CLAY; greenish gray, moderately plastic, slightly moist (CL)	95	Moderate odor
					6			
					7			
					8			
					9			
CA	MW-7-2	9/15/25	10.0-11.5	18	10	Color change to yellowish brown	85	Moderate odor
					11	Saturated		
					12			
					13			
					14			
CA	MW-7-3	6/8/10	15.0-16.5	18	15		5	Slight odor
					16	SILTY CLAY; yellowish brown, moderately plastic, saturated (CL)		
					17			
					18			
					19			
CA	MW-7-4	6/8/14	20.0-21.5	18	20		0	No odor
					21			
					22	Total Depth at 21.5 feet		
					23			

WATER LEVEL DATA			
DATE	02-02		
TIME	11:52		
GWL	8.91		
CASING DEPTH	20'		

GEOLOGIST

Hal Hansen

SIGNATURE

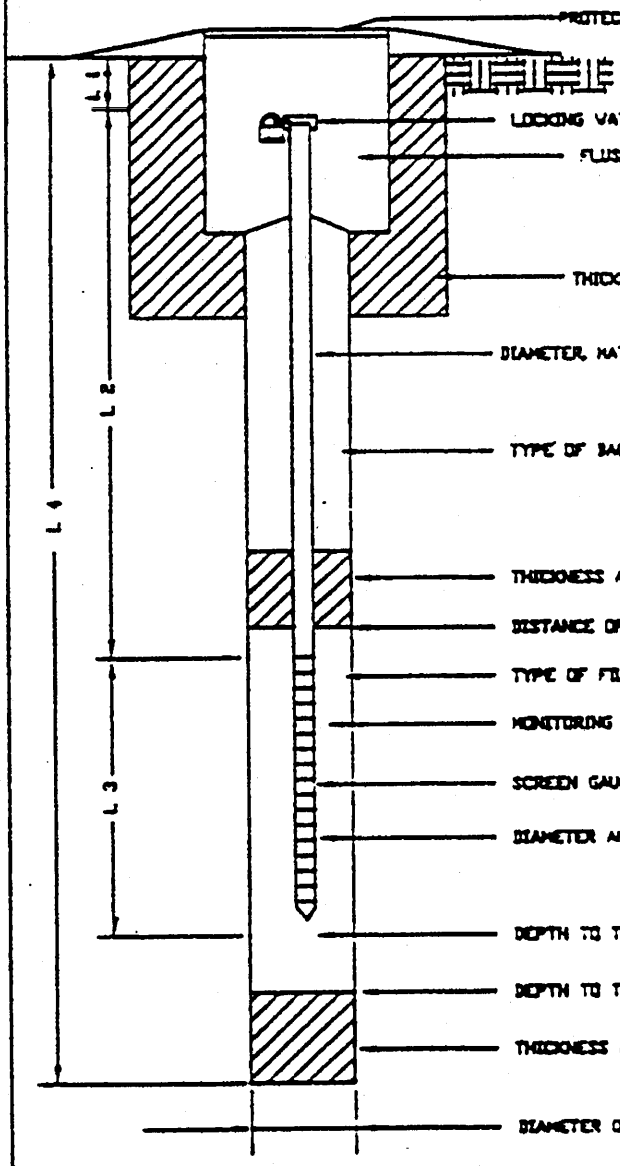
Hal Hansen

TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Ave
DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-7
ELEVATIONS: TOP OF RISER 20.36
GROUND LEVEL 20.76



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	12 inch steel
TOTAL LENGTH	9 inches
LENGTH ABOVE GROUND	1/4 inch
THICKNESS AND TYPE OF SEAL	1 foot concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4 inches PVC, flush thread
TYPE OF BACKFILL AROUND RISER	sand cement
THICKNESS AND TYPE OF SEAL	1 foot bentonite
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	1 foot
TYPE OF FILTER AROUND SCREEN	#3 clemintine
MONITORING WELL MATERIAL	sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inch 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	20 feet
DEPTH TO THE BOTTOM OF FILTER SAND	20 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 4.75 FT.
L 3 = 15.0 FT.
L 4 = 20.0 FT.

