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Environmental Health

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by:

Paul Supple
Environmental Business Manager

Quarterly Groundwater Monitoring Progress Report Fourth Quarter 2008

76 (Former BP) Service Station No.11126
1700 Powell Street
Emeryville, California 94608

Stantec Project No.: 77BP.11126.02.0436 and 77CP.01731.41

Submitted to:
Mr. Steven Plunkett
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Submitted by:
Stantec Consulting Corporation
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670
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Prepared on behalf of:
Mr. Paul Supple
Atlantic Richfield Company, a BP affiliated company
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San Ramon, California 94583

And

Ms. Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, California 95818

January 23, 2009

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1.0 SITE INFORMATION AND BACKGROUND

Service Station No.:	11126
Site Address:	1700 Powell Street, Emeryville, California 94608
Consulting Company:	Stantec Consulting Corporation (Stantec) – Ms. Catherine Francini
Stantec Project No.:	77BP.11126.02.0436 and 77CP.01731.41
Primary Agency / Contact:	Mr. Steven Plunkett Alameda County Environmental Health Department 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

WORK PERFORMED THIS QUARTER [FOURTH – 2008]

1. Stantec Consulting Corporation (Stantec) submitted the *Quarterly Groundwater Monitoring Progress Report* (QMR) *Third Quarter 2008* (3Q08) on November 2008.
2. Stantec performed the groundwater monitoring and sampling event on December 23, 2008.

WORK PROPOSED FOR NEXT QUARTER [FIRST – 2009]

1. Stantec will prepare and submit the QMR-4Q08.
2. Stantec will perform the monitoring and sampling event.

Background

The site is located on the northwest corner of Powell Street and Christie Avenue in Emeryville, California (Figure 1), and is currently utilized as a retail gasoline service station. Three single-walled, fiberglass, gasoline underground storage tanks (USTs), associated product lines, two dispenser islands, a station building, and a convenience store are present at the site. The three unleaded gasoline USTs, consisting of one 12,000-gallon UST, one 10,000-gallon UST, and one 6,000-gallon UST, were installed in 1982 (State Water Resources Control Board [SWRCB], 1992).

The properties in the vicinity of the site are a mixture of industrial and commercial developments. South of the site and across Powell Street is Powell Street Plaza, a retail commercial development with a number of groundwater monitoring wells on-site and around its perimeter. Immediately east of Powell Street Plaza and approximately 1,000 feet (ft) southeast of the site are monitoring wells installed in the immediate vicinity of Harcros Pigments, located at 4650 Shell Mound Street. The area surrounding the site was historically used for industrial purposes before being developed into a shopping center. A summary of previous investigations and site history is included as Attachment A.

SITE INFORMATION

Current phase of project:	Groundwater monitoring and sampling
Have separate-phase hydrocarbons (SPH) historically been found on-site?:	No
Historic range in depth-to-water (DTW) [ft below top of casing (TOC), 4Q93 to 4Q08]:	2.50 ft to 10.74 ft below top of casing (TOC)
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	unknown
Current remediation technique:	Natural Attenuation

CURRENT SAMPLING SCHEDULE

(All wells gauged quarterly unless otherwise noted)

Current Sampling Schedule	
Well ID:	**All Quarters**
MW-1 and MW-2	GRO/BTEX/OXYS/1,2-DCA/EDB
MW-3	GRO/BTEX/OXYS/1,2-DCA/EDB/DRO/TOG
MW-4 through MW-11	GRO/BTEX/OXYS/1,2-DCA/EDB
Gasoline range organics (GRO); benzene, toluene, ethylbenzene, xylenes (collectively BTEX); methyl tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), ethanol (collectively OXYS); 1,2-Dichloroethane (1,2-DCA); 1,2-dibromoethane (EDB); diesel range organics (DRO); total petroleum hydrocarbons as oil and grease (TOG)	

CURRENT QUARTER MONITORING DATA

Wells Monitored and Sampled:	MW-1 through MW-11
Sampling Date	December 23, 2008
Depth to Groundwater (DTW, ft below TOC)	3.79 ft in MW-1 to 10.74 ft in MW-11
Average Change in Groundwater Elevation Since Last Event (ft):	0.44 increase [4.49 (3Q08) – 4.93 (4Q08)
Groundwater Flow Direction and Gradient:	Southwest at 0.02 foot per foot (ft/ft)

CURRENT QUARTER ANALYTICAL DATA – SHALLOW ZONE

Constituents	No. of detections above the laboratory method reporting limits (MRL): No. of wells analyzed	Minimum Concentration [micrograms per liter (µg/L)]	Maximum Concentration (µg/L)
GRO	8 : 11	<50	5,700 (MW-2)
Benzene	4 : 11	<1.0	950 (MW-2)
MTBE	10 : 11	<1.0	1,800 (MW-2)
TBA	8 : 11	<5.0	57,000 (MW-2)

2.0 Groundwater Monitoring and Sampling

2.1 MONITORING AND SAMPLING PROCEDURES

The current groundwater monitoring well network consists of 11 wells (MW-1 through MW-11). DTW measurements are taken and groundwater samples are collected on a quarterly basis. During the fourth quarter 2008, groundwater samples were collected on December 23, 2008. Stantec's field procedures for sample collection are presented as Attachment B. Field notes from the fourth quarter sampling event are included as Attachment C.

2.2 GROUNDWATER SAMPLE ANALYSIS

Groundwater samples were submitted to Lancaster Laboratories of Lancaster Pennsylvania, a California Certified Laboratory for analysis of GRO, BTEX, fuel oxygenates (MTBE, TAME, DIPE, EtBE, TBA, and ethanol), and lead scavengers 1,2-DCA and EDB by U.S. Environmental Protection Agency (EPA) Method 8260B. Additional groundwater samples were collected from well MW-3 and were submitted for analysis of DRO by EPA Method 8015B and TOG by EPA Method 1664A. The certified laboratory analytical report and chain-of-custody documentation are included as Attachment D.

2.3 QUALITY ASSURANCE / QUALITY CONTROL

Analytical data was quality assured and quality controlled using the Stantec Lab Validation Form. All data is acceptable except for the following issues:

The gas chromatograph / mass spectrometer (GC/MS) volatile analysis for C6-C12-TPH-GRO for sample #5567498 (MW-5) was performed outside of the method specified 14 day holding time.

Preservation requirements were not met for samples #5567494 (MW-1), #5567496 (MW-3), and #5567505 (QCTB). The vials submitted for volatile analysis did not have a pH of <2.

3.0 Discussion / Conclusion

3.1 GROUNDWATER SAMPLE RESULTS AND DISTRIBUTION

During the fourth quarter 2008, depth to groundwater within the wells ranged from 3.79 ft below TOC in well MW-1 to 10.74 ft below TOC in well MW-11. Historical depth to groundwater levels have ranged between approximately 2.50 ft and 10.51 ft below TOC. On December 23, 2008, the direction of groundwater flow beneath and in the site vicinity was toward the southwest at a hydraulic gradient of 0.02 ft/ft, which was generally consistent with the historical groundwater flow direction and gradient since 2003. Prior to 2003, the historical groundwater flow direction was reportedly variable since 2001; however, the groundwater flow patterns were most consistently

toward the south and southwest. Current and historical depth to groundwater measurements, calculated groundwater elevation data, and analytical data are presented in Tables 1 and 2. Groundwater elevation data were used to construct a potentiometric surface map, which is included as Figure 1. Analytical data were used to construct GRO, benzene, MTBE, and TBA isoconcentration contour maps included as Figures 2 through 5. Current and historical groundwater gradient data are presented in Table 3 and historical groundwater flow direction is depicted in a rose diagram as Figure 6. Well construction details are presented in Table 4.

Contaminant Concentrations
Evaluation of recent and historical groundwater analytical data indicates that the highest concentrations of GRO, BTEX, MTBE, TAME, and TBA have been detected in wells located in the immediate vicinity (MW-1 and MW-9) and northwest of the USTs (MW-2). Based on the generally southwesterly to southerly groundwater flow direction reported over previous sampling events, elevated concentrations of GRO have been present down-gradient in MW-5, and elevated concentrations of TBA have been detected in well MW-4.

Dissolved GRO, BTEX, and MTBE
During the fourth quarter 2008 monitoring and sampling event, well MW-2 contained the greatest concentrations of GRO at 5,700 µg/L. Additionally, concentrations of GRO were detected in wells MW-1, MW-3 through MW-5 and MW-7 through MW-9 at concentrations ranging from 59 µg/L (MW-7) to 3,300 µg/L (MW-5) during the current quarter.

During the fourth quarter 2008, well MW-2 contained the greatest concentrations of benzene, toluene, and ethylbenzene at respective concentrations of 950 µg/L, 19 µg/L, and 170 µg/L. Benzene was additionally detected in wells MW-1 (14 µg/L), MW-5 (2.7 µg/L), and MW-9 (420 µg/L); toluene was additionally detected in wells MW-1 (6.1 µg/L), MW-5 (1.1 µg/L), and MW-9 (7.9 µg/L); ethylbenzene was additionally detected in wells MW-1 (1.2 µg/L) and MW-9 (110 µg/L) during the current quarter. Well MW-9 contained the greatest concentration of total xylenes at 84 µg/L. Xylenes were additionally detected in wells MW-1 (9.7 µg/L), MW-2 (70 µg/L), and MW-5 (3.4 µg/L), during the fourth quarter 2008.

During the fourth quarter 2008, the greatest concentrations of MTBE were detected in well MW-2 at 1,800 µg/L. MTBE was additionally detected in wells MW-1 and MW-3 through MW-10 at concentrations ranging from 1.0 µg/L (MW-5) to 870 µg/L (MW-9) during the current quarter.

Dissolved Other Fuel Oxygenates and Lead Scavengers
During the fourth quarter 2008, TBA was detected in wells MW-1 through MW-4 and MW-6 through MW-9 up with concentrations ranging from 54 µg/L (MW-6) to 57,000 µg/L (MW-2). TAME was detected in wells MW-2 (51 µg/L) and MW-9 (23 µg/L) during the fourth quarter 2008. Additionally, ETBE was detected in wells MW-2 (2.4 µg/L) and MW-4 (3.2 µg/L). Other oxygenates (DIPE, and ethanol) and lead scavengers (1,2-DCA, and EDB) were not detected at or above laboratory MRLs during the fourth quarter 2008.

Dissolved DRO and TOG
Well MW-3 has historically been analyzed for DRO and TOG since 1992. Consistent with historical data, DRO was detected in well MW-3 at a concentration of 2,800 µg/L, while TOG was not detected at or above laboratory MRLs during the fourth quarter 2008 monitoring and sampling event.

PLUME STATUS

Other than MTBE and TBA, the lateral extent of impacted groundwater has been defined to the southwest by non-detectable levels of petroleum hydrocarbons and fuel oxygenates. Low to non-detectable levels of MTBE are present in wells MW-10 and MW-11. The lateral extent of dissolved GRO and BTEX in groundwater has been delineated in the westerly direction by low to non-detectable concentrations in wells MW-6, and MW-7. The lateral extent of affected groundwater has not been delineated north of well MW-8, and to the east and southeast of the site. The presence of dissolved DRO has not been delineated in the vicinity of well MW-3. Review of historical investigations indicates that the vertical extent of dissolved contaminants has not been investigated beyond the maximum completed depth of the wells at 17 feet below ground surface (bgs).

4.0 Purge Water Disposal

Approximately 43 gallons of purged groundwater were generated during the fourth quarter 2008 groundwater sampling event. The water was transferred into 55-gallon, steel, California Department of Transportation-approved drums pending waste characterization and transported by Belshire Environmental Services Inc. to DeMenno Kerdoon in Compton California for disposal.

5.0 Recommendations and Conclusions

Since the groundwater gradient has been predominately to the southwest with occasional fluctuations to the south, and the site has been adequately delineated in those directions, it appears the plume is stable and confined to the site boundaries.

In a letter dated February 1, 2007, the Alameda County Environmental Health Services (ACEH) requested the submittal of a remedial action plan to address source area contamination. SECOR, now Stantec, submitted the *Remedial Action Plan* on March 30, 2007. The plan recommended oxygen injection as a possible remedial option. No response has been received from the ACEH to date. Monitored natural attenuation will continue to be pursued as the remedial alternative for this site unless the ACEH directs Stantec to pursue other options.

6.0 Limitations

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Atlantic Richfield Company, a BP affiliated company and ConocoPhillips for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this third party information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:

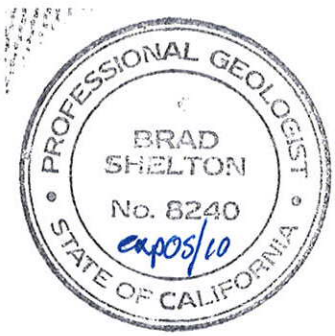
Kimber Collins
Project Scientist

All information, conclusions, and recommendations provided by Stantec in this document regarding the site at 1700 Powell Street, Emeryville, California has been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

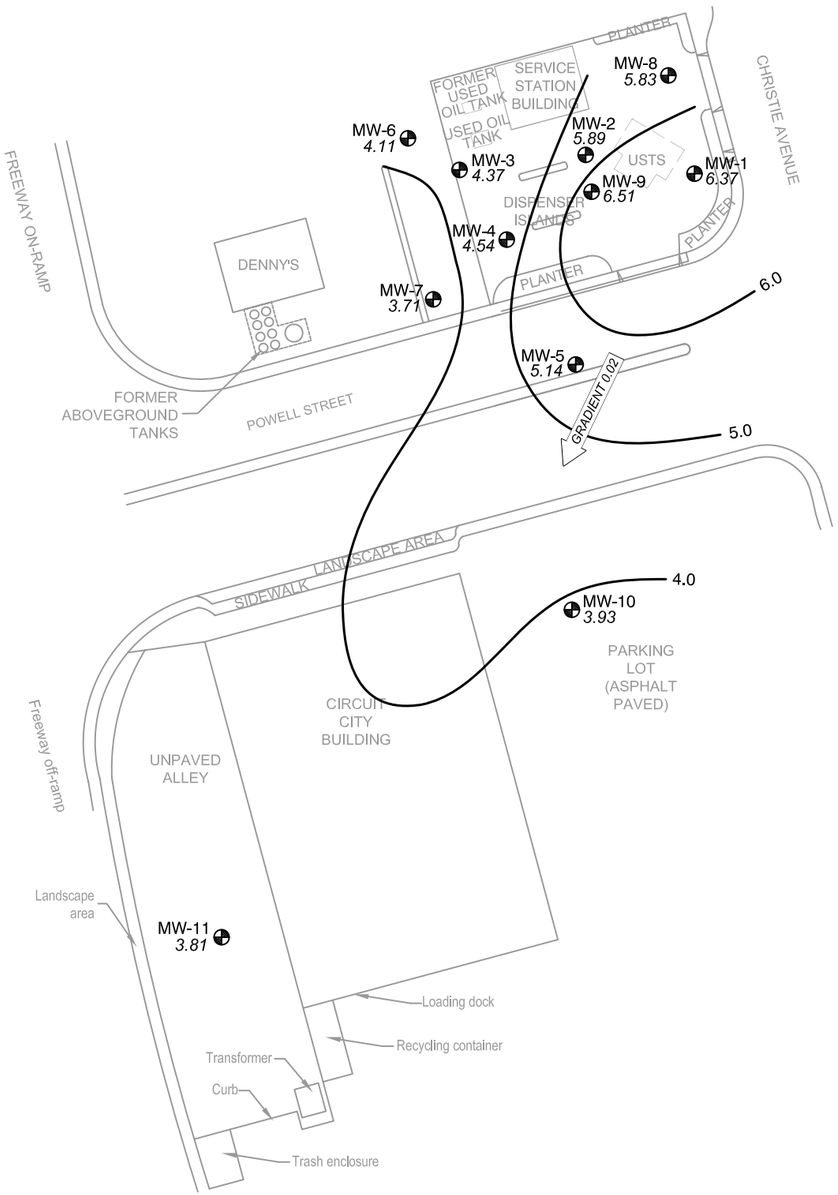
Brad Shelton, P.G.
Associate Geologist

January 23, 2009



cc: Mr. Paul Supple, Atlantic Richfield Company (electronic upload to ENFOS)
Ms. Shelby Lathrop, ConocoPhillips (electronic upload to LiveLink)

Figures



LEGEND:

MW-1 ⊕	GROUNDWATER MONITORING WELL LOCATION
GRADIENT →	APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)
4.0	GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
4.11	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

N

0 80 160

SCALE IN FEET

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

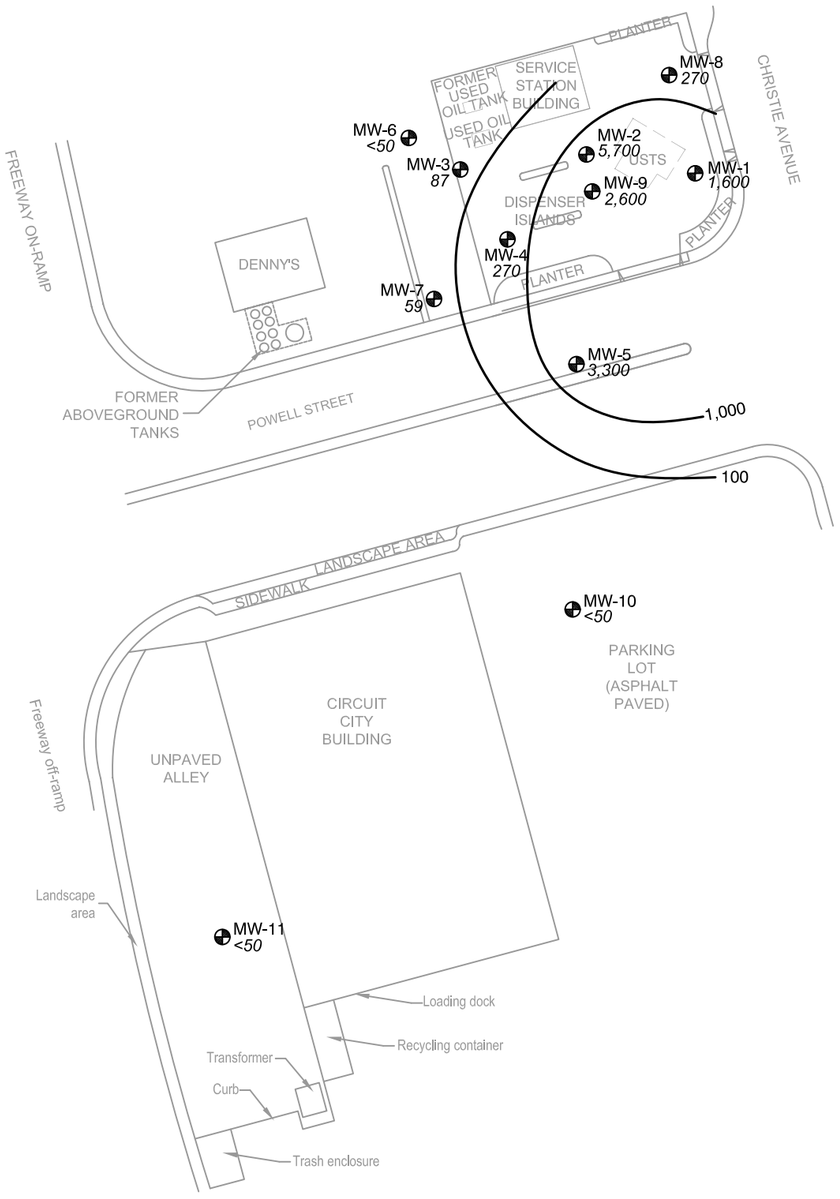
Stantec

FOR:
76 (FORMER BP)
SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP FOURTH QUARTER 2008

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77BP.11126.02 77CP.01731.41	MDR/STA	KC	BS	01/20/09



LEGEND:

MW-1	GROUNDWATER MONITORING WELL
100	GRO ISOCONCENTRATION CONTOUR
270	GRO CONCENTRATION (µg/L)
GRO	GASOLINE RANGE ORGANICS
µg/L	MICROGRAMS PER LITER

N

0 80 160

SCALE IN FEET

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

Stantec

FOR:
76 (FORMER BP)
SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

GRO ISOCONCENTRATION CONTOUR MAP FOURTH QUARTER 2008

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77BP.11126.02 77CP.01731.41	MDR/STA	KC	BS	01/20/09

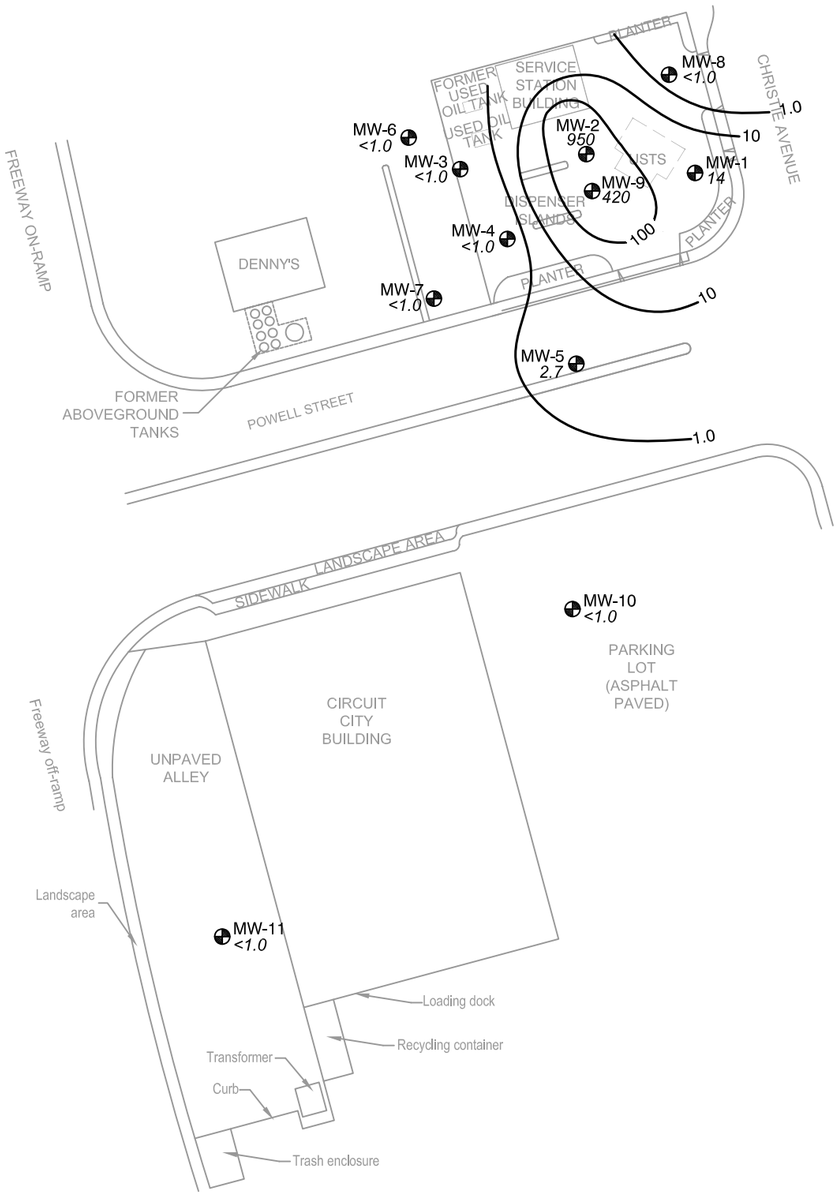
LEGEND:

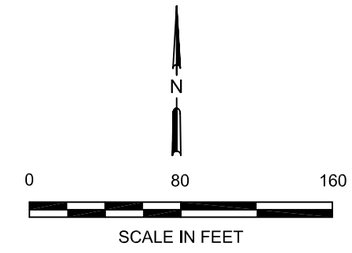
MW-1 — GROUNDWATER MONITORING WELL

10 — BENZENE ISOCONCENTRATION CONTOUR

14 — BENZENE CONCENTRATION (µg/L)

µg/L — MICROGRAMS PER LITER





NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

Stantec

FOR:
76 (FORMER BP)
SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

BENZENE ISOCONCENTRATION CONTOUR MAP FOURTH QUARTER 2008

FIGURE: **3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77BP.11126.02 77CP.01731.41	MDR/STA	KC	BS	01/20/09

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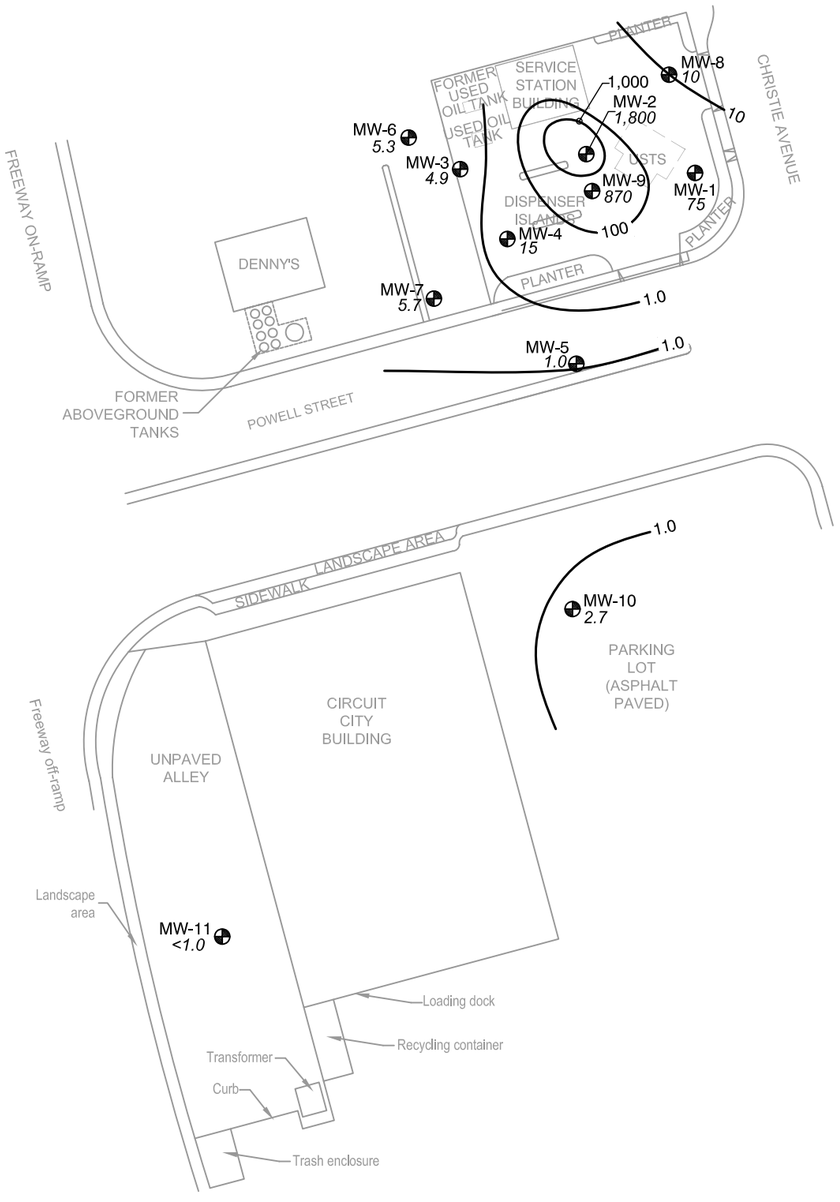
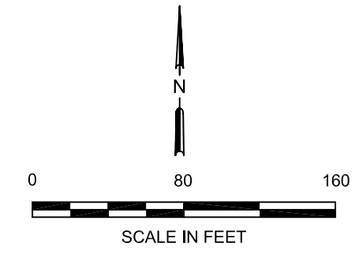
LEGEND:

MW-1	GROUNDWATER MONITORING WELL
100	MTBE ISOCONCENTRATION CONTOUR
15	MTBE CONCENTRATION (µg/L)
MTBE	METHYL TERTIARY BUTLY ETHER
µg/L	MICROGRAMS PER LITER





NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

Stantec

FOR:
76 (FORMER BP)
SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

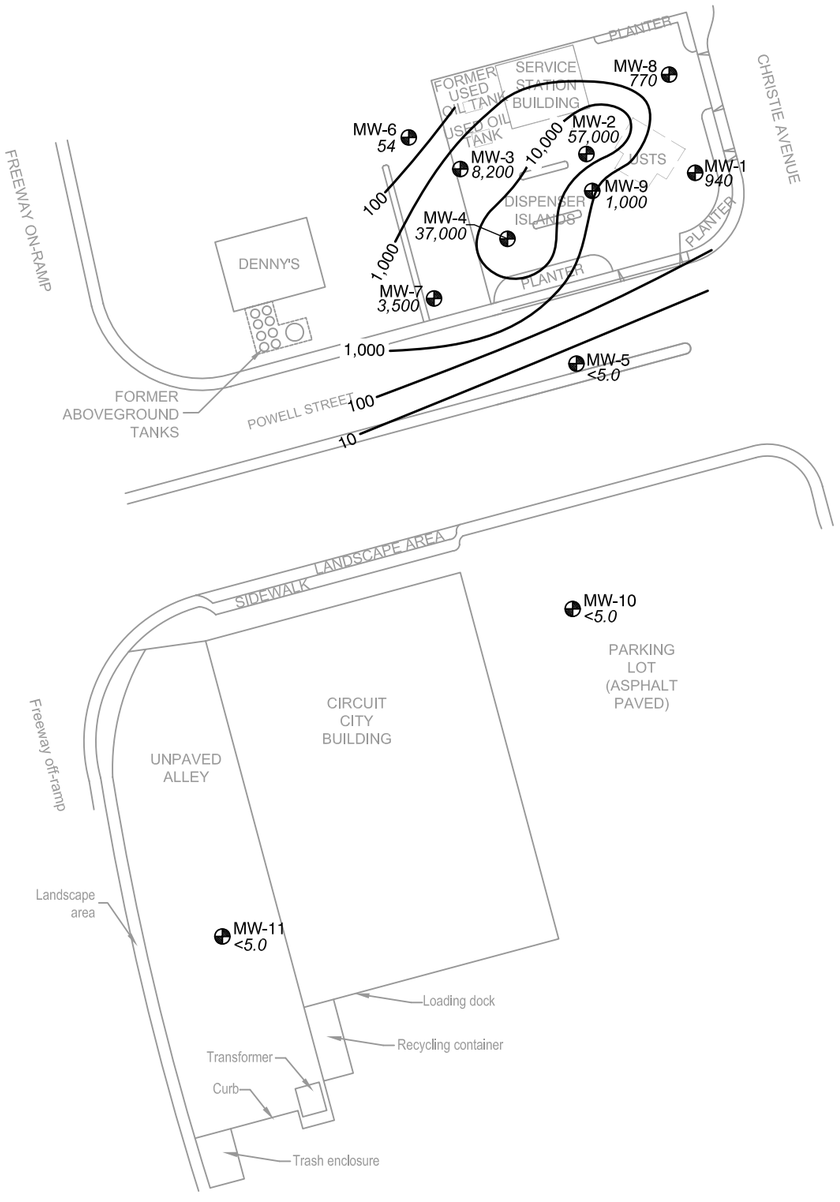
MTBE ISOCONCENTRATION CONTOUR MAP FOURTH QUARTER 2008

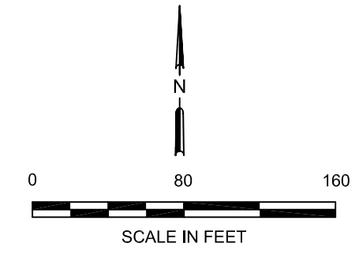
FIGURE: **4**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
77BP.11126.02 77CP.01731.41	MDR/STA	KC	BS	01/20/09

LEGEND:

MW-1 ⊕	GROUNDWATER MONITORING WELL
100	TBA ISOCONCENTRATION CONTOUR
54	TBA CONCENTRATION (µg/L)
TBA	TERTIARY BUTLY ALCOHOL
µg/L	MICROGRAMS PER LITER





NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

Stantec

FOR: 76 (FORMER BP) SERVICE STATION NO. 11126 1700 POWELL STREET EMERYVILLE, CALIFORNIA		**TBA ISOCONCENTRATION CONTOUR MAP FOURTH QUARTER 2008**		FIGURE: **5**
JOB NUMBER: 77BP.11126.02 77CP.01731.41	DRAWN BY: MDR/STA	CHECKED BY: KC	APPROVED BY: BS	DATE: 01/20/09