INSTALLATION COMPLETED:
DATE: 1-19-90
TIME: 12:00

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
2-2-90	11:52	8.91

* MEASURE POINT: top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-8	SHEET 1 OF 1
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling	DRILLING METHOD: H.S.A.	
	DRILLER: Randy Reidhead	DRILLING RIG: CME-75	
	START: 2:30/01-18-90	COMPLETED: 3:45/01-18-90	
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 20.95	LOGGED BY: Hal Hansen	

SAMPLE TYPE	SAMPLER NUMBER	BLOWN COUNTS	SAMPLE INTERVAL(ft)	SAMPLE RECOV(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
					1	Asphalt road base		
					2	CLAY; very dark gray, highly plastic, slightly moist (CH)		
					3			
					4			
CA	MW-8-1	16/27/28	5.0-6.5	18	5		3	Slight odor
					6	SANDY CLAY; greenish gray, moderately plastic, slightly moist (CL)		
					7			
					8			
					9			
CA	MW-8-2	11/13/19	10.0-11.5	18	10	Saturated	100	Moderate odor
					11			
					12			
					13			
					14			
CA	MW-8-3	4/6/7	15.0-16.5	18	15		0	No odor
					16			
					17	SILTY CLAY; dark yellowish brown, slightly plastic, saturated (CL)		
					18			
					19			
CA	MW-8-4	9/11/16	20.0-21.5	18	20		0	No odor
					21			
					22	Total Depth at 21.5 feet		
					23			

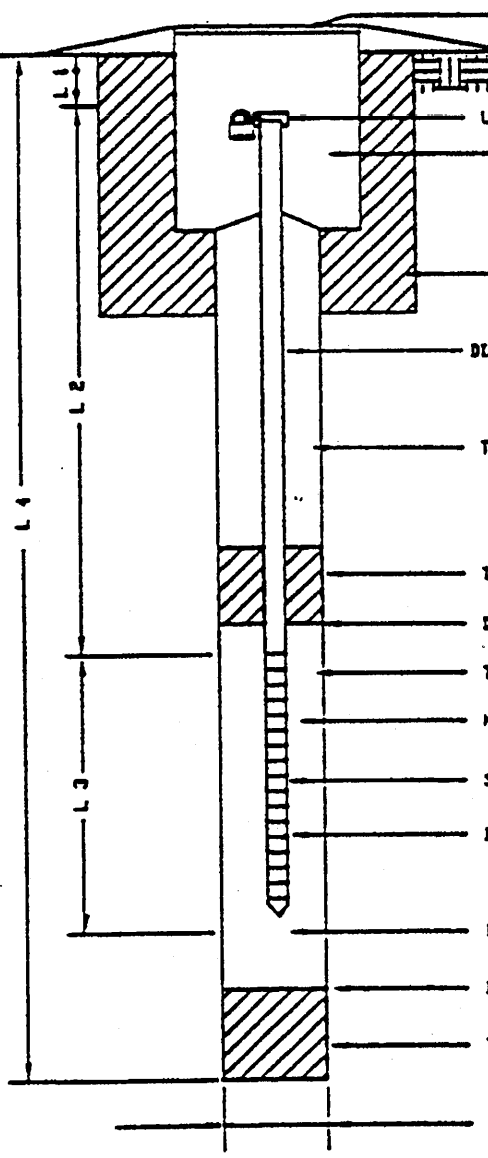
WATER LEVEL DATA			
DATE	02-02		
TIME	11:49		
GWL	7.32		
CASING DEPTH	20'		

GEOLOGIST
Hal Hansen
SIGNATURE
Hal Hansen
TYPED NAME

INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Ave
DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-8
ELEVATIONS: TOP OF RISER 20.95
GROUND LEVEL 21.14



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	12 inch steel
TOTAL LENGTH	9 inches
LENGTH ABOVE GROUND	1/4 inch
THICKNESS AND TYPE OF SEAL	1 foot concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4 inches PVC, flush thread
TYPE OF BACKFILL AROUND RISER	sand cement
THICKNESS AND TYPE OF SEAL	1 foot bentonite
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	1 foot
TYPE OF FILTER AROUND SCREEN	#3 clemintine
MONITORING WELL MATERIAL	sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inch 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	20 feet
DEPTH TO THE BOTTOM OF FILTER SAND	20 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 4.75 FT.
L 3 = 15.0 FT.
L 4 = 20.0 FT.