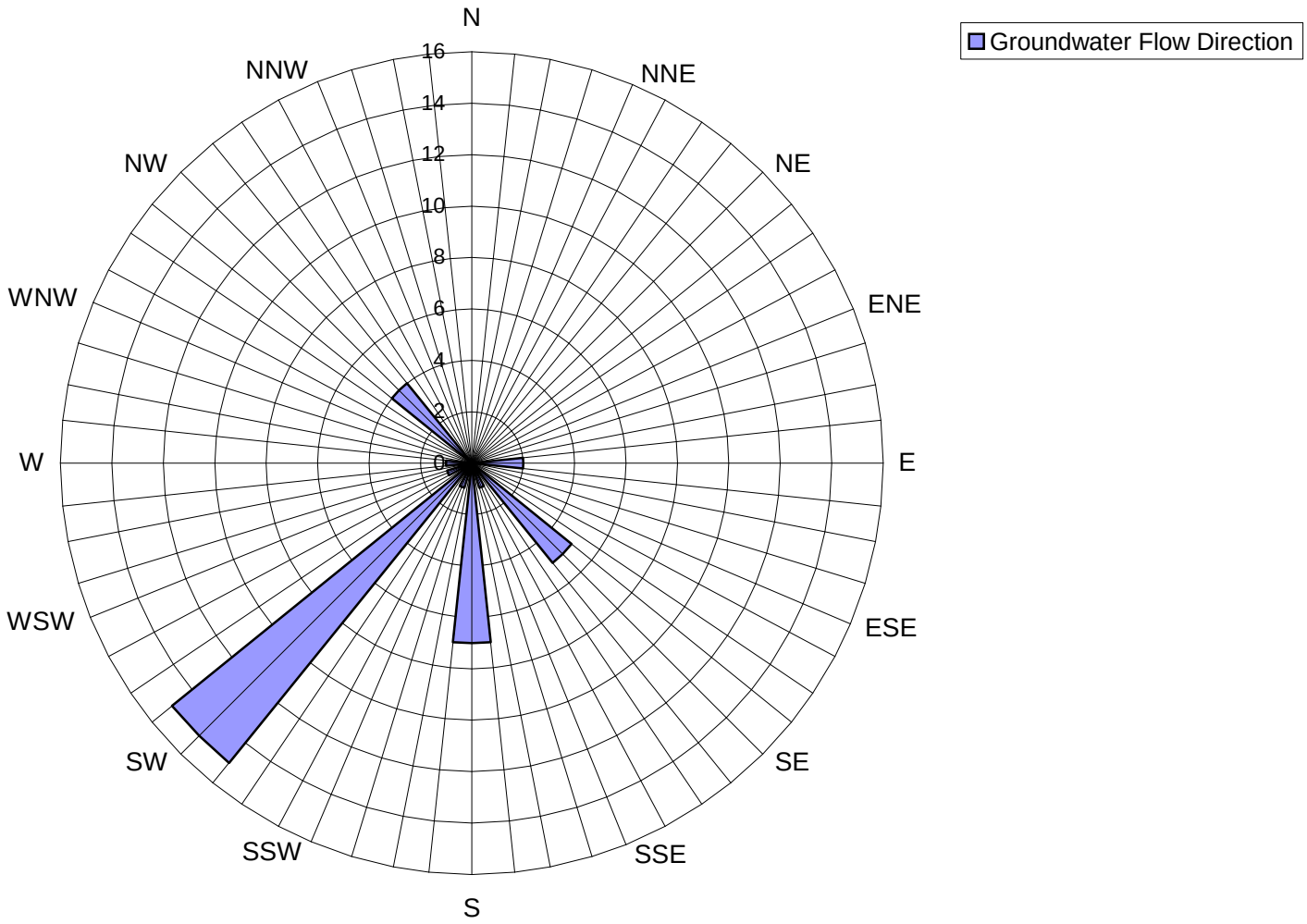
FILEPATH:M:\BP-ARCO\11126\AUTOPOST 2008\4Q 2008\FIG5-11126-TBA.dwg|saguinaldo|Jan 20, 2009 at 14:10|Layout: 11x17

FIGURE 6
Groundwater Flow Direction Rose Diagram
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, California

Legend:

Each concentric gridline represents the number of monitoring events.

Diagram includes data from the First Quarter 2001 through the Fourth Quarter 2008.



Tables

TABLE 1
Current Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	D.O. (mg/L)	Comment
MW-1	12/23/08		10.16	3.79	0.00	6.37	**1,600**	-	-	**14**	**6.1**	**1.2**	**9.7**	**75**	**940**	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-2	12/23/08		11.39	5.50	0.00	5.89	**5,700**	-	-	**950**	**19**	**170**	**70**	**1,800**	**57,000**	<2.0	**2.4**	**51**	<500	<2.0	<2.0	-	
MW-3	12/23/08		10.73	6.36	0.00	4.37	**87**	**2,800**	<5,000	<1.0	<1.0	<1.0	<1.0	**4.9**	**8,200**	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-4	12/23/08		10.58	6.04	0.00	4.54	**270**	-	-	<1.0	<1.0	<1.0	<1.0	**15**	**37,000**	<1.0	**3.2**	<1.0	<250	<1.0	<1.0	-	
MW-5	12/23/08		10.18	5.04	0.00	5.14	**3,300**	-	-	**2.7**	**1.1**	<1.0	**3.4**	**1.0**	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-6	12/23/08		11.01	6.90	0.00	4.11	<50	-	-	<1.0	<1.0	<1.0	<1.0	**5.3**	**54**	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-7	12/23/08		10.11	6.40	0.00	3.71	**59**	-	-	<1.0	<1.0	<1.0	<1.0	**5.7**	**3,500**	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-8	12/23/08		11.08	5.25	0.00	5.83	**270**	-	-	<1.0	<1.0	<1.0	<1.0	**10**	**770**	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-9	12/23/08		10.55	4.04	0.00	6.51	**2,600**	-	-	**420**	**7.9**	**110**	**84**	**870**	**1,000**	<1.0	<1.0	**23**	<250	<1.0	<1.0	-	
MW-10	12/23/08		12.53	8.60	0.00	3.93	<50	-	-	<1.0	<1.0	<1.0	<1.0	**2.7**	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
MW-11	12/23/08		14.55	10.74	0.00	3.81	<50	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	
QCTB	12/23/08		-	-	-	-	<50	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	

Notes:

GRO = Gasoline range organics
DRO = Diesel range organics
TOG = Total petroleum hydrocarbons as oil and grease
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
D.O. = Dissolved Oxygen; rounded to the nearest tenth
SPH = Separate-phase hydrocarbons
TOC = Top of casing (surveyed)
Calc. GW Elev. = Calculated groundwater elevation = TOC - Depth to Water + 0.75*(Measured SPH Thickness
ft-MSL = feet above mean sea level
mg/L = Milligrams per liter
µg/L = Micrograms per liter
< = Analyte was not detected above the specified method reporting limit
- = Not measured or analyzed

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-1	11/04/92		7.76	4.96	0.00	2.80	5,300	-	-	1,100	480	<0.50	1,500	-	-	-	-	-	-	-	-	-	-	
	10/12/93			5.26	0.00	2.50	3,600	-	-	970	71	100	550	6,111	-	-	-	-	-	-	-	-	-	
	02/15/94			4.98	0.00	2.78	17,000	-	-	4,200	510	360	1,600	5,495	-	-	-	-	-	-	-	-	3.9	
	05/11/94			4.55	0.00	3.21	5,500	-	-	2,900	37	56	64	705	-	-	-	-	-	-	-	-	8.0	
	08/01/94	DUP		-	-	-	16,000	-	-	3,600	750	510	2,800	9,800	-	-	-	-	-	-	-	-	-	
	08/01/94			5.51	0.00	2.25	15,000	-	-	3,600	740	510	2,800	9,718	-	-	-	-	-	-	-	-	2.9	
	10/18/94	DUP		-	-	-	16,000	-	-	1,900	64	170	950	-	-	-	-	-	-	-	-	-	-	
	10/18/94			5.11	0.00	2.65	16,000	-	-	1,800	61	160	890	15,668	-	-	-	-	-	-	-	-	2.9	
	01/13/95	DUP		-	-	-	590	-	-	88	0.70	<0.50	55	-	-	-	-	-	-	-	-	-	-	
	01/13/95			3.05	0.00	4.71	220	-	-	7.0	<0.50	1.0	23	-	-	-	-	-	-	-	-	-	6.6	
	04/13/95			3.84	0.00	3.92	9,300	-	-	4,000	300	200	950	-	-	-	-	-	-	-	-	-	7.7	
	07/11/95			3.60	0.00	4.16	15,000	-	-	2,200	84	<25	2,500	-	-	-	-	-	-	-	-	-	8.8	
	11/02/95			4.58	0.00	3.18	19,000	-	-	920	<100	<100	430	52,000	-	-	-	-	-	-	-	-	7.3	
	02/05/96			4.43	0.00	3.33	4,600	-	-	1,400	330	54	247	8,700	-	-	-	-	-	-	-	-	3.2	
	04/24/96			4.00	0.00	3.76	2,000	-	-	510	33	61	228	4,500	-	-	-	-	-	-	-	-	7.5	
	07/15/96			4.30	0.00	3.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/16/96	DUP		-	-	-	12,000	-	-	2,800	160	390	1,610	63,000	-	-	-	-	-	-	-	-	-	
	07/16/96			-	-	-	12,000	-	-	2,800	170	390	1,630	64,000	-	-	-	-	-	-	-	-	7.9	
	07/30/96			4.64	0.00	3.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/12/96			-	-	-	11,000	-	-	2,500	160	<10	1,740	440,000	-	-	-	-	-	-	-	-	7.0	
	11/04/96			5.98	0.00	1.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	53,000	-	-	1,300	43	100	349	42,000	-	-	-	-	-	-	-	-	6.6	
	05/17/97			4.65	0.00	3.11	52,000	-	-	1,958	55	305	1,216	140,198	-	-	-	-	-	-	-	-	5.7	
	08/11/97			4.90	0.00	2.86	25,000	-	-	540	6.7	<5.0	57	360,000	-	-	-	-	-	-	-	-	7.9	
	11/17/97			6.12	0.00	1.64	93,000	-	-	1,200	31	180	40	400,000	-	-	-	-	-	-	-	-	7.6	
	01/29/98			4.90	0.00	2.86	4,800	-	-	320	24	52	20	<50	-	-	-	-	-	-	-	-	6.6	
	06/22/98			4.62	0.00	3.14	63,000	-	-	180	<5.0	15	69	57,000	-	-	-	-	-	-	-	-	6.0	
	12/30/98			5.41	0.00	2.35	22,000	-	-	2,500	24	120	400	15,000	-	-	-	-	-	-	-	-	-	
	03/09/99			3.40	0.00	4.36	16,000	-	-	2,000	84	290	510	13,000	-	-	-	-	-	-	-	-	-	
	06/23/99			4.60	0.00	3.16	9,600	-	-	4,500	21	160	260	24,000	-	-	-	-	-	-	-	-	-	
	09/23/99			4.21	0.00	3.55	3,800	-	-	1,600	32	150	240	7,100	-	-	-	-	-	-	-	-	-	
	12/28/99			4.10	0.00	3.66	3,400	-	-	<2,200	17	53	130	5,500	-	-	-	-	-	-	-	-	-	
	03/22/00			5.51	0.00	2.25	6,400	-	-	1,100	45	190	330	4,900	-	-	-	-	-	-	-	-	-	
	05/26/00			4.79	0.00	2.97	110,000	-	-	700	44	140	250	320,000	-	-	-	-	-	-	-	-	-	
	09/06/00			5.19	0.00	2.57	5,600	-	-	1,000	13	57	90	19,000	-	-	-	-	-	-	-	-	-	
	09/15/00			5.73	0.00	2.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			5.82	0.00	1.94	5,500	-	-	1,160	47	155	292	3,900	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-1	06/27/01		7.76	5.49	0.00	2.27	6,100	-	-	1,200	13	17	78	1,780	-	-	-	-	-	-	-	-	-	
	09/19/01			6.19	0.00	1.57	1,800	-	-	102	<12.5	<12.5	<37.5	1,090	-	-	-	-	-	-	-	-	-	
	12/28/01			5.27	0.00	2.49	4,000	-	-	540	12	20	65	1,120	-	-	-	-	-	-	-	-	-	
	03/12/02			5.68	0.00	2.08	3,700	-	-	491	8.4	12	27	1,020	-	-	-	-	-	-	-	-	-	
	06/13/02			5.54	0.00	2.22	1,900	-	-	255	<12.5	<12.5	<25	6,490	-	-	-	-	-	-	-	-	-	
	09/06/02			5.56	0.00	2.20	1,100	-	-	170	5.1	2.2	20	550	-	-	-	-	-	-	-	-	-	
	12/13/02			5.45	0.00	2.31	2,700	-	-	610	10	18	67	470	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			3.00	0.00	4.76	1,500	-	-	180	<5.0	<5.0	15	610	-	-	-	-	-	-	-	-	-	
	06/06/03			5.52	0.00	2.24	4,600	-	-	620	<25	<25	55	1,400	<1,000	<25	<25	<25	<5,000	-	-	-	-	
	08/07/03			5.55	0.00	2.21	2,000	-	-	290	<5.0	<5.0	15	920	560	<5.0	<5.0	12	<1,000	<5.0	<5.0	-	-	
	11/20/03			5.41	0.00	2.35	2,800	-	-	420	11	11	53	250	<200	<5.0	<5.0	<5.0	1,800	-	-	-	-	Past holding time
	04/28/04			5.33	0.00	2.43	1,600	-	-	100	5.3	<5.0	8.8	200	950	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	08/26/04			4.03	0.00	3.73	1,700	-	-	220	7.2	15	35	180	320	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	12/01/04			3.93	0.00	3.83	2,100	-	-	380	8.0	34	76	170	300	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	02/02/05			3.61	0.00	4.15	1,100	-	-	150	3.0	12	14	160	6,700	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	04/25/05		10.16	3.75	0.00	6.41	930	-	-	140	3.6	5.3	11	200	5,000	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	09/30/05			3.54	0.00	6.62	4,600	-	-	1,000	15	78	150	250	1,200	13	<5.0	<5.0	<500	<5.0	<5.0	-	-	
	12/28/05			3.26	0.00	6.90	1,500	-	-	200	5.7	32	58	140	1,800	<10	<5.0	<5.0	<1,000	<5.0	-	-	-	
	03/23/06			3.40	0.00	6.76	580	-	-	42	<5.0	10	20	40	2,800	<10	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	06/05/06			2.97	0.00	7.19	900	-	-	230	2.5	28	71	160	1,900	<5.0	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	09/19/06			3.67	0.00	6.49	1,600	-	-	240	3.4	11	23	180	1,000	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	Well purged dry
	12/01/06			3.64	0.00	6.52	1,400	-	-	86	4.3	7.0	19	150	930	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	03/01/07			3.55	0.00	6.61	4,200	-	-	340	7.0	34	46	160	510	<4.0	<2.0	2.0	<1,000	<2.0	<2.0	-	-	
	06/01/07			3.53	0.00	6.63	2,100	-	-	200	3.4	34	59	140	1,500	<4.0	<2.0	2.2	<1,000	<2.0	<2.0	-	-	
	09/13/07			4.88	0.00	5.28	540	-	-	74	2.4	5.4	10	59	1,300	<4.0	<2.0	<2.0	1,100	<2.0	<2.0	-	-	
	11/21/07			3.70	0.00	6.46	1,800	-	-	67	6.2	3.5	12	200	1,300	<4.0	<2.0	2.7	<1,000	<2.0	<2.0	-	-	
	02/29/08			3.49	0.00	6.67	970	-	-	100	1.9	37	32	25	1,200	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	05/23/08			4.26	0.00	5.90	1,300	-	-	170	3.5	15	26	120	1,800	<1.0	<0.50	1.4	<250	<0.50	<0.50	-	-	
	09/26/08			4.29	0.00	5.87	1,800	-	-	26	6.1	<1.0	10	120	1,400	<1.0	<1.0	1.9	<250	<1.0	<1.0	-	-	
	12/23/08			**3.79**	**0.00**	**6.37**	**1,600**	**-**	**-**	**14**	**6.1**	**1.2**	**9.7**	**75**	**940**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-2	11/04/92	DUP	8.56	-	-	-	12,000	-	-	3,200	980	<0.50	1,900	-	-	-	-	-	-	-	-	-	-	
	11/04/92			5.88	0.00	2.68	12,000	-	-	3,900	1,300	<0.50	2,300	-	-	-	-	-	-	-	-	-	-	
	10/12/93			6.29	0.00	2.27	4,500	-	-	3,400	180	230	940	442	-	-	-	-	-	-	-	-	-	
	02/15/94	DUP		5.56	0.00	3.00	2,000	-	-	430	270	28	390	127	-	-	-	-	-	-	-	-	4.0	
	02/15/94			-	-	-	1,800	-	-	290	160	14	250	-	-	-	-	-	-	-	-	-	-	
	05/11/94	DUP		-	-	-	15,000	-	-	5,600	1,500	470	2,000	740	-	-	-	-	-	-	-	-	-	
	05/11/94			5.17	0.00	3.39	14,000	-	-	3,900	1,200	440	1,900	953	-	-	-	-	-	-	-	-	8.9	
	08/01/94			5.43	0.00	3.13	8,200	-	-	3,000	420	230	680	1,676	-	-	-	-	-	-	-	-	2.6	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-2	10/18/94		8.56	5.71	0.00	2.85	9,000	-	-	2,000	140	150	420	2,417	-	-	-	-	-	-	-	-	7.2	
	01/13/95			4.67	0.00	3.89	7,900	-	-	2,200	42	<5.0	770	-	-	-	-	-	-	-	-	-	6.8	
	04/13/95	DUP		-	-	-	25,000	-	-	6,500	1,500	110	5,300	-	-	-	-	-	-	-	-	-	-	
	04/13/95			4.37	0.00	4.19	33,000	-	-	8,000	2,500	1,100	6,600	-	-	-	-	-	-	-	-	-	7.5	
	07/11/95	DUP		-	-	-	28,000	-	-	6,800	1,000	900	4,900	-	-	-	-	-	-	-	-	-	-	
	07/11/95			4.51	0.00	4.05	19,000	-	-	3,300	99	7.5	4,600	-	-	-	-	-	-	-	-	-	7.8	
	11/02/95	DUP		-	-	-	22,000	-	-	4,000	1,200	600	2,700	19,000	-	-	-	-	-	-	-	-	-	
	11/02/95			5.55	0.00	3.01	20,000	-	-	3,800	1,200	570	2,700	15,000	-	-	-	-	-	-	-	-	7.3	
	02/05/96	DUP		-	-	-	910	-	-	290	180	19	137	93	-	-	-	-	-	-	-	-	-	
	02/05/96			5.10	0.00	3.46	1,200	-	-	320	220	26	187	99	-	-	-	-	-	-	-	-	2.2	
	04/24/96	DUP		4.95	0.00	3.61	<500	-	-	70	22	<10	61	<50	-	-	-	-	-	-	-	-	7.0	
	04/24/96			-	-	-	<500	-	-	100	30	<10	71	<100	-	-	-	-	-	-	-	-	-	
	07/15/96			5.40	0.00	3.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/16/96			-	-	-	12,000	-	-	3,300	1,400	250	2,610	1,400	-	-	-	-	-	-	-	-	7.8	
	07/30/96			5.44	0.00	3.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			7.06	0.00	1.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96	DUP		-	-	-	9,200	-	-	1,300	170	<25	2,240	1,100	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	7,200	-	-	1,400	230	38	2,110	1,100	-	-	-	-	-	-	-	-	7.4	
	05/17/97			5.77	0.00	2.79	570	-	-	42	<5.0	5.0	60	210	-	-	-	-	-	-	-	-	6.9	
	08/11/97			5.71	0.00	2.85	6,300	-	-	1,800	130	86	397	2,400	-	-	-	-	-	-	-	-	8.5	
	11/17/97			6.91	0.00	1.65	2,400	-	-	220	30	33	259	130	-	-	-	-	-	-	-	-	7.9	
	01/29/98			4.61	0.00	3.95	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	6.2	
	06/22/98			4.80	0.00	3.76	4,200	-	-	640	150	120	650	560	-	-	-	-	-	-	-	-	5.4	
	12/30/98			5.21	0.00	3.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/23/99			5.30	0.00	3.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			4.75	0.00	3.81	3,800	-	-	760	19	210	960	910	-	-	-	-	-	-	-	-	-	
	12/28/99			4.51	0.00	4.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			4.21	0.00	4.35	2,500	-	-	780	17	44	270	2,800	-	-	-	-	-	-	-	-	-	
	05/26/00			4.66	0.00	3.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/06/00			4.71	0.00	3.85	3,700	-	-	1,200	5.5	12	170	12,000	-	-	-	-	-	-	-	-	-	
	09/15/00			4.74	0.00	3.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			4.79	0.00	3.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/27/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/19/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/12/02			4.25	0.00	4.31	26,000	-	-	1,160	4.4	61	171	37,300	-	-	-	-	-	-	-	-	-	
	06/13/02			4.94	0.00	3.62	18,000	-	-	578	<50	<50	<100	84,600	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-2	09/06/02		8.56	5.23	0.00	3.33	26,000	-	-	440	<50	<50	<50	45,000	-	-	-	-	-	-	-	-	-	
	12/13/02			4.94	0.00	3.62	69,000	-	-	1,200	<500	<500	<500	98,000	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			4.14	0.00	4.42	78,000	-	-	1,100	<500	<500	<500	81,000	-	-	-	-	-	-	-	-	-	
	06/06/03			4.66	0.00	3.90	120,000	-	-	1,100	<1,000	<1,000	<1,000	72,000	<40,000	<1,000	<1,000	1,300	<200,000	-	-	-	-	
	08/07/03			4.90	Sheen	3.66	71,000	-	-	590	<500	<500	<500	83,000	45,000	<500	<500	1,300	<100,000	<500	<500	-	-	
	11/20/03			4.59	0.00	3.97	22,000	-	-	720	<100	<100	<100	18,000	48,000	<100	<100	200	<20,000	-	-	-	-	
	04/28/04			4.37	0.00	4.19	<25,000	-	-	690	<250	<250	<250	31,000	59,000	<250	<250	<250	<50,000	<250	<250	-	-	
	08/26/04			4.59	0.00	3.97	140,000	-	-	8,200	18,000	4,200	19,000	11,000	<10,000	<250	<250	320	<50,000	<250	<250	-	-	
	12/01/04			4.79	0.00	3.77	98,000	-	-	8,400	13,000	4,600	21,000	10,000	<4,000	<100	<100	230	<20,000	<100	<100	-	-	
	02/02/05			4.27	Sheen	4.29	92,000	-	-	6,600	9,900	4,400	18,000	10,000	4,000	<100	<100	260	<20,000	<100	<100	-	-	
	04/25/05		11.39	4.00	0.00	7.39	80,000	-	-	6,700	4,900	4,400	17,000	8,200	3,700	<50	<50	220	<10,000	<50	<50	-	-	
	09/30/05			4.86	0.00	6.53	98,000	-	-	7,700	7,400	4,700	20,000	16,000	4,700	<50	<50	270	<5,000	<50	<50	-	-	
	12/28/05			4.28	0.00	7.11	210,000	-	-	15,000	21,000	7,300	31,000	22,000	6,300	<200	<100	410	<20,000	<100	-	-	-	
	03/23/06			3.60	0.00	7.79	79,000	-	-	9,100	12,000	4,300	17,000	13,000	5,800	<200	<100	290	<20,000	<100	<100	-	-	
	06/05/06			4.28	Sheen	7.11	79,000	-	-	9,700	8,700	4,900	20,000	8,000	3,300	<100	<50	280	<10,000	<50	<50	-	-	
	09/19/06			4.61	0.00	6.78	68,000	-	-	12,000	9,300	4,100	14,000	16,000	4,800	<100	<50	370	<25,000	<50	<50	-	-	
	12/01/06			4.55	0.00	6.84	61,000	-	-	15,000	6,900	4,400	17,000	10,000	3,900	<100	<50	270	<25,000	<50	<50	-	-	
	03/01/07			4.14	0.00	7.25	80,000	-	-	9,300	5,500	4,100	15,000	8,300	2,700	<100	<50	210	<25,000	<50	<50	-	-	
	06/01/07			4.34	0.00	7.05	120,000	-	-	12,000	6,400	4,200	11,000	17,000	4,900	260	<100	310	<50,000	<100	<100	-	-	
	09/13/07			5.35	0.00	6.04	<5,000	-	-	770	<50	140	<100	2,300	42,000	<100	<50	50	<25,000	<50	<50	-	-	
	11/21/07			5.19	0.00	6.20	27,000	-	-	4,500	220	1,600	2,800	5,200	5,000	<100	<50	160	<25,000	<50	<50	-	-	
	02/29/08			4.41	0.00	6.98	44,000	-	-	6,100	320	3,800	6,600	4,900	2,500	<100	<50	120	<25,000	<50	<50	-	-	
	05/23/08			5.25	0.00	6.14	13,000	-	-	1,700	<50	300	210	2,500	29,000	140	<50	60	<25,000	<50	<50	-	-	
	09/26/08			5.81	0.00	5.58	4,800	-	-	220	12	20	42	960	77,000	<1.0	2.8	42	<250	<1.0	<1.0	-	-	
	12/23/08			**5.50**	**0.00**	**5.89**	**5,700**	**-**	**-**	**950**	**19**	**170**	**70**	**1,800**	**57,000**	**<2.0**	**2.4**	**51**	**<500**	**<2.0**	**<2.0**	**-**	**-**	
MW-3	11/04/92		8.25	6.38	0.00	1.87	200	690	<5,000	1.6	<0.50	<0.50	1.1	-	-	-	-	-	-	-	-	ND	-	
	10/12/93	DUP		5.84	0.00	2.41	270	2,100	<5,000	5.0	0.70	<0.50	2.6	96	-	-	-	-	-	-	-	ND	-	
	10/12/93			-	-	-	150	-	-	5.6	0.60	<0.50	1.6	-	-	-	-	-	-	-	-	-	-	-	
	02/15/94			6.60	0.00	1.65	140	2.3	90	5.7	<0.50	<0.50	<0.50	30	-	-	-	-	-	-	-	-	ND	3.9	
	05/11/94			5.86	0.00	2.39	190	2,500	<5,000	2.7	1.9	<0.50	1.9	51	-	-	-	-	-	-	-	-	ND	9.2	
	08/01/94			6.13	0.00	2.12	120	1,300	<5,000	1.3	<0.50	0.50	1.1	18	-	-	-	-	-	-	-	-	ND	2.9	
	10/18/94			6.39	0.00	1.86	100	2,200	<5,000	2.3	<0.50	<0.50	<0.50	21	-	-	-	-	-	-	-	-	ND	3.6	
	01/13/95			5.47	0.00	2.78	<50	970	-	0.80	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	ND	7.7	
	04/13/95			5.17	0.00	3.08	530	<500	2,100	8.7	1.9	<0.50	3.9	-	-	-	-	-	-	-	-	-	ND	8.4	
	07/11/95			5.37	0.00	2.88	78	2,100	1,900	0.57	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	ND	8.3	
	11/02/95			6.29	0.00	1.96	250	2,000	1,400	0.73	<0.50	<0.50	1.8	270	-	-	-	-	-	-	-	-	ND	8.3	
	02/05/96			5.80	0.00	2.45	<50	1,600	9,000	<0.50	<1.0	<1.0	2.7	11	-	-	-	-	-	-	-	-	ND	3.5	
	04/24/96			5.69	0.00	2.56	<50	2,800	6,000	<5.0	<10	<10	<10	150	-	-	-	-	-	-	-	-	ND	8.6	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-3	07/15/96		8.25	6.18	0.00	2.07	<250	3,700	1,000	<2.5	<5.0	<5.0	<5.0	<50	-	-	-	-	-	-	-	ND	7.7	
	07/30/96			6.04	0.00	2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			7.84	0.00	0.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	90	890	2,000	<0.50	<1.0	<1.0	<1.0	30	-	-	-	-	-	-	-	ND	6.8	
	05/17/97			6.49	0.00	1.76	<50	2,100	700	<0.50	<1.0	<1.0	<1.0	52	-	-	-	-	-	-	-	ND	6.3	
	08/11/97			6.15	0.00	2.10	490	1,900	<5,000	<2.5	<5.0	<5.0	<5.0	170	-	-	-	-	-	-	-	ND	7.4	
	11/17/97			7.15	0.00	1.10	120	2,500	<5,000	<0.50	<1.0	<1.0	<1.0	46	-	-	-	-	-	-	-	ND	7.0	
	01/29/98			5.10	0.00	3.15	270	1,700	2,000	0.53	<1.0	<1.0	<1.0	330	-	-	-	-	-	-	-	ND	6.4	
	06/22/98			5.50	0.00	2.75	200	2,200	<5.0	<0.50	<1.0	<1.0	<1.0	130	-	-	-	-	-	-	-	ND	5.5	
	12/30/98			6.68	0.00	1.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/09/99			5.53	0.00	2.72	60	840	7,600	<1.0	<1.0	<1.0	<1.0	19	-	-	-	-	-	-	-	-	-	
	06/23/99			6.60	0.00	1.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			6.17	0.00	2.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/99			6.00	0.00	2.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			4.77	0.00	3.48	690	<58	13,000	4.2	3.1	0.81	2.7	2,900	-	-	-	-	-	-	-	-	-	
	05/26/00			5.28	0.00	2.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00			5.58	0.00	2.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			11.74	0.00	-3.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	DTW anomalous
	03/29/01			5.04	0.00	3.21	650	<50	6,540	<2.5	<2.5	<2.5	<7.5	680	-	-	-	-	-	-	-	-	-	
	06/27/01			5.62	0.00	2.63	460	690	<5,000	<2.5	<2.5	<2.5	<7.5	560	-	-	-	-	-	-	-	-	-	
	09/19/01			5.80	0.00	2.45	<500	520	<5,000	<5.0	<5.0	<5.0	<15	464	-	-	-	-	-	-	-	-	-	
	12/28/01			4.85	0.00	3.40	180	550	<5,000	<0.50	<0.50	<0.50	<1.0	180	-	-	-	-	-	-	-	-	-	
	03/12/02			4.39	0.00	3.86	410	1,300	<5,000	<2.5	<2.5	<2.5	<5.0	443	-	-	-	-	-	-	-	-	-	
	06/13/02			5.38	0.00	2.87	<250	2,600	<5,000	<2.5	<2.5	<2.5	<5.0	395	-	-	-	-	-	-	-	-	-	
	09/06/02			5.68	0.00	2.57	<200	-	-	<2.0	<2.0	<2.0	<2.0	650	-	-	-	-	-	-	-	-	-	
	12/13/02			5.37	0.00	2.88	<50	980	7,000	<0.50	<0.50	<0.50	<0.50	60	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			4.80	0.00	3.45	<1,000	380	6,700	<10	<10	<10	<10	120	-	-	-	-	-	-	-	-	-	
	06/06/03			5.13	0.00	3.12	<500	620	7.9	<5.0	<5.0	<5.0	<5.0	180	<200	<5.0	<5.0	16	<1,000	-	-	-	-	
	08/07/03			5.43	0.00	2.82	<500	820 N	5.4	5.7	<5.0	<5.0	<5.0	290	<200	<5.0	<5.0	20	<1,000	<5.0	<5.0	-	-	
	11/20/03			4.72	0.00	3.53	<50	1,200 N	-	<0.50	<0.50	<0.50	<0.50	17	<20	<0.50	<0.50	1.4	<100	-	-	-	-	
	04/28/04			4.87	0.00	3.38	<100	240 N	-	<1.0	<1.0	<1.0	<1.0	87	<40	<1.0	<1.0	3.9	<200	<1.0	<1.0	-	-	
	08/26/04			5.42	0.00	2.83	56	250 N	-	<0.50	<0.50	<0.50	<0.50	34	260	<0.50	<0.50	2.0	<100	<0.50	<0.50	-	-	
	12/01/04			5.69	0.00	2.56	<100	690	-	<1.0	<1.0	<1.0	<1.0	7.4	610	<1.0	<1.0	<1.0	<200	<1.0	<1.0	-	-	
	02/02/05			4.72	0.00	3.53	<100	730	-	<1.0	<1.0	<1.0	<1.0	20	<40	<1.0	<1.0	1.1	<200	<1.0	<1.0	-	-	
	04/25/05		10.73	4.75	0.00	5.98	<250	520	-	<2.5	<2.5	<2.5	<2.5	220	160	<2.5	<2.5	10	<500	<2.5	<2.5	-	-	
	09/30/05			5.30	0.00	5.43	<50	300 N	-	<0.50	<0.50	<0.50	<1.0	8.2	270	<0.50	<0.50	0.68	<50	<0.50	<0.50	-	-	
	12/28/05			4.41	0.00	6.32	<50	100	<2.0	<0.50	<0.50	<0.50	<1.0	0.66	<5.0	<1.0	<0.50	<0.50	<100	<0.50	-	-	-	
	03/23/06			4.43	0.00	6.30	<50	260	<2.0	<0.50	<0.50	<0.50	<1.0	13	130	<1.0	<0.50	0.63	<100	<0.50	<0.50	-	-	