INSTALLATION COMPLETED:
DATE: 1-18-90
TIME: 3:45

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
2-2-90	11:49	7.32

* MEASURE POINT: top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME / LOCATION	PROJECT NUMBER: 40-88-666	BORING NUMBER: MW-9	SHEET 1 OF 1
Oakland Shell 3420 San Pablo Avenue Oakland, CA	CONTRACTOR: West Hazmat Drilling		DRILLING METHOD: H.S.A.
	DRILLER: Randy Reidhead		DRILLING RIG: CME-75
	START: 12:30/01-19-90		COMPLETED: 2:00/01-19-90
LAND OWNER: Shell Oil Company	SURFACE ELEVATION: 21.19		LOGGED BY: Hal Hansen

SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	SAMPLE INTERVAL(ft)	RECOVERY(in)	DEPTH SCALE 1"= 4'	DESCRIPTIONS OF MATERIALS AND CONDITIONS	CONTAMINANT OBSERVATION INSTRUMENT: OVM UNITS: ppm	GENERAL OBSERVATION NOTES
					1	Asphalt road base		
					2	CLAY; very dark gray, highly plastic, slighly moist (CH)		
					3			
					4			
CA	MW-9-1	9/23/27	5.0-6.5	10	5	SANDY CLAY; yellowish brown, moderately plastic, slightly moist (CL)	0	No odor
					6			
					7			
					8			
					9			
CA	MW-9-2	16/21/31	10.0-11.5	18	10		30	Slight odor
					11			
					12			
					13			
					14			
CA	MW-9-3	5/9/12	15.0-16.5	18	15	SILTY CLAY; dark yellowish brown, slightly plastic saturated (CL)	0	No odor
					16			
					17			
					18			
					19			
CA	MW-9-4		20.0-21.5	18	20		0	No odor
					21			
					22	Total Depth at 21.5 feet		
					23			

WATER LEVEL DATA			
DATE	02-02		
TIME	11:43		
GWL	9.02		
CASING DEPTH	20'		

GEOLOGIST

Hal Hansen

SIGNATURE

Hal Hansen

TYPED NAME

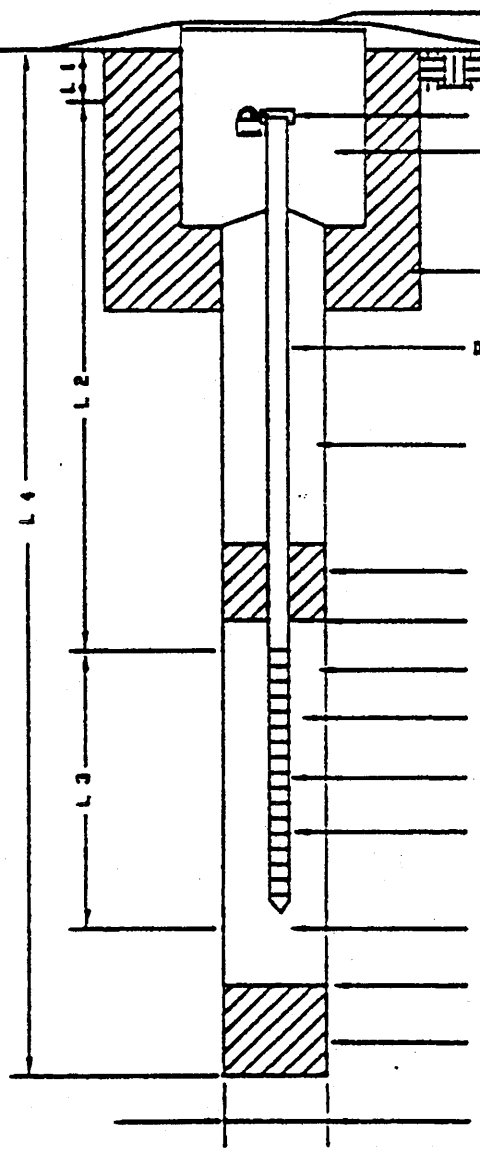
INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Ave

DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-9

ELEVATIONS: TOP OF RISER 21.19
GROUND LEVEL 21.46



FLUSH GRADE WELL CONSTRUCTION DIAMETER AND MATERIAL	12-inches, steel
TOTAL LENGTH	9 inches
LENGTH ABOVE GROUND	1/4 inch
THICKNESS AND TYPE OF SEAL	1 foot concrete
DIAMETER, MATERIAL AND JOINT TYPE OF RISER PIPE	4 inches PVC, flush thread
TYPE OF BACKFILL AROUND RISER	sand cement
THICKNESS AND TYPE OF SEAL	1 foot bentonite
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	1 foot
TYPE OF FILTER AROUND SCREEN	#3 clemintine
MONITORING WELL MATERIAL	sch 40, PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.01 inch
DIAMETER AND LENGTH OF SCREEN	4 inch - 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	20 feet
DEPTH TO THE BOTTOM OF FILTER SAND	20 feet
THICKNESS AND TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	10 inches

L 1 = 0.25 FT.
L 2 = 4.75 FT.
L 3 = 15.0 FT.
L 4 = 20.0 FT.

INSTALLATION COMPLETED:
DATE: 1-18-90
TIME: 2:00

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
2-2-90	11:43	9.02

* MEASURE POINT: top of casing

Delta Environmental Consultants, Inc.

1022 B/3-89

PROJECT NAME/LOCATION:	Project Number	40-88-666	Boring Number	MW-10
Oakland Shell 3420 San Pablo Oakland, California	Contractor	West Hazmat	Drilling Method	H.S.A 10"
	Driller	Tom Wright	Drilling Rig	Acker
	Start	9:00 a.m. 10/23/91	Completed	10:45 a.m. 10/23/91
Landowner: City of Oakland	Surface Elev.		Logged By	Charles K. Almeida

Sample Type	Sample No.	Blow Count	Sample Interval (ft)	Sample Recovery (in.)	Depth Scale 1" = 4'	Descriptions of Materials and Conditions	Observations: Instrument: OVM Units: ppm	Observations: General Observation Notes
					1	Asphalt/Road Base		
					2			
					3			
					4			
CA	MW-10-1	7-20-25	5-6.5	16	5	CLAY; silty dark gray, medium plasticity; dry (CL)	55	
					6			
					7			
					8			
					9			
CA	MW-10-2	7-12-21	10-11.5	18	10	CLAY; silty, some coarse grained sand and .25"- diameter angular grains, very moist (CL)	213	
					11			
					12			
					13			
					14			
CA	MW-10-3	4-8-15	15-16.5	18	15	CLAY; silty gray green, medium to coarse gravely sand, minor fragments; very moist (CL)	118	
					16			
					17			
					18			
					19			
CA	MW-10-4	6-15-20	20-21.5	18	20	SANDY SILT; clayey tan brown, very fine grained sand, soft; very moist (ML)	51	
					21			
					22	Total Depth at 21.5 ft.		
					23			

BOREHOLE WATER LEVEL DATA			
Date	10/23/91		
Time	10:50 a.m.		
GWL	16.54		
Casing Depth	19.3		

Sheet 1 of 1

Delta Environmental Consultants, Inc.

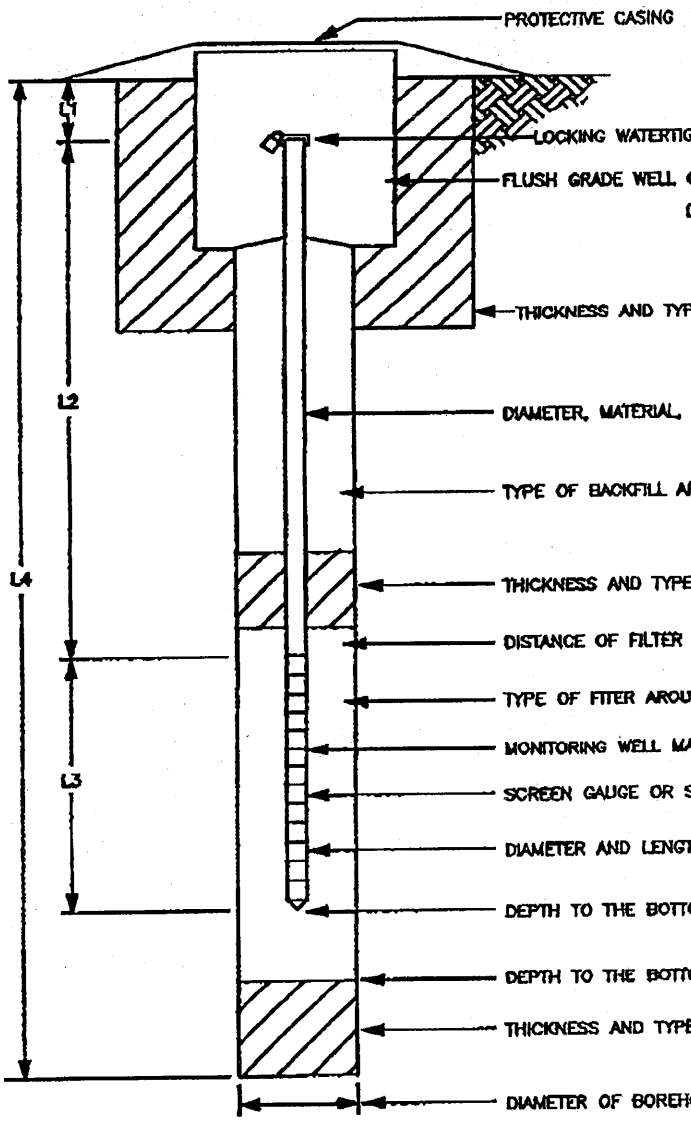
INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT: Oakland Shell
3420 San Pablo Avenue