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1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-3	06/05/06		10.73	4.95	0.00	5.78	61	340	<2.0	0.69	1.4	0.85	3.6	29	510	<1.0	<0.50	1.6	<100	<0.50	<0.50	-	-	
	09/19/06			5.19	0.00	5.54	<50	330	<2.0	<0.50	<0.50	<0.50	<1.0	4.1	420	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	12/01/06			5.37	0.00	5.36	<50	130	<2.0	<0.50	<0.50	<0.50	<1.0	2.0	250	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	03/01/07			4.62	0.00	6.11	<50	120	<2.0	<0.50	<0.50	<0.50	<1.0	3.8	77	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	06/01/07			5.53	0.00	5.20	<50	350	<2.0	<0.50	<0.50	<0.50	<1.0	3.7	320	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	09/13/07			6.17	0.00	4.56	<250	1,200	<2.0	<2.5	<2.5	<2.5	<5.0	2.6	2,000	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	11/21/07			6.16	0.00	4.57	<250	1,600	<2.0	<2.5	<2.5	<2.5	<5.0	3.4	2,600	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	02/29/08			5.38	0.00	5.35	<50	350	<2.0	<0.50	<0.50	<0.50	<1.0	0.90	540	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	05/23/08			6.07	0.00	4.66	<500	1,100	<2.0	<5.0	<5.0	<5.0	<10	<5.0	3,200	<10	<5.0	<5.0	<2,500	<5.0	<5.0	-	-	
	09/26/08			6.46	0.00	4.27	120	3,000	<5,000	<1.0	<1.0	<1.0	<1.0	4.8	6,900	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**6.36**	**0.00**	**4.37**	**87**	**2,800**	**<5,000**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**4.9**	**8,200**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-4	11/04/92		8.12	6.66	0.00	1.46	340	-	-	4.5	<0.50	4.3	<0.50	-	-	-	-	-	-	-	-	-	-	
	10/12/93			6.87	0.00	1.25	160	-	-	5.8	1.4	0.80	2.7	261	-	-	-	-	-	-	-	-	-	
	02/15/94			6.61	0.00	1.51	110	-	-	4.4	0.70	<0.50	2.5	118	-	-	-	-	-	-	-	-	4.3	
	05/11/94			5.89	0.00	2.23	120	-	-	0.50	0.80	<0.50	<0.50	137	-	-	-	-	-	-	-	-	9.3	
	08/01/94			6.87	0.00	1.25	140	-	-	0.70	2.0	5.2	15	138	-	-	-	-	-	-	-	-	3.3	
	10/18/94			6.62	0.00	1.50	140	-	-	3.5	<0.50	0.50	<0.50	197	-	-	-	-	-	-	-	-	3.0	
	01/13/95			7.27	0.00	0.85	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	7.9	
	04/13/95			6.51	0.00	1.61	73	-	-	1.2	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	9.9	
	07/11/95			6.21	0.00	1.91	82	-	-	0.57	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	7.2	
	11/02/95			6.78	0.00	1.34	71	-	-	1.4	0.96	0.99	2.8	140	-	-	-	-	-	-	-	-	8.6	
	02/05/96			6.41	0.00	1.71	<50	-	-	<5.0	<10	<10	<10	200	-	-	-	-	-	-	-	-	4.4	
	04/24/96			6.18	0.00	1.94	<250	-	-	<2.5	<5.0	<5.0	<5.0	510	-	-	-	-	-	-	-	-	8.3	
	07/15/96			6.63	0.00	1.49	<50	-	-	5.7	<1.0	<1.0	<1.0	550	-	-	-	-	-	-	-	-	7.4	
	07/30/96			6.34	0.00	1.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			8.27	0.00	-0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	460	-	-	<2.5	11	<5.0	<5.0	620	-	-	-	-	-	-	-	-	7.3	
	05/17/97			7.00	0.00	1.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/11/97			6.81	0.00	1.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/17/97			9.19	0.00	-1.07	840	-	-	<0.50	<1.0	<1.0	<1.0	880	-	-	-	-	-	-	-	-	7.3	
	01/29/98			7.94	0.00	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/22/98			7.49	0.00	0.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/30/98			8.21	0.00	-0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/09/99			7.70	0.00	0.42	1,200	-	-	<1.0	<1.0	<1.0	<1.0	2,000	-	-	-	-	-	-	-	-	-	
	06/23/99			8.81	0.00	-0.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			8.32	0.00	-0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/99			8.21	0.00	-0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			6.74	0.00	1.38	910	-	-	<0.50	<0.50	0.54	1.7	3,800	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-4	05/26/00		8.12	5.13	0.00	2.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00			8.20	0.00	-0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			8.31	0.00	-0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/27/01			7.57	0.00	0.55	2,800	-	-	19	<2.5	<2.5	<7.5	4,220	-	-	-	-	-	-	-	-	-	
	09/19/01			7.87	0.00	0.25	2,500	-	-	<5.0	<5.0	<5.0	<15	3,340	-	-	-	-	-	-	-	-	-	
	12/28/01			7.80	0.00	0.32	4,400	-	-	<5.0	<5.0	<5.0	<10	5,330	-	-	-	-	-	-	-	-	-	
	03/12/02			4.53	0.00	3.59	6,400	-	-	72	<5.0	<5.0	<10	8,440	-	-	-	-	-	-	-	-	-	
	06/13/02			6.21	0.00	1.91	1,800	-	-	7.5	<5.0	5.0	13	6,870	-	-	-	-	-	-	-	-	-	
	09/06/02			7.78	0.00	0.34	<2,000	-	-	<20	<20	<20	<20	9,600	-	-	-	-	-	-	-	-	-	
	12/13/02			7.87	0.00	0.25	5,600	-	-	<50	<50	<50	<50	8,600	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			4.84	0.00	3.28	<10,000	-	-	<100	<100	<100	<100	8,000	-	-	-	-	-	-	-	-	-	
	06/06/03			7.98	0.00	0.14	13,000	-	-	<50	<50	<50	<50	6,800	2,500	<50	<50	190	<10,000	-	-	-	-	
	08/07/03			7.24	0.00	0.88	6,200	-	-	<50	<50	<50	<50	6,600	2,400	<50	<50	160	<10,000	<50	<50	-	-	
	11/20/03			7.02	0.00	1.10	10,000	-	-	<100	<100	<100	<100	11,000	<4,000	<100	<100	310	<20,000	-	-	-	-	
	04/28/04			4.81	0.00	3.31	<25,000	-	-	<250	<250	<250	<250	3,600	15,000	<250	<250	<250	<50,000	<250	<250	-	-	
	08/26/04			5.65	0.00	2.47	<2,500	-	-	<25	<25	<25	<25	1,800	16,000	<25	<25	60	-	<25	<25	-	-	
	12/01/04			7.34	0.00	0.78	1,100	-	-	<10	<10	<10	<10	450	19,000	<10	<10	10	<2,000	<10	<10	-	-	
	02/02/05			7.61	0.00	0.51	1,000	-	-	<5.0	<5.0	<5.0	<5.0	410	19,000	<5.0	<5.0	10	<1,000	<5.0	<5.0	-	-	
	04/25/05		10.58	7.25	0.00	3.33	720	-	-	8.0	5.3	<5.0	16	170	18,000	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	09/30/05			7.72	0.00	2.86	<2,500	-	-	63	58	46	140	110	30,000	<25	<25	<25	<2,500	<25	<25	-	-	
	12/28/05			7.48	0.00	3.10	<2,500	-	-	<25	<25	<25	<50	34	27,000	<50	<25	<25	<5,000	<25	-	-	-	
	03/23/06			4.42	0.00	6.16	<2,500	-	-	<25	<25	<25	<50	120	34,000	<50	<25	<25	<5,000	<25	<25	-	-	
	06/05/06			4.97	0.00	5.61	<5,000	-	-	<50	<50	<50	<100	<50	34,000	<100	<50	<50	<10,000	<50	<50	-	-	Well purged dry
	09/19/06			5.45	0.00	5.13	<5,000	-	-	<50	<50	<50	<100	110	27,000	<100	<50	<50	<25,000	<50	<50	-	-	Well purged dry
	12/01/06			5.14	0.00	5.44	<5,000	-	-	<50	<50	<50	<100	68	31,000	<100	<50	<50	<25,000	<50	<50	-	-	Well purged dry
	03/01/07			7.60	0.00	2.98	<5,000	-	-	<50	<50	<50	<100	<50	31,000	<100	<50	<50	<25,000	<50	<50	-	-	
	06/01/07			5.21	0.00	5.37	2,700	-	-	<25	<25	<25	<50	31	32,000	<50	<25	<25	<13,000	<25	<25	-	-	
	09/13/07			6.45	0.00	4.13	<2,500	-	-	<25	<25	<25	<50	<25	10,000	<50	<25	<25	<13,000	<25	<25	-	-	
	11/21/07			5.68	0.00	4.90	<2,500	-	-	<25	<25	<25	<50	<25	38,000	<50	<25	<25	<13,000	<25	<25	-	-	
	02/29/08			6.44	0.00	4.14	<5,000	-	-	<50	<50	<50	<100	<50	32,000	<100	<50	<50	<25,000	<50	<50	-	-	
	05/23/08			6.01	0.00	4.57	<5,000	-	-	<50	<50	<50	<100	<50	42,000	<100	<50	<50	<25,000	<50	<50	-	-	
	09/26/08			7.37	0.00	3.21	370	-	-	<1.0	<1.0	<1.0	<1.0	14	39,000	<1.0	2.8	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**6.04**	**0.00**	**4.54**	**270**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**15**	**37,000**	**<1.0**	**3.2**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-5	10/12/93		7.69	6.01	0.00	1.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	10/13/93			-	-	-	2,300	-	-	160	10	<0.50	26	-	-	-	-	-	-	-	-	-	-	
	02/15/94			5.74	0.00	1.95	5,100	-	-	710	16	33	35	153	-	-	-	-	-	-	-	-	4.0	
	05/11/94			5.28	0.00	2.41	11,000	-	-	1,100	39	110	57	165	-	-	-	-	-	-	-	-	8.0	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-5	08/01/94		7.69	5.84	0.00	1.85	9,000	-	-	730	35	61	41	196	-	-	-	-	-	-	-	-	2.6	
	10/18/94			6.01	0.00	1.68	7,800	-	-	330	30	27	27	559	-	-	-	-	-	-	-	-	5.6	
	01/13/95			4.74	0.00	2.95	<500	-	-	290	6.0	<5.0	18	-	-	-	-	-	-	-	-	-	6.8	
	04/13/95			5.50	0.00	2.19	9,100	-	-	400	15	52	27	-	-	-	-	-	-	-	-	-	7.4	
	07/11/95			5.75	0.00	1.94	7,300	-	-	390	13	28	23	-	-	-	-	-	-	-	-	-	7.2	
	11/03/95			6.65	0.00	1.04	7,200	-	-	270	15	38	23	200	-	-	-	-	-	-	-	-	8.4	
	02/05/96			4.83	0.00	2.86	4,600	-	-	370	15	53	28	<50	-	-	-	-	-	-	-	-	1.9	
	04/24/96			6.09	0.00	1.60	3,000	-	-	180	<10	32	14	<100	-	-	-	-	-	-	-	-	8.1	
	07/15/96			6.57	0.00	1.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/16/96			-	-	-	<50	-	-	190	<10	31	16	<100	-	-	-	-	-	-	-	-	8.3	
	07/30/96			5.61	0.00	2.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/12/96			-	-	-	2,000	-	-	150	12	25	18	<50	-	-	-	-	-	-	-	-	7.6	
	11/04/96			8.25	0.00	-0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	5,200	-	-	42	5.5	13	<5.0	1,700	-	-	-	-	-	-	-	-	7.4	
	05/17/97			6.95	0.00	0.74	80	-	-	0.56	<1.0	<1.0	<1.0	46	-	-	-	-	-	-	-	-	6.7	
	08/11/97			6.72	0.00	0.97	2,700	-	-	20	12	6.7	9.7	1,900	-	-	-	-	-	-	-	-	8.5	
	11/17/97			9.49	0.00	-1.80	8,400	-	-	25	12	8.7	5.4	13,000	-	-	-	-	-	-	-	-	7.9	
	01/29/98			7.88	0.00	-0.19	110,000	-	-	2,500	110	180	589	180,000	-	-	-	-	-	-	-	-	6.8	
	06/22/98			7.40	0.00	0.29	4,400	-	-	47	10	29	21	47	-	-	-	-	-	-	-	-	6.6	
	12/30/98			6.13	0.00	1.56	6,000	-	-	18	9.1	22	16	63	-	-	-	-	-	-	-	-	-	
	03/09/99			4.79	0.00	2.90	4,600	-	-	8.8	5.5	12	11	24	-	-	-	-	-	-	-	-	-	
	06/23/99			5.95	0.00	1.74	3,400	-	-	1,500	8.9	54	87	7,500	-	-	-	-	-	-	-	-	-	
	09/23/99			5.43	0.00	2.26	2,600	-	-	510	14	140	650	580	-	-	-	-	-	-	-	-	-	
	12/28/99			5.30	0.00	2.39	3,500	-	-	900	18	57	140	4,800	-	-	-	-	-	-	-	-	-	
	03/22/00	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/26/00	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/06/00	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/27/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/19/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/01			4.65	0.00	3.04	4,600	-	-	20	25	16	57	72	-	-	-	-	-	-	-	-	-	
	03/12/02			5.35	0.00	2.34	5,100	-	-	45	14	22	39	32	-	-	-	-	-	-	-	-	-	
	06/13/02			5.34	0.00	2.35	2,900	-	-	32	<12.5	<12.5	<25	616	-	-	-	-	-	-	-	-	-	
	09/06/02			5.46	0.00	2.23	3,400	-	-	23	5.5	<5.0	11	230	-	-	-	-	-	-	-	-	-	
	12/13/02			5.47	0.00	2.22	2,500	-	-	12	9.3	4.6	8.8	110	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			5.29	0.00	2.40	2,800	-	-	11	5.4	9.7	12	6.4	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-5	06/06/03		7.69	5.30	0.00	2.39	3,200	-	-	9.1	<5.0	7.6	9.3	<5.0	<200	<5.0	<5.0	<5.0	<1,000	-	-	-	-	
	08/07/03			5.33	0.00	2.36	2,200	-	-	7.3	<5.0	<5.0	9.1	18	<200	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	11/20/03			5.39	0.00	2.30	3,500	-	-	12	5.4	6.4	12	12	<100	<2.5	<2.5	<2.5	<500	-	-	-	-	
	04/28/04			5.53	0.00	2.16	5,700	-	-	7.8	4.2	5.2	11	11	<100	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	08/26/04			5.42	0.00	2.27	2,400	-	-	23	4.0	3.6	11	74	<100	<2.5	<2.5	<2.5	-	<2.5	<2.5	-	-	
	12/01/04			5.38	0.00	2.31	4,300	-	-	11	<5.0	5.5	15	<5.0	<200	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	-	-	
	02/02/05			5.48	0.00	2.21	4,000	-	-	8.4	4.8	4.0	10	11	<100	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	04/25/05		10.18	5.52	0.00	4.66	5,200	-	-	7.6	4.0	4.3	9.9	12	<100	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	09/30/05			5.04	0.00	5.14	4,100	-	-	5.3	2.7	2.1	8.0	16	27	<1.0	<1.0	<1.0	<100	<1.0	<1.0	-	-	
	12/28/05			4.85	0.00	5.33	7,700	-	-	7.7	3.3	2.9	7.1	3.8	<20	14	<2.0	<2.0	<400	<2.0	-	-	-	
	03/23/06			5.07	0.00	5.11	5,700	-	-	11	3.3	2.4	8.1	8.6	37	<4.0	<2.0	<2.0	<400	<2.0	<2.0	-	-	
	06/05/06			5.39	Sheen	4.79	5,900	-	-	36	5.0	3.7	15	11	90	<5.0	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	09/19/06			4.75	0.00	5.43	4,600	-	-	6.7	<2.5	<2.5	<5.0	12	53	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	12/01/06			5.29	0.00	4.89	4,400	-	-	5.0	<2.5	<2.5	5.8	14	<25	<5.0	<2.5	2.7	<1,300	<2.5	<2.5	-	-	
	03/01/07			5.01	0.00	5.17	6,400	-	-	6.2	3.0	<2.5	8.7	<2.5	<25	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	06/01/07			5.34	0.00	4.84	7,000	-	-	3.4	<2.5	<2.5	6.6	11	40	32	<2.5	<2.5	<1,300	<2.5	5.8	-	-	
	09/13/07			5.11	0.00	5.07	7,000	-	-	3.8	<2.5	<2.5	<5.0	8.5	<25	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	11/21/07			5.34	0.00	4.84	4,700	-	-	<2.5	<2.5	<2.5	<5.0	11	310	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	02/29/08			5.33	0.00	4.85	5,100	-	-	1.9	1.8	0.93	4.2	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	05/23/08			5.38	0.00	4.80	4,600	-	-	<2.5	<2.5	<2.5	<5.0	3.9	<25	<5.0	<2.5	<2.5	<1,200	<2.5	<2.5	-	-	
	09/26/08			5.26	0.00	4.92	3,400	-	-	1.5	<1.0	<1.0	2.2	2.8	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**5.04**	**0.00**	**5.14**	**3,300**	**-**	**-**	**2.7**	**1.1**	**<1.0**	**3.4**	**1.0**	**<5.0**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-6	10/12/93		8.52	6.59	0.00	1.93	63	-	-	<0.50	<0.50	<0.50	<0.50	44	-	-	-	-	-	-	-	-	-	
	02/15/94			6.31	0.00	2.21	68	-	-	<0.50	<0.50	<0.50	<0.50	38	-	-	-	-	-	-	-	-	3.1	
	05/11/94			6.15	0.00	2.37	68	-	-	<0.50	<0.50	<0.50	<0.50	49	-	-	-	-	-	-	-	-	8.7	
	08/01/94			6.46	0.00	2.06	91	-	-	<0.50	<0.50	<0.50	0.60	60	-	-	-	-	-	-	-	-	2.4	
	10/18/94			6.72	0.00	1.80	<50	-	-	<0.50	<0.50	<0.50	<0.50	85	-	-	-	-	-	-	-	-	6.0	
	01/13/95			5.95	0.00	2.57	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	7.0	
	04/13/95			5.44	0.00	3.08	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	8.5	
	07/11/95			5.68	0.00	2.84	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	8.4	
	11/02/95			6.57	0.00	1.95	<50	-	-	<0.50	<0.50	<0.50	<1.0	35	-	-	-	-	-	-	-	-	8.3	
	02/05/96			6.27	0.00	2.25	<50	-	-	<5.0	<10	<10	<10	<100	-	-	-	-	-	-	-	-	2.2	
	04/24/96			5.95	0.00	2.57	<250	-	-	<2.5	<5.0	<5.0	<5.0	62	-	-	-	-	-	-	-	-	8.0	
	07/15/96			6.39	0.00	2.13	<250	-	-	<2.5	<5.0	<5.0	<5.0	<50	-	-	-	-	-	-	-	-	8.0	
	07/30/96			6.44	0.00	2.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			8.05	0.00	0.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.3	
	05/17/97			6.75	0.00	1.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-6	08/11/97		8.52	6.48	0.00	2.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/17/97			9.27	0.00	-0.75	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.7	
	01/29/98			7.98	0.00	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/22/98			7.68	0.00	0.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/30/98			6.98	0.00	1.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/09/99			5.90	0.00	2.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/23/99			6.93	0.00	1.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			6.45	0.00	2.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/99			6.33	0.00	2.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			5.15	0.00	3.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/26/00			5.72	0.00	2.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00			6.02	0.00	2.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			6.20	0.00	2.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01			5.34	0.00	3.18	750	-	-	<2.5	2.9	<2.5	12	820	-	-	-	-	-	-	-	-	-	
	06/27/01			6.00	0.00	2.52	760	-	-	33	<2.5	<2.5	<7.5	968	-	-	-	-	-	-	-	-	-	
	09/19/01			6.22	0.00	2.30	<500	-	-	<5.0	<5.0	<5.0	<15	879	-	-	-	-	-	-	-	-	-	
	12/28/01	NS		4.71	0.00	3.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/12/02			4.96	0.00	3.56	<500	-	-	<5.0	<5.0	<5.0	<10	244	-	-	-	-	-	-	-	-	-	
	06/13/02			5.78	0.00	2.74	<250	-	-	<2.5	<2.5	<2.5	<5.0	413	-	-	-	-	-	-	-	-	-	
	09/06/02			6.14	0.00	2.38	130	-	-	<0.50	<0.50	<0.50	<0.50	240	-	-	-	-	-	-	-	-	-	
	12/13/02			6.05	0.00	2.47	140	-	-	<1.0	<1.0	<1.0	<1.0	200	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			5.40	0.00	3.12	<500	-	-	<5.0	<5.0	<5.0	<5.0	150	-	-	-	-	-	-	-	-	-	
	06/06/03			5.54	0.00	2.98	1,100	-	-	<5.0	<5.0	<5.0	<5.0	140	<200	<5.0	<5.0	21	<1,000	-	-	-	-	
	08/07/03			5.94	0.00	2.58	<500	-	-	<5.0	<5.0	<5.0	<5.0	160	<200	<5.0	<5.0	20	<1,000	<5.0	<5.0	-	-	
	11/20/03			5.85	0.00	2.67	95	-	-	<0.50	<0.50	<0.50	<0.50	74	<20	<0.50	<0.50	12	<100	-	-	-	-	
	04/28/04			5.45	0.00	3.07	<250	-	-	<2.5	<2.5	<2.5	<2.5	120	<100	<2.5	<2.5	12	<500	<2.5	<2.5	-	-	
	08/26/04			6.06	0.00	2.46	<250	-	-	<2.5	<2.5	<2.5	<2.5	110	<100	<2.5	<2.5	12	<500	<2.5	<2.5	-	-	
	12/01/04			6.19	0.00	2.33	<250	-	-	<2.5	<2.5	<2.5	<2.5	86	<100	<2.5	<2.5	11	<500	<2.5	<2.5	-	-	
	02/02/05			5.20	0.00	3.32	55	-	-	<0.50	<0.50	<0.50	<0.50	41	32	<0.50	<0.50	6.2	<100	<0.50	<0.50	-	-	
	04/25/05		11.01	5.22	0.00	5.79	64	-	-	<0.50	<0.50	<0.50	<0.50	50	45	<0.50	<0.50	6.0	<100	<0.50	<0.50	-	-	
	09/30/05			5.93	0.00	5.08	200 N	-	-	<2.0	<2.0	<2.0	<4	51	280	<2.0	<2.0	4.4	<200	<2.0	<2.0	-	-	
	12/28/05			5.49	0.00	5.52	<50	-	-	<0.50	<0.50	<0.50	<1.0	16	160	<1.0	<0.50	2.0	<100	<0.50	-	-	-	
	03/23/06			4.59	0.00	6.42	<50	-	-	<0.50	<0.50	<0.50	<1.0	5.6	35	<1.0	<0.50	0.91	<100	<0.50	<0.50	-	-	
	06/05/06			5.38	0.00	5.63	<50	-	-	<0.50	0.54	<0.50	<1.0	14	110	<1.0	<0.50	1.5	<100	<0.50	<0.50	-	-	
	09/19/06			5.93	0.00	5.08	<50	-	-	<0.50	<0.50	<0.50	<1.0	8.8	190	<1.0	<0.50	1.4	<250	<0.50	<0.50	-	-	
	12/01/06			6.28	0.00	4.73	<50	-	-	<0.50	<0.50	<0.50	<1.0	5.9	98	<1.0	<0.50	0.94	<250	<0.50	<0.50	-	-	
	03/01/07			5.72	0.00	5.29	<50	-	-	<0.50	<0.50	<0.50	<1.0	6.0	96	<1.0	<0.50	0.68	<250	<0.50	<0.50	-	-	
	06/01/07			6.22	0.00	4.79	<50	-	-	<0.50	<0.50	<0.50	<1.0	7.4	160	<1.0	<0.50	0.77	<250	<0.50	<0.50	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-6	09/13/07		11.01	6.57	0.00	4.44	63	-	-	<0.50	<0.50	<0.50	<1.0	6.7	120	<1.0	<0.50	0.87	<250	<0.50	<0.50	-	-	
	11/21/07			6.67	0.00	4.34	<50	-	-	<0.50	<0.50	<0.50	<1.0	8.4	210	<1.0	<0.50	1.0	<250	<0.50	<0.50	-	-	
	02/29/08			5.80	0.00	5.21	<50	-	-	<0.50	<0.50	<0.50	<1.0	7.1	46	<1.0	<0.50	0.92	<250	<0.50	<0.50	-	-	
	05/23/08			6.53	0.00	4.48	<50	-	-	<0.50	<0.50	<0.50	<1.0	8.4	53	<1.0	<0.50	0.95	<250	<0.50	<0.50	-	-	
	09/26/08			6.86	0.00	4.15	<50	-	-	<1.0	<1.0	<1.0	<1.0	5.1	56	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**6.90**	**0.00**	**4.11**	**<50**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**5.3**	**54**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-7	10/12/93		7.61	6.14	0.00	1.47	<50	-	-	<0.50	<0.50	<0.50	0.70	<5.0	-	-	-	-	-	-	-	-	-	
	02/15/94			5.88	0.00	1.73	78	-	-	<0.50	<0.50	<0.50	0.60	<5.0	-	-	-	-	-	-	-	-	4.0	
	05/11/94			5.76	0.00	1.85	70	-	-	<0.50	<0.50	<0.50	0.90	12	-	-	-	-	-	-	-	-	9.1	
	08/01/94			5.97	0.00	1.64	77	-	-	<0.50	<0.50	<0.50	0.50	182	-	-	-	-	-	-	-	-	2.5	
	10/18/94			6.24	0.00	1.37	<50	-	-	<0.50	<0.50	<0.50	<0.50	52	-	-	-	-	-	-	-	-	6.3	
	01/13/95			5.39	0.00	2.22	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	8.2	
	04/13/95			5.17	0.00	2.44	63	-	-	<0.50	<0.50	<0.50	1.4	-	-	-	-	-	-	-	-	-	8.4	
	07/11/95			5.25	0.00	2.36	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	7.9	
	11/02/95			6.19	0.00	1.42	<50	-	-	<0.50	<0.50	<0.50	<1.0	55	-	-	-	-	-	-	-	-	8.0	
	02/05/96			5.69	0.00	1.92	<50	-	-	<0.50	<1.0	<1.0	<1.0	40	-	-	-	-	-	-	-	-	1.9	
	04/24/96			5.59	0.00	2.02	<250	-	-	<2.5	<5.0	<5.0	<5.0	53	-	-	-	-	-	-	-	-	8.2	
	07/15/96			6.07	0.00	1.54	<250	-	-	<2.5	<5.0	<5.0	<5.0	<50	-	-	-	-	-	-	-	-	7.8	
	07/30/96			6.04	0.00	1.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			7.76	0.00	-0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.8	
	05/17/97			6.42	0.00	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/11/97			6.06	0.00	1.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/17/97			9.07	0.00	-1.46	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.1	
	01/29/98			7.44	0.00	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/22/98			7.39	0.00	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/30/98			5.51	0.00	2.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/09/99			5.57	0.00	2.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/23/99			6.69	0.00	0.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			6.23	0.00	1.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/99			6.08	0.00	1.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			4.88	0.00	2.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/26/00			5.42	0.00	2.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00			5.79	0.00	1.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			5.93	0.00	1.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01			5.24	0.00	2.37	600	-	-	<2.5	<2.5	<2.5	<7.5	636	-	-	-	-	-	-	-	-	-	
	06/27/01			5.69	0.00	1.92	590	-	-	<2.5	<2.5	<2.5	<7.5	739	-	-	-	-	-	-	-	-	-	
	09/19/01			5.89	0.00	1.72	560	-	-	<5.0	<5.0	<5.0	<15	1,190	-	-	-	-	-	-	-	-	-	