DELTA NO.: 40-88-666

MONITORING WELL NO.: MW-10

ELEVATIONS:
TOP OF RISER: 19.74
GROUND LEVEL:



DIAMETER AND MATERIAL	10 inch
TOTAL LENGTH	12 inch
THICKNESS AND TYPE OF SEAL	1-foot concrete
DIAMETER, MATERIAL, AND JOINT TYPE OF RISER PIPE	4-inch PVC Flush Threaded
TYPE OF BACKFILL AROUND RISER	Portland cement < 5% Bentonite
THICKNESS AND TYPE OF SEAL	.5-foot Bentonite chips
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN	.5 feet
TYPE OF FITER AROUND SCREEN	#3 Monterey sand
MONITORING WELL MATERIAL	PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE)	0.020 inch
DIAMETER AND LENGTH OF SCREEN	4 inch x 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL	19.3 feet
DEPTH TO THE BOTTOM OF FILTER SAND	19.3 feet
THICKNESS AND TYPE OF SEAL	NA
DIAMETER OF BOREHOLE	10 inch

L1 = .25 FT
L2 = 4.05 FT
L3 = 15 FT
L4 = 19.3 FT

MONITORING WELL WATER LEVEL MEASUREMENTS

DATE	TIME	WATER LEVEL *
10/23/91	14:50	8.57

INSTALLATION COMPLETED:
DATE: 10/23/91
TIME: 10:45 am

Delta Environmental Consultants, Inc.

* MEASURE POINT: Top of casing

PROJECT NAME/LOCATION:	Project Number	40-88-666	Boring Number	MW-11
Oakland Shell 3420 San Pablo Avenue Oakland, California	Contractor	West Hazmat	Drilling Method	H.S.A. 10"
	Driller	Tom Wright	Drilling Rig	Acker
	Start	12:20 p.m. 10/23/91	Completed	2:15 p.m. 10/23/91 p.m.
Landowner: City of Oakland	Surface Elev.		Logged By	Charles K. Almeida

Sample Type	Sample No.	Blow Count	Sample Interval (ft)	Sample Recovery (in.)	Depth Scale 1" = 4'	Descriptions of Materials and Conditions	Observations: Instrument: OVM Units: ppm	Observations: General Observation Notes
					1	Asphalt/Road Base		
					2			
					3			
					4			
CA	MW-11-1	4-14-35	5-6.5	15	5	CLAY; silty dark brown, minor fine grained sand, medium plasticity--dry (CL)	0	
					6			
					7			
					8			
					9			
CA	MW-11-2	4-18-31	10-11.5	10	10	Tan brown, very moist.	0	
					11			
					12			
					13			
					14	gradational contact		
CA	MW-11-3	6-10-13	15-16.5	15	15	SILT; clayey, tan brown, minor fine to medium grained sand; saturated (ML)	0	
					16			
					17			
					18			
					19			
CA	MW-11-4	16-24-35	20-21.5	20	20	CLAYEY SILTY GRAVEL; brown, .25-.5" angular grains, minor coarse grained sand; saturated (GC)	0	
					21			
					22	Total Depth at 21.5 ft.		
					23			

BOREHOLE WATER LEVEL DATA			
Date	10/23/91		
Time	3:15 p.m.		
GWL	14.0		
Casing Depth	19.0		