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1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-7	12/28/01		7.61	4.53	0.00	3.08	910	-	-	23	<2.5	<2.5	<5.0	856	-	-	-	-	-	-	-	-	-	
	03/12/02			4.71	0.00	2.90	620	-	-	<2.5	<2.5	<2.5	<5.0	675	-	-	-	-	-	-	-	-	-	
	06/13/02			5.21	0.00	2.40	860	-	-	<2.5	<2.5	<2.5	<5.0	1,470	-	-	-	-	-	-	-	-	-	
	09/06/02			5.77	0.00	1.84	350	-	-	<2.5	<2.5	<2.5	<2.5	690	-	-	-	-	-	-	-	-	-	
	12/13/02			5.65	0.00	1.96	1,300	-	-	<10	<10	<10	<10	1,800	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			5.07	0.00	2.54	1,700	-	-	<10	<10	<10	<10	1,600	-	-	-	-	-	-	-	-	-	
	06/06/03			5.27	0.00	2.34	1,000	-	-	<5.0	<5.0	<5.0	<5.0	510	<200	<5.0	<5.0	41	<1,000	-	-	-	-	
	08/07/03			5.52	0.00	2.09	510	-	-	<5.0	<5.0	<5.0	<5.0	520	<200	<5.0	<5.0	43	<1,000	<5.0	<5.0	-	-	
	11/20/03			5.79	0.00	1.82	330	-	-	<2.5	<2.5	<2.5	<2.5	270	1,300	<2.5	<2.5	8.9	<500	-	-	-	-	
	04/28/04			5.20	0.00	2.41	<250	-	-	<2.5	<2.5	<2.5	<2.5	71	880	<2.5	<2.5	3.5	<500	<2.5	<2.5	-	-	
	08/26/04			5.65	0.00	1.96	450	-	-	<2.5	<2.5	<2.5	2.8	150	4,800	<2.5	<2.5	7.8	<500	<0.50	<0.50	-	-	
	12/01/04			5.79	0.00	1.82	100	-	-	<1.0	<1.0	<1.0	<1.0	25	1,400	<1.0	<1.0	1.1	<200	<1.0	<1.0	-	-	
	02/02/05			4.92	0.00	2.69	81	-	-	<0.50	<0.50	<0.50	<0.50	31	830	<0.50	<0.50	1.8	<100	<0.50	<0.50	-	-	
	04/25/05		10.11	4.88	0.00	5.23	67	-	-	<0.50	<0.50	<0.50	0.64	41	520	<0.50	<0.50	2.1	<100	<0.50	<0.50	-	-	
	09/30/05			5.62	0.00	4.49	58 N	-	-	<0.50	<0.50	<0.50	<1.0	18	450	<0.50	<0.50	1.5	<50	<0.50	<0.50	-	-	
	12/28/05			4.93	0.00	5.18	<500	-	-	<5.0	<5.0	<5.0	<10	7.4	1,600	<10	<5.0	<5.0	<1,000	<5.0	-	-	-	
	03/23/06			4.63	0.00	5.48	71	-	-	<0.50	<0.50	<0.50	<1.0	25	340	<1.0	<0.50	1.7	<100	<0.50	<0.50	-	-	
	06/05/06			5.08	0.00	5.03	57	-	-	<0.50	<0.50	<0.50	<1.0	14	200	<1.0	<0.50	1.2	<100	<0.50	<0.50	-	-	
	09/19/06			5.60	0.00	4.51	<50	-	-	<0.50	<0.50	<0.50	<1.0	14	280	<1.0	<0.50	1.6	<250	<0.50	<0.50	-	-	
	12/01/06			6.00	0.00	4.11	<250	-	-	<2.5	<2.5	<2.5	<5.0	6.7	1,400	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	03/01/07			5.69	0.00	4.42	<250	-	-	<2.5	<2.5	<2.5	<5.0	4.0	1,000	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	06/01/07			5.97	0.00	4.14	120	-	-	<0.50	<0.50	<0.50	<1.0	7.5	600	<1.0	<0.50	0.59	<250	<0.50	<0.50	-	-	
	09/13/07			6.31	0.00	3.80	<50	-	-	<0.50	<0.50	<0.50	<1.0	10	260	<1.0	<0.50	0.80	<250	<0.50	<0.50	-	-	
	11/21/07			6.39	0.00	3.72	55	-	-	<0.50	<0.50	<0.50	<1.0	8.4	1,500	<1.0	<0.50	0.87	<250	<0.50	<0.50	-	-	
	02/29/08			5.78	0.00	4.33	<50	-	-	<0.50	<0.50	<0.50	<1.0	6.2	960	<1.0	<0.50	0.73	<250	<0.50	<0.50	-	-	
	05/23/08			6.27	0.00	3.84	53	-	-	<0.50	<0.50	<0.50	<1.0	9.6	300	<1.0	<0.50	0.96	<250	<0.50	<0.50	-	-	
	09/26/08			6.52	0.00	3.59	<50	-	-	<1.0	<1.0	<1.0	<1.0	7.5	800	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**6.40**	**0.00**	**3.71**	**59**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**5.7**	**3,500**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-8	10/12/93		8.60	5.86	0.00	2.74	<50	-	-	<0.50	<0.50	<0.50	<0.50	11	-	-	-	-	-	-	-	-	-	
	02/15/94			5.50	0.00	3.10	380	-	-	<0.50	<0.50	<0.50	<0.50	<5.0	-	-	-	-	-	-	-	-	3.3	
	05/11/94			5.09	0.00	3.51	330	-	-	<0.50	1.2	<0.50	1.9	<5.0	-	-	-	-	-	-	-	-	8.5	
	08/01/94			5.20	0.00	3.40	260	-	-	<0.50	1.2	2.9	5.8	<5.0	-	-	-	-	-	-	-	-	2.3	
	10/18/94			5.70	0.00	2.90	82	-	-	<0.50	<0.50	<0.50	<0.50	<5.0	-	-	-	-	-	-	-	-	6.4	
	01/13/95			4.96	0.00	3.64	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	6.9	
	04/13/95			5.40	0.00	3.20	270	-	-	<0.50	<0.50	<0.50	4.4	-	-	-	-	-	-	-	-	-	8.4	
	07/11/95			6.01	0.00	2.59	320	-	-	<0.50	<0.50	<0.50	3.5	-	-	-	-	-	-	-	-	-	8.0	
	11/02/95			6.81	0.00	1.79	100	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	-	8.7	
	02/05/96			6.12	0.00	2.48	<50	-	-	<5.0	<10	<10	<10	<100	-	-	-	-	-	-	-	-	1.5	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-8	04/24/96		8.60	6.23	0.00	2.37	<50	-	-	<5.0	<10	<10	<10	<100	-	-	-	-	-	-	-	-	8.7	
	07/15/96			6.70	0.00	1.90	<250	-	-	<2.5	<5.0	<5.0	<5.0	<50	-	-	-	-	-	-	-	-	8.4	
	07/30/96			6.64	0.00	1.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			8.36	0.00	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/05/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.2	
	05/17/97			7.03	0.00	1.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/11/97			6.05	0.00	2.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/17/97			9.14	0.00	-0.54	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	7.7	
	01/29/98			7.90	0.00	0.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/22/98			7.72	0.00	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/30/98	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/09/99	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/23/99			4.70	0.00	3.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/23/99			4.22	0.00	4.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/99			4.12	0.00	4.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/22/00			4.71	0.00	3.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/26/00			4.98	0.00	3.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	09/15/00			4.62	0.00	3.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			4.77	0.00	3.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/27/01			5.11	0.00	3.49	570	-	-	<2.5	<2.5	2.6	<7.5	3.4	-	-	-	-	-	-	-	-	-	
	09/19/01			5.00	0.00	3.60	<500	-	-	<5.0	<5.0	<5.0	<15	<5.0	-	-	-	-	-	-	-	-	-	
	12/28/01			4.15	0.00	4.45	440	-	-	<0.50	<0.50	0.98	<1.0	6.3	-	-	-	-	-	-	-	-	-	
	03/12/02			4.35	0.00	4.25	330	-	-	<2.5	<2.5	<2.5	<5.0	8.7	-	-	-	-	-	-	-	-	-	
	06/13/02			5.09	0.00	3.51	<500	-	-	<5.0	<5.0	<5.0	<10	16	-	-	-	-	-	-	-	-	-	
	09/06/02			5.18	0.00	3.42	98	-	-	<0.50	<0.50	<0.50	<0.50	76	-	-	-	-	-	-	-	-	-	
	12/13/02			4.84	0.00	3.76	120	-	-	<0.50	<0.50	0.94	0.52	140	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			4.45	0.00	4.15	<2,500	-	-	<25	<25	<25	<25	800	-	-	-	-	-	-	-	-	-	
	06/06/03			5.00	0.00	3.60	<50,000	-	-	<500	<500	<500	<500	17,000	<20,000	<500	<500	<500	<100,000	-	-	-	-	
	08/07/03			4.84	0.00	3.76	<2,500	-	-	<25	<25	<25	<25	2,400	<1,000	<25	<25	44	<5,000	<25	<25	-	-	
	11/20/03			4.48	0.00	4.12	<2,500	-	-	<25	<25	<25	<25	1,400	4,100	<25	<25	<25	<5,000	-	-	-	-	
	04/28/04			9.66	0.00	-1.06	730	-	-	<2.5	<2.5	<2.5	<2.5	170	42,000	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	08/26/04			4.73	0.00	3.87	<2,500	-	-	<25	<25	<25	<25	170	47,000	<25	<25	<25	-	<25	<25	-	-	
	12/01/04			4.80	0.00	3.80	<250	-	-	<2.5	<2.5	<2.5	<2.5	36	9,700	<2.5	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	02/02/05			4.50	0.00	4.10	810	-	-	<0.50	<0.50	<0.50	<0.50	41	<20	<0.50	0.72	0.64	<100	<0.50	<0.50	-	-	
	04/25/05		11.08	4.99	0.00	6.09	1,400	-	-	<12	<12	<12	<12	32	45,000	<12	<12	<12	<2,500	<12	<12	-	-	
	09/30/05			4.89	0.00	6.19	840	-	-	<5.0	<5.0	<5.0	<10	17	8,500	<5.0	<5.0	<5.0	<500	<5.0	<5.0	-	-	
	12/28/05			4.81	0.00	6.27	<250	-	-	<2.5	<2.5	<2.5	<5.0	17	7,400	<5.0	<2.5	<2.5	<500	<2.5	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-8	03/23/06		11.08	4.22	0.00	6.86	660	-	-	<2.5	<2.5	<2.5	<5.0	21	11,000	<5.0	<2.5	<2.5	<500	<2.5	<2.5	-	-	
	06/05/06			4.63	0.00	6.45	<2,500	-	-	<25	<25	<25	<50	30	34,000	<50	<25	<25	<5,000	<25	<25	-	-	
	09/19/06			4.82	0.00	6.26	<500	-	-	<5.0	<5.0	<5.0	<10	17	7,500	<10	<5.0	<5.0	<2,500	<5.0	<5.0	-	-	Well purged dry
	12/01/06			4.83	0.00	6.25	350	-	-	<2.5	<2.5	<2.5	<5.0	16	1,900	<5.0	<2.5	<2.5	<1,300	<2.5	<2.5	-	-	
	03/01/07			4.43	0.00	6.65	<500	-	-	<5.0	<5.0	<5.0	<10	20	6,200	<10	<5.0	<5.0	<2,500	<5.0	<5.0	-	-	
	06/01/07			4.74	0.00	6.34	<500	-	-	<5.0	<5.0	<5.0	<10	8.7	3,700	<10	<5.0	<5.0	<2,500	<5.0	<5.0	-	-	
	09/13/07			5.25	0.00	5.83	230	-	-	<0.50	<0.50	<0.50	<1.0	9.4	630	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	11/21/07			5.13	0.00	5.95	350	-	-	<0.50	<0.50	<0.50	<1.0	8.7	360	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	02/29/08			4.75	0.00	6.33	<1,000	-	-	<10	<10	<10	<20	16	7,500	<20	<10	<10	<5,000	<10	<10	-	-	
	05/23/08			5.01	0.00	6.07	<1,000	-	-	<10	<10	<10	<20	15	4,800	<20	<10	<10	<5,000	<10	<10	-	-	
	09/26/08			5.43	0.00	5.65	190	-	-	<1.0	<1.0	<1.0	<1.0	14	1,800	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**5.25**	**0.00**	**5.83**	**270**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**10**	**770**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-9	10/12/93		8.08	5.66	0.08	2.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	02/15/94			5.32	0.05	2.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/11/94			5.57	0.00	2.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	08/01/94			6.25	0.00	1.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	10/18/94			5.59	0.13	2.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	01/13/95			4.42	0.14	3.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	04/13/95			4.06	0.11	4.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/11/95			4.21	0.08	3.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/02/95			5.22	0.05	2.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	02/05/96			4.76	0.01	3.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	04/24/96			4.62	0.09	3.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/15/96			5.11	0.04	3.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	07/30/96			5.15	0.00	2.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11/04/96			6.75	0.01	1.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	05/17/97	DUP		-	-	-	97,000	-	-	16,000	8,200	2,300	17,300	39,000	-	-	-	-	-	-	-	-	-	
	05/17/97			5.42	0.00	2.66	97,000	-	-	16,000	7,700	2,300	18,400	40,000	-	-	-	-	-	-	-	-	7.0	
	08/11/97	DUP		-	-	-	100,000	-	-	14,000	360	3,200	5,790	27,000	-	-	-	-	-	-	-	-	-	
	08/11/97			5.37	0.00	2.71	71,000	-	-	12,000	340	2,100	4,300	26,000	-	-	-	-	-	-	-	-	9.1	
	11/17/97	DUP		-	-	-	100,000	-	-	24,000	5,300	3,500	19,300	35,000	-	-	-	-	-	-	-	-	-	
	11/17/97			5.62	Sheen	2.46	100,000	-	-	22,000	4,800	3,100	17,900	32,000	-	-	-	-	-	-	-	-	8.3	
	01/29/98			4.07	Sheen	4.01	250,000	-	-	20,000	21,000	3,100	18,500	110,000	-	-	-	-	-	-	-	-	6.6	
	01/29/98	DUP		-	-	-	250,000	-	-	20,000	20,000	3,100	18,400	110,000	-	-	-	-	-	-	-	-	-	
	06/22/98			4.28	0.00	3.80	280,000	-	-	21,000	18,000	3,800	21,200	110,000	-	-	-	-	-	-	-	-	5.8	
	06/22/98	DUP		-	-	-	290,000	-	-	20,000	17,000	3,800	21,200	110,000	-	-	-	-	-	-	-	-	-	
	12/30/98			4.95	0.00	3.13	150,000	-	-	10,000	3,800	2,000	9,600	86,000	-	-	-	-	-	-	-	-	-	
	03/09/99			3.95	0.00	4.13	82,000	-	-	6,800	570	1,400	4,700	100,000	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-9	06/23/99		8.08	5.12	0.00	2.96	41,000	-	-	11,000	820	2,300	5,200	92,000	-	-	-	-	-	-	-	-	-	
	09/23/99			4.74	0.00	3.34	57,000	-	-	12,000	5,400	1,900	9,500	89,000	-	-	-	-	-	-	-	-	-	
	12/28/99			4.58	0.00	3.50	46,000	-	-	15,000	490	2,500	3,500	100,000	-	-	-	-	-	-	-	-	-	
	03/22/00			3.90	0.00	4.18	86,000	-	-	18,000	1,800	2,300	6,800	120,000	-	-	-	-	-	-	-	-	-	
	05/26/00			4.15	0.00	3.93	82,000	-	-	17,000	680	1,800	3,800	100,000	-	-	-	-	-	-	-	-	-	
	09/06/00			4.47	0.00	3.61	100,000	-	-	19,000	280	2,400	6,400	84,000	-	-	-	-	-	-	-	-	-	
	09/15/00			4.34	0.00	3.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/11/00			4.41	0.00	3.67	110,000	-	-	14,400	768	2,610	6,670	123,000	-	-	-	-	-	-	-	-	-	
	03/29/01	INA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	06/26/01			5.03	0.13	3.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GW Elev. Estimated
	09/19/01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12/28/01			3.73	0.00	4.35	110,000	-	-	15,000	1,500	2,280	5,530	60,900	-	-	-	-	-	-	-	-	-	
	03/12/02			4.93	0.00	3.15	88,000	-	-	12,500	2,600	2,800	8,950	44,000	-	-	-	-	-	-	-	-	-	
	06/13/02			4.13	0.00	3.95	59,000	-	-	9,870	161	2,560	5,560	35,600	-	-	-	-	-	-	-	-	-	
	09/06/02			4.39	0.00	3.69	47,000	-	-	10,000	<100	2,100	4,600	31,000	-	-	-	-	-	-	-	-	-	
	12/13/02			3.97	0.00	4.11	57,000	-	-	11,000	1,000	2,300	5,800	28,000	-	-	-	-	-	-	-	-	-	EPA 8015B/8021B used
	02/19/03			3.25	0.00	4.83	76,000	-	-	10,000	2,100	3,000	8,900	11,000	-	-	-	-	-	-	-	-	-	
	06/06/03			3.94	0.00	4.14	66,000	-	-	9,000	<500	2,500	4,400	17,000	<20,000	<500	<500	<500	<100,000	-	-	-	-	
	08/07/03			3.92	Sheen	4.16	53,000	-	-	7,600	<250	2,600	4,700	17,000	<10,000	<250	<250	350	<50,000	<250	<250	-	-	
	11/20/03			4.89	0.00	3.19	40,000	-	-	6,800	<250	860	1,100	16,000	12,000	<250	<250	<250	<50,000	-	-	-	-	
	04/28/04			3.19	Sheen	4.89	47,000	-	-	5,600	690	2,300	6,800	8,500	<5,000	<120	<120	170	<25,000	<120	<120	-	-	
	08/26/04			3.61	0.00	4.47	35,000	-	-	3,700	500	1,300	5,300	6,500	2,600	<50	<50	140	-	<50	<50	-	-	Past holding time (TBA)
	12/01/04			3.99	0.00	4.09	36,000	-	-	3,500	<250	1,200	4,300	8,300	<10,000	<250	<250	<250	<50,000	<250	<250	-	-	
	02/02/05			3.71	Sheen	4.37	21,000	-	-	1,800	130	670	2,000	3,600	5,600	<50	<50	88	<10,000	<50	<50	-	-	
	04/25/05		10.55	3.31	Sheen	7.24	5,900	-	-	190	<5.0	120	77	540	1,400	<5.0	<5.0	14	<1,000	<5.0	<5.0	-	-	
	09/30/05			4.02	0.00	6.53	26,000	-	-	2,400	360	1,600	4,200	2,400	520	<20	<20	61	<2,000	<20	<20	-	-	
	12/28/05			2.99	0.00	7.56	14,000	-	-	1,400	22	350	450	2,200	1,800	<20	<10	49	<2,000	<10	-	-	-	
	03/23/06			2.50	0.00	8.05	4,100	-	-	250	<10	130	110	330	2,400	<20	<10	<10	<2,000	<10	<10	-	-	
	06/05/06			3.34	0.00	7.21	8,200	-	-	2,200	79	500	1,200	1,800	1,100	<25	<13	75	<2,500	<13	<13	-	-	Well purged dry
	09/19/06			4.06	0.00	6.49	9,000	-	-	2,600	15	440	370	3,100	3,900	<25	<13	100	<6,300	<13	<13	-	-	Well purged dry
	12/01/06			3.88	0.00	6.67	5,400	-	-	1,600	15	310	140	1,400	2,400	<25	<13	46	<6,300	<13	<13	-	-	Well purged dry
	03/01/07			2.79	0.00	7.76	6,300	-	-	250	<13	270	75	240	580	<25	<13	<13	<6,300	<13	<13	-	-	
	06/01/07			3.53	0.00	7.02	6,500	-	-	980	16	250	95	1,800	2,300	<25	<13	50	<6,300	<13	<13	-	-	
	09/13/07			4.78	0.00	5.77	4,500	-	-	170	14	79	27	640	7,300	<25	<13	28	<6,300	<13	<13	-	-	
	11/21/07			4.41	0.00	6.14	4,600	-	-	790	<13	97	34	2,000	3,500	<25	<13	42	<6,300	<13	<13	-	-	
	02/29/08			3.41	0.00	7.14	6,800	-	-	700	19	250	98	1,100	2,400	<25	<13	35	<6,300	<13	<13	-	-	
	05/23/08			4.53	0.00	6.02	5,300	-	-	390	22	130	68	1,200	6,800	<25	<12	33	<6,200	<12	<12	-	-	
	09/26/08			5.07	0.00	5.48	10,000	-	-	94	11	26	35	280	12,000	<1.0	<1.0	6.2	<250	<1.0	<1.0	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
MW-9	**12/23/08**		10.55	**4.04**	**0.00**	**6.51**	**2,600**	**-**	**-**	**420**	**7.9**	**110**	**84**	**870**	**1,000**	**<1.0**	**<1.0**	**23**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-10	04/25/05		12.53	8.37	0.00	4.16	<50	-	-	<0.50	<0.50	<0.50	<0.50	1.5	<20	<0.50	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	09/30/05			8.41	0.00	4.12	<50	-	-	<0.50	<0.50	<0.50	<1.0	1.5	<5.0	<0.50	<0.50	<0.50	<50	<0.50	<0.50	-	-	
	12/28/05			7.78	0.00	4.75	<50	-	-	<0.50	<0.50	<0.50	<1.0	0.78	<5.0	<1.0	<0.50	<0.50	<100	<0.50	-	-	-	
	03/23/06			7.77	0.00	4.76	<50	-	-	<0.50	<0.50	<0.50	<1.0	0.67	<5.0	<1.0	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	06/05/06			8.38	0.00	4.15	<50	-	-	<0.50	<0.50	<0.50	<1.0	1.8	<5.0	<1.0	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	09/19/06			7.99	0.00	4.54	<50	-	-	<0.50	<0.50	<0.50	<1.0	0.59	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	12/01/06			5.47	0.00	7.06	<50	-	-	<0.50	<0.50	<0.50	<1.0	0.89	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	Well purged dry
	03/01/07			7.92	0.00	4.61	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	06/01/07			8.55	0.00	3.98	<50	-	-	<0.50	<0.50	<0.50	<1.0	1.2	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	09/13/07			8.71	0.00	3.82	<50	-	-	<0.50	<0.50	<0.50	<1.0	0.94	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	11/21/07			8.84	0.00	3.69	<50	-	-	<0.50	<0.50	<0.50	<1.0	2.2	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	02/29/08			8.20	0.00	4.33	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	05/23/08			8.49	0.00	4.04	<50	-	-	<0.50	<0.50	<0.50	<1.0	2.2	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	09/26/08			9.91	0.00	2.62	<50	-	-	<1.0	<1.0	<1.0	<1.0	3.0	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**8.60**	**0.00**	**3.93**	**<50**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**2.7**	**<5.0**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
MW-11	04/25/05		14.55	9.29	0.00	5.26	<50	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	09/30/05			10.23	0.00	4.32	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<0.50	<0.50	<50	<0.50	<0.50	-	-	
	12/28/05			9.09	0.00	5.46	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<100	<0.50	-	-	-	
	03/23/06			8.75	0.00	5.80	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	06/05/06			9.47	0.00	5.08	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<100	<0.50	<0.50	-	-	
	09/19/06			10.16	0.00	4.39	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	12/01/06			10.46	0.00	4.09	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	03/01/07			9.62	0.00	4.93	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	06/01/07			9.97	0.00	4.58	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	09/13/07			10.42	0.00	4.13	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	11/21/07			10.64	0.00	3.91	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	02/29/08			9.76	0.00	4.79	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	05/23/08			10.51	0.00	4.04	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<1.0	<0.50	<0.50	<250	<0.50	<0.50	-	-	
	09/26/08			10.51	0.00	4.04	<50	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	<1.0	<1.0	-	-	
	12/23/08			**10.74**	**0.00**	**3.81**	**<50**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<5.0**	**<1.0**	**<1.0**	**<1.0**	**<250**	**<1.0**	**<1.0**	**-**	**-**	
QC-2	11/05/92	-	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	10/12/93		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	02/15/94		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	05/11/94		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	08/01/94		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	10/18/94		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	
	01/13/95		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	-	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Well No.	Date	Notes	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	GRO (µg/L)	DRO (µg/L)	TOG	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	HVOC	D.O. (mg/L)	Comments
QC-2	04/13/95		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	-	
	07/11/95			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	-	
	11/02/95			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	-	-	-	
	02/05/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	-	-	
	04/24/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	-	-	
	07/16/96			-	-	-	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	-	-	-	
QCTB	09/30/05		-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	12/28/05			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	03/23/06			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	06/05/06			-	-	-	50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	09/19/06			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	12/01/06			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	03/01/07			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	06/01/07			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	09/13/07			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	11/21/07			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	02/29/08			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	05/23/08			-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<0.50	-	-	-	-	-	-	-	-	-	-	
	09/26/08			-	-	-	<50	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	
	12/23/08			**-**	**-**	**-**	**<50**	**-**	**-**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