Sheet 1 of 1

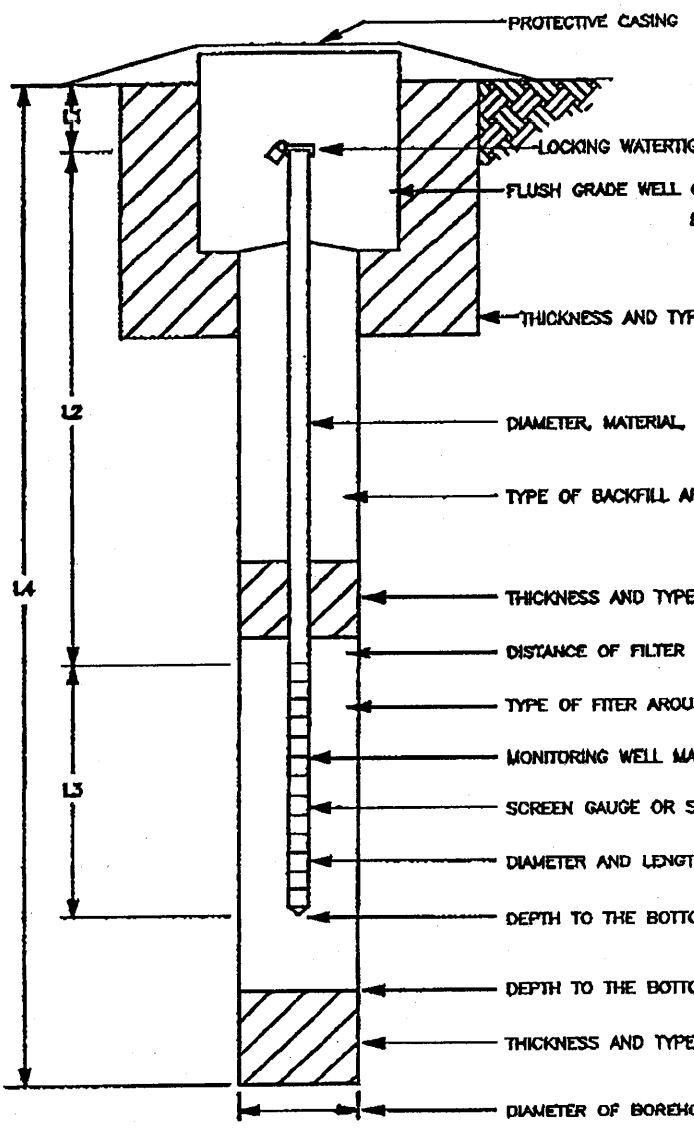
Delta Environmental Consultants, Inc.

INSTALLATION OF FLUSH GRADE MONITORING WELL

PROJECT Oakland Shell
3420 San Pablo Avenue
DELTA NO. 40-88-666

MONITORING WELL NO. MW-11

ELEVATIONS:
TOP OF RISER 22.06
GROUND LEVEL



DIAMETER AND MATERIAL: 10 inch
TOTAL LENGTH: 12 inch
THICKNESS AND TYPE OF SEAL: 1-foot concrete
DIAMETER, MATERIAL, AND JOINT TYPE OF RISER PIPE: 4-inch PVC Flush Threaded
TYPE OF BACKFILL AROUND RISER: Portland cement < 5% Bentonite
THICKNESS AND TYPE OF SEAL: .5-foot Bentonite chips
DISTANCE OF FILTER SAND ABOVE TOP OF SCREEN: .5 feet
TYPE OF FITER AROUND SCREEN: #3 Monterey sand
MONITORING WELL MATERIAL: PVC
SCREEN GAUGE OR SIZE OF OPENINGS (SLOT SIZE): 0.020 inch
DIAMETER AND LENGTH OF SCREEN: 4 inch x 15 feet
DEPTH TO THE BOTTOM OF MONITORING WELL: 19 feet
DEPTH TO THE BOTTOM OF FILTER SAND: 19 feet
THICKNESS AND TYPE OF SEAL: NA
DIAMETER OF BOREHOLE: 10 inch

L1 = .25 FT
L2 = 3.75 FT
L3 = 15 FT
L4 = 19 FT

MONITORING WELL WATER LEVEL MEASUREMENTS		
DATE	TIME	WATER LEVEL *
10/23/91	15:15	14.0

INSTALLATION COMPLETED:
DATE: 10/23/91
TIME: 14:15

Delta Environmental Consultants, Inc.

* MEASURE POINT: Top of casing

DRILLING LOG

Client: **Shell Oil Products Company**

Project No: **240-0554** Phase Task

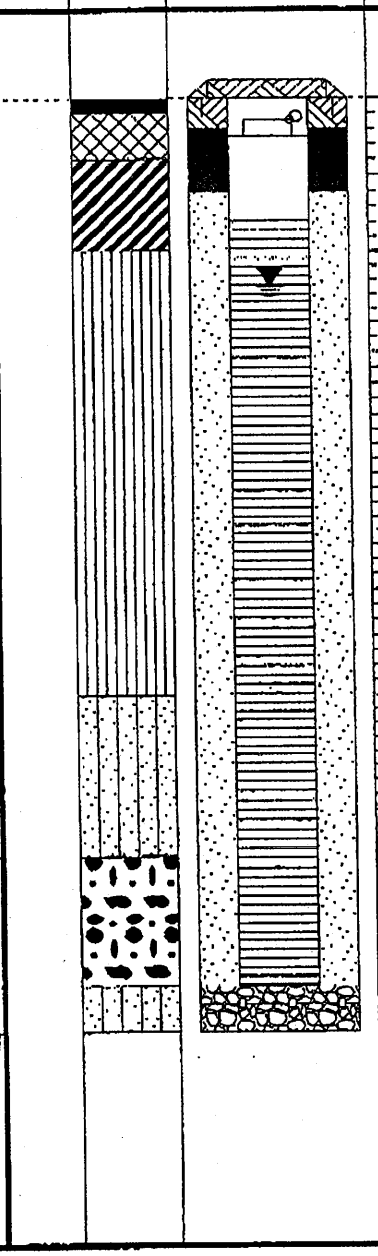
Well ID **MW-3R** Boring ID **MW-3R**

Location **3420 San Pablo Avenue, Oakland, California**

Surface Elev. **NA ft.** Page **1** of **1**

Depth (feet)	Blow Count	Sample	% Rec	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly fill
5				**Silty CLAY**; (CH); black; stiff; moist; 60% clay, 40% silt; high plasticity; very low estimated permeability.
	NA			**Clayey Sandy SILT**; (ML); yellowish brown; medium stiff; moist; 20% clay, 40% silt, 30% fine to medium grained sand, 10% gravel; medium plasticity; low estimated permeability.
10				
	NA			20% clay, 40% silt, 40% sand.
15				
	NA			Wet; 25% clay, 40% silt, 30% fine grained sand, 5% gravel.
20				
	NA			**Clayey Silty SAND**; (SM); yellowish brown; medium dense; wet; 20% clay, 20% silt, 60% fine grained sand; medium plasticity; medium estimated permeability.
25				
	NA			**Silty Sandy GRAVEL**; (GP); brown; loose; wet; 5% clay, 20% silt, 20% fine to coarse grained sand, 55% angular gravel; no plasticity; high estimated permeability.
30				
	NA			**Clayey Silty SAND with gravel**; (SM); yellowish brown; medium dense; wet; 20% clay, 20% silt, 40% fine to medium grained sand, 20% angular gravel; low to medium plasticity; high estimated permeability.
35				

TPHg (ppm) | Graphic Log | Well Construction Graphics | Depth (feet)



Well Construction Details

T.O.C. Elev. na

water encountered during drilling @ 6'
static water level @ 6.25'

bottom of boring @ 31.5

Driller	Gregg Drilling	Development Yield	NA	Bentonite Seal	3' to 1'
Logged By	J. Riggi	Well Casing	2" Dia. 0' to 4'	Sand Pack	3' to 30'
Drilling Started	6/18/98	Casing Type	Schedule 40 PVC	Sand Pack Type	# 2/12 Sand
Drilling Completed	6/18/98	Well Screen	2" Dia. 4' to 30'	Static Water Level	6.25 ft Depth
Construction Completed	6/18/98	Screen Type	Schedule 40 PVC	Date	6/18/98
Development Completed	NA	Slot Size	0.010"	Notes:	Rhino Rig HSA 8" augers
Water Bearing Zones	NA	Drilling Mud	NA		
		Grout Type	Concrete		

WELL 24554 7/1/98

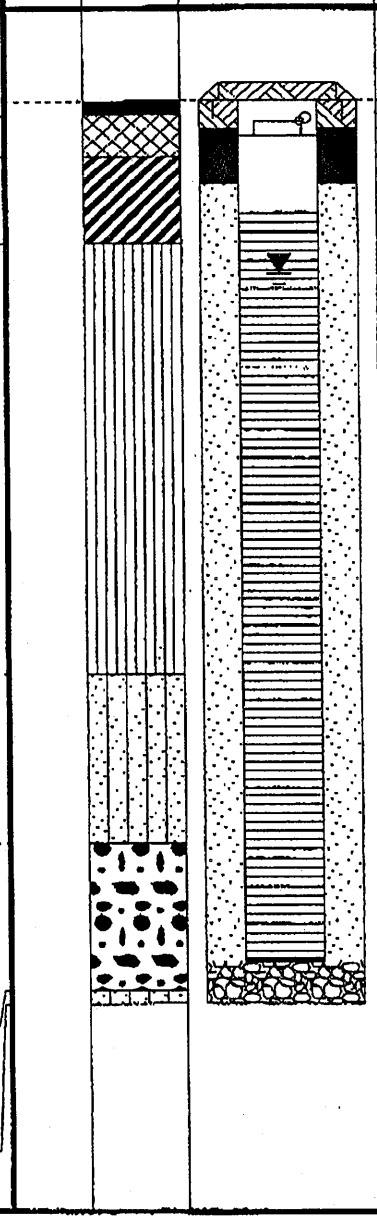
Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Shell Oil Products Company
Project No: 240-0554 Phase Task

Well ID MW-6R Boring ID MW-6R
Location 3420 San Pablo Avenue, Oakland, California
Surface Elev. NA ft, Page 1 of 1

Depth (feet)	Blow Count	Sample	% Rec	Lithologic Description
0	Ground Surface			
	NA			**ASPHALT**
				Gravelly Fill
5				**Silty CLAY:** (CH); black; stiff; moist; 60% clay, 40% silt; high plasticity; very low estimated permeability.
	NA			**Clayey SILT:** (ML); olive; medium stiff; moist; 20% clay, 60% silt, 10% fine grained sand, 10% gravel; medium plasticity; low estimated permeability.
10				**Clayey Sandy SILT:** (ML); yellowish brown; medium stiff; moist; 20% clay, 40% silt, 40% fine to medium grained sand; low to medium plasticity; low to medium estimated permeability.
	NA			
15				
	NA			20% clay, 35% silt, 40% sand, 5% gravel.
20				
	NA			**Clayey Silty SAND:** (SM); yellowish brown; medium dense; moist; 20% clay, 20% silt, 60% sand; medium plasticity; medium estimated permeability.
25				
	NA			**Sandy GRAVEL:** (GP); brown; loose; wet; 5% clay, 10% silt, 35% fine to coarse sand, 50% angular gravel; no plasticity; high estimated permeability.
30				
	NA			10% clay, 10% silt, 30% fine to coarse grained sand, 50% angular gravel.
				Silty Clayey SAND: (SM); yellow to yellowish brown; medium dense; moist; 20% clay, 20% silt, 50% fine to medium grained sand, 10% angular gravel; low to medium plasticity; high estimated permeability.
35				



Well Construction Details:
T.O.C. Elev. na
water encountered during drilling @ 5.5' static water level @ 6'
bottom of boring @31.5'

Driller	Gregg Drilling	Development Yield	NA	Bentonite Seal	3' to 1'
Logged By	J. Riggi	Well Casing	2" Dia. 0' to 4'	Sand Pack	3' to 30'
Drilling Started	6/18/98	Casing Type	Schedule 40 PVC	Sand Pack Type	# 2/12 Sand
Drilling Completed	6/18/98	Well Screen	2" Dia. 4' to 30'	Static Water Level	6.00 ft Depth
Construction Completed	6/18/98	Screen Type	Schedule 40 PVC	Date	6/18/98
Development Completed	NA	Slot Size	0.010"	Notes:	Rhino Rig HSA 8" augers
Water Bearing Zones	NA	Drilling Mud	NA		
		Grout Type	Concrete		

WELL 24554 7/1/98

Cambria Environmental Technology, Inc.