TABLE 2
Historical Groundwater Monitoring and Analytical Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, CA

Notes:

GRO = Gasoline range organics
DRO = Diesel range organics
TOG = Total petroleum hydrocarbons as oil and grease
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
HVOC = Halogenated volatile organic compounds
D.O. = Dissolved Oxygen; rounded to the nearest tenth
SPH = Separate-phase hydrocarbons
TOC = Top of casing (surveyed)
Calc. GW Elev. = Calculated groundwater elevation = TOC - Depth to Water + 0.75*(Measured SPH Thickness); assuming a specific gravity of 0.75 for SPH
ft-MSL = feet above mean sea level
mg/L = Milligrams per liter
µg/L = Micrograms per liter
< = Analyte was not detected above the specified method detection limit; except after 2008 Quarter 3 where reporting limits are used.
- = Not measured or analyzed
N = Identity of contaminant uncertain (hydrocarbon pattern atypical of indicated analyte); see lab report
ND = Not detected (historical data; reporting limit not reported)
DUP = Duplicate sample
INA = Well inaccessible; not sampled
NS = Well not sampled

Beginning in the first quarter 2003, TPHg and VOCs analyzed by EPA Method 8260B.

TABLE 3
Groundwater Flow Direction and Hydraulic Gradient Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, California

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)
03/29/01	South	0.020
06/27/01	South	0.020
09/19/01	South	0.020
12/28/01	South	0.035
03/12/02	South-Southeast	0.018
06/13/02	Northwest to Southeast	0.007
09/06/02	South	0.010
12/13/02	Southeast	0.020
02/19/03	West-Southwest	0.025
06/06/03	East-Southwest	0.018 - 0.041
08/07/03	East-Southwest	0.019 - 0.038
11/20/03	Northwest to Southeast	0.014 - 0.04
02/05/04	Northwest to Southeast	0.020
04/28/04	West-Southwest	0.023 - 0.025
08/26/04	South-Southwest	0.036
12/01/04	Northwest to Southeast	0.020
02/02/05	South	0.020
04/25/05	Southwest	0.020
09/30/05	Southwest	0.081
12/28/05	Southwest	0.081
03/23/06	Southwest	0.040
06/05/06	Southwest	0.020
09/19/06	Southwest	0.013
12/01/06	Southwest	0.030
03/01/07	Southwest	0.010
06/01/07	Southwest	0.025
09/13/07	Southwest	0.025
11/21/07	Southwest	0.025
02/29/08	Southwest	0.060
05/23/08	Southwest	0.067
09/26/08	South	0.02
12/23/08	**Southwest**	**0.02**
		Average: 0.029

TABLE 3
Groundwater Flow Direction and Hydraulic Gradient Data
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, California

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)

Notes:

Number of monitoring events: 32

- The groundwater was flowing in two directions (Northwest and Southeast) during the second quarter of 2002, the fourth quarter of 2003, and the first and fourth quarters of 2004.
- Data included in this table were found from current and historical documents.

TABLE 4
Well Construction Details
76 (Former BP) Service Station No. 11126
1700 Powell Street, Emeryville, California

Well I.D.	Construction Date	Elevation (TOC feet above MSL)	Boring Depth (feet bgs)	Borehole Diameter (inches)	Casing Diameter (inches)	Casing Material	Slot Size (inches)	Screened Interval (feet bgs)	Filter Pack Interval (feet bgs)	Bentonite Seal Interval (feet bgs)	Cement Seal Interval (feet bgs)	Comments
Groundwater Monitoring Wells												
MW-1	10/20/92	7.78	12	8	2	PVC	0.01	4-12	3.5-12	3-3.5	1-3	
MW-2	10/20/92	8.58	12	8	2	PVC	0.01	5-12	4-12	3-4	1-3	
MW-3	10/20/92	8.25	12	8	2	PVC	0.01	5-12	4-12	3-4	1-3	
MW-4	10/20/92	8.12	12	8	2	PVC	0.01	5-12	4-12	3-4	0.5-3	
MW-5	09/02/93	7.69	13.5	8	2	PVC	0.01	3.5-13.5	3-13.5	2.5-3	0.5-2.5	
MW-6	09/03/93	8.52	14	8	2	PVC	0.01	4-14	3-14	2.5-3	0.5-2.5	
MW-7	09/03/93	7.61	14	8	2	PVC	0.01	4-14	3-14	2.5-3	0.5-2.5	
MW-8	09/03/93	8.8	14	8	2	PVC	0.01	4-14	3-14	2.5-3	0.5-2.5	
MW-9	09/03/93	8.08	14	10	4	PVC	0.01	4-14	3-14	2.5-3	0.5-2.5	
MW-10	04/15/05	12.53	20	8	2	PVC	0.01	7-17	6-17.5	5-6	0.5-5	Backfilled with bentonite at 17-20'
MW-11	04/15/05	14.55	24	8	2	PVC	0.01	7-17	6-17	5-6	0.5-5	Backfilled with bentonite at 17-24'

Notes:

TOC = top of casing

MSL = mean sea level

bgs = below ground surface

Elevations are in US survey feet, Vertical Datum is NGVD29

Attachment A

Previous Investigations and Site History Summary

PREVIOUS INVESTIGATIONS AND SITE HISTORY SUMMARY

A soil gas survey was conducted on April 10, 1989 by Target Environmental Services, Inc. (TES) on behalf of Mobil Oil Corporation (Mobil) prior to the transfer of ownership of the property to BP. Soil gas samples were collected from 19 sampling points at an approximate depth of four feet below ground surface (bgs) across the site. Results indicated that gasoline may have entered the site subsurface at the pump islands, UST complex, or along the product supply lines. Total volatile hydrocarbons were detected in soil vapor using a flame-ionization detector (FID) at concentrations up to 932,000 micrograms per Liter (µg/L), with the highest detections detected in the vicinity of the pump islands and east of the USTs (TES, *Soil Gas Survey*, April 1989).

On April 24, 1989, one 550-gallon waste oil UST was removed from the site, and was replaced with a suspected 1,000-gallon waste oil UST in a separate excavation. A soil sample collected from beneath the UST (seven feet bgs) and sidewalls (nine feet bgs, approximately six inches above groundwater) of the initial waste oil UST excavation contained total oil and grease (TOG), total petroleum hydrocarbons as diesel (TPHd), and total petroleum hydrocarbons as gasoline (TPHg) up to concentrations of 340 parts per million (ppm), 27 ppm, and 9.6 ppm, respectively. A capillary fringe soil sample (six inches above groundwater) collected on April 27, 1989 from the sidewall of the new waste oil UST excavation, located approximately 20 feet south of the former waste oil UST location, contained TOG and TPHd at respective concentrations of 10,000 ppm and 370 ppm. An *Underground Storage Tank Unauthorized Release (Leak) / Contamination Site Report* dated May 2, 1989 documenting the past occurrence of a release of unknown quantity was subsequently submitted to Alameda County Environmental Health Department (ACEHD), Hazardous Materials Division (EMCON, *Baseline Assessment Report*, December 27, 1994).

In October 1992, Alisto Engineering (Alisto) performed a preliminary site assessment to investigate the extent of petroleum hydrocarbon impacts beneath the site. Eight soil borings (B-1 through B-3, B-4A, B-4B, B-4, B-5A, and B-5) were advanced to depths ranging from four feet to 20 feet bgs. Auger refusal was encountered during the drilling of borings B-1, B-4A, B-4B, and B-5A; and borings B-2 through B-5 were converted to monitoring wells MW-1 through MW-4, respectively. Soil samples collected to a depth of 5.5 feet bgs from the borings advanced in the immediate vicinity of the USTs and dispenser islands contained TPHg and benzene at maximum concentrations of 280 ppm and 0.94 ppm, respectively. Groundwater samples collected from the wells in November 1992 contained elevated concentrations of TPHg (12,000 parts per billion [ppb]) and benzene (3,900 ppb). Groundwater from well MW-3 contained TPHd at 690 ppb. The direction of groundwater flow was established toward the southwest (Alisto, *Supplemental Site Investigation Report*, April 8, 1994).

In September 1993, Alisto supervised the installation of five additional groundwater monitoring wells (MW-5 through MW-9). Soil samples collected from approximately 4.5 feet bgs from borings MW-5 and MW-9 contained TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) up to respective concentrations of 4,600 ppm, 76 ppm, 330 ppm, 130 ppm, and 420 ppm. The highest concentrations of petroleum hydrocarbons were found in groundwater from well MW-2; maximum concentrations of TPHg and benzene were detected at 4,500 µg/L and 3,400 µg/L, respectively. Well MW-9, which is located in the area of the product dispensers contained liquid phase hydrocarbons (LPH) at an initial thickness of 0.08 feet. A product

recovery canister was subsequently installed to assist in the removal of LPH from beneath the site. The direction of groundwater flow was generally toward the east to southeast. Off-site sources identified in the site vicinity included former Pabco Products, a paint, roofing, and floor coverings manufacturing facility, which stored oil in aboveground storage tanks (ASTs) at the site (located on and northeast of the site); former Auto Freight Depot (southeast corner of Shellmound Road and Powell Street, approximately 450 feet east of the site); former Truck Repair Shop (approximately 480 feet east to southeast of the site), which stored diesel and gasoline in ASTs; and former Pacific Intermountain Express Truck Terminal (approximately 440 feet southeast of the site), which utilized ASTs and USTs.

In October 1994, EMCON conducted a supplementary site assessment to establish baseline subsurface conditions prior to the purchase of the site by Tosco Corporation (Tosco, now ConocoPhillips) from BP. Three soil borings (THP-1, TB-2 and THP-3, and also respectively referred to as TB-1, TB-2 and TB-3) were advanced on-site using cone penetrometer testing (CPT) equipment. Refusal was encountered in TB-2 and TPH-3 at 10 feet and 4.5 feet bgs, respectively. Soil samples from borings THP-1 and THP-3 contained TPHg and benzene up to 290 ppm and 1.6 ppm, respectively; TPHd was detected in soil from THP-1 (33 ppm); and TOG was detected in the 4.5-foot sample from THP-3 (1,800 ppm). Hydropunch groundwater samples from borings THP-1 and THP-3 contained concentrations of TPHg up to 4,600 ppb, and benzene up to 800 ppb. TOG (3,300 ppb), trans-1,2-dichloroethane (DCE, 2.4 ppb), cis-1,2-DCE (41 ppb), and 1,2-dichloroethane (1,2-DCA, 6.4 ppb) were also detected in the groundwater sample from boring THP-1. EMCON personnel returned to the site on December 5, 1994 to inspect the fuel dispensers for the presence of spill containment boxes, and for indications of leakage. No spill containment boxes were in place, and staining was observed beneath the northeast and southwest fuel dispensers. Photo-ionization detector (PID) readings collected from backfill material beneath the dispensers indicated the presence of volatile organic compounds (VOCs) ranging from 27 ppm to 1,063 ppm. Grab soil samples collected from beneath the fuel dispensers (TD-1, TD-2, TD-3 and TD-4) indicated the presence of TPHg and TPHd up to concentrations of 1,400 ppm and 4,600 ppm, respectively (EMCON, *Baseline Assessment Report*, December 27, 1994).

In February 1995, Alisto performed baildown testing at the site. Using the Aqtesolv groundwater modeling program (Geraghty and Miller, 1991), the average hydraulic conductivity (K) and transmissivity (T) were estimated at 5.97E-05 centimeters per second (cm/sec), and 1.16E-06 square meters per second, respectively. The calculated K value was consistent with the expected K values for the soil type encountered beneath the site (1×10^{-1} to 10^{-6} cm/sec), which consisted predominantly of silty clay containing interbedded layers of sand (Alisto, *Baildown Test Results*, February 10, 1995).

In April 1999, Environmental Resolutions Inc. (ERI) performed a five-day soil vapor extraction (SVE) test at the site (ERI, 1999). UST backfill wells (TP-1 and TP-2) were used for SVE, and wells MW-1, MW-2, and MW-4 were utilized as observation wells. Results of vapor samples from well TP-1 indicated a decrease in methyl tertiary butyl ether (MTBE) concentrations from an initial concentration of 4,820 µg/L to 300 µg/L during the test. TPHg concentrations also decreased from an initial concentration of 12,800 µg/L to 464 µg/L during the test. ERI estimated that approximately 21.5 pounds of TPHg and 16.7 pounds of MTBE were removed by SVE. SVE flow rates ranged from 88 to 98 standard cubic feet per minute (scfm) at an applied

vacuum of 12 inches of mercury. No effective radius of influence was measured in native soil outside the UST backfill (ERI, *Extended Soil Vapor Extraction Test Report*, July 20, 1999).

Following the performance of the SVE test by ERI, SECOR observed the removal of one 550-gallon, fiberglass, waste oil UST, along with a clarifier and two hoists (Hoist No. 1 and Hoist No. 2) from the former service bays as part of site remodeling activities on April 28, 1999. The waste oil UST and Hoist No. 2, were removed from two separate excavations, and the clarifier and Hoist No. 1 were removed from another excavation. One soil sample (OILT-1) from the waste oil UST excavation contained TPHg (180 milligrams per kilogram [mg/kg]), benzene (0.19 mg/kg), TPHd (370 mg/kg), and total petroleum hydrocarbons as motor oil (TPHmo, 7,000 mg/kg). A grab groundwater sample collected from 7.5 feet bgs from the waste oil UST excavation contained TPHd (560 µg/L), TPHmo (710 µg/L), benzene (10 µg/L), and MTBE (2,400 µg/L). Soil samples were collected from beneath the former clarifier (four feet bgs), former Hoist No. 1 (eight feet bgs), and the former Hoist No. 2 (eight feet bgs); TPHg, TPHd, TPHmo, benzene, and lead were detected at maximum respective concentrations of 3.0 mg/kg (clarifier), 870 mg/kg (Hoist No. 1), 4,200 mg/kg (Hoist No. 1), 0.013 mg/kg (clarifier), and 22,000 mg/kg (clarifier). MTBE was not detected in soil from the excavations (SECOR, *Removal of Waste Oil UST, Hoists No. 1 and No. 2 and Clarifier Sump*, June 29, 1999).

Based on the presence of petroleum hydrocarbons in soil, the clarifier and hoist areas were over-excavated on May 7, 1999. Soil samples collected from the clarifier excavation at five feet bgs, and the hoist excavations at five feet bgs contained concentrations of TPHg up to 1,200 mg/kg (Hoist No. 1), TPHd up to 1,200 mg/kg (Hoist No. 1), TPHmo up to 5,000 mg/kg (Hoist No. 1), and lead up to 410 mg/kg (clarifier). Over-excavation confirmation soil samples were not analyzed for the presence of BTEX and other metals. A composite sample collected from the pea gravel was also analyzed for the presence of petroleum hydrocarbons; based on the relatively minor levels of TPHd and TPHmo, relatively low to non-detectable levels of BTEX, and non-detectable concentrations of MTBE, the excavated pea gravel was used as backfill for the waste oil UST excavation. Approximately 17.41 tons of soil were removed from the site as a result of the initial excavation and over-excavation activities (SECOR, *Removal of Waste Oil UST, Hoists No. 1 and No. 2 and Clarifier Sump*, June 29, 1999).

On March 28 and 30, 2001, Gettler-Ryan Incorporated (GRI) oversaw the removal and replacement of product lines, dispensers, and the station canopy. During the removal of the product lines, petroleum hydrocarbon-stained soil and odors were observed within the excavated trench. The entire length of the former product line trench was subsequently over-excavated an additional 1.5 feet to 3.5 feet bgs prior to sampling, resulting in the removal of approximately 150 cubic yards of soil from beneath the site. The former trenches were backfilled with clean, imported backfill as it was discovered that the former trenches were not suitable for re-use due to insufficient grading. An additional 100 cubic yards of soil were excavated to accommodate the new product lines. A total of 13 confirmation soil samples were collected from product line, dispenser and trench excavations by SECOR from the initial excavation and following over-excavation of soil. TPHg and TPHd were detected in the 13 samples at concentrations up to 5,300 mg/kg and 630 mg/kg in the initial excavation soil samples, respectively. The highest concentrations of petroleum hydrocarbons were detected in a 3.5-foot soil sample from a former product line location near well MW-9. MTBE was detected in 12 of the 13 samples up to 8.4 mg/kg. A total of 400 cubic yards of soil were removed from the site, and approximately 15,000 gallons of groundwater were removed from beneath the site

during the dewatering of the UST cavity (SECOR, *Removal and Replacement of Product Lines, Dispensers and Canopy*, May 4, 2001).

Between June and October 2004 in accordance with their July 11, 2003 *Interim Remedial Action and Off-Site Assessment Workplan* and the April 20, 2004 *Modifications to Interim Remedial Action and Offsite Assessment Work Plan*, URS Corporation (URS) implemented biweekly groundwater batch extraction at the site utilizing a vacuum truck (URS, *Off-Site Soil and Water Investigation Report*, June 15, 2005). Over this time period, groundwater was periodically extracted from wells MW-1, MW-2, MW-4, MW-8, and MW-9, which resulted in the removal of approximately 125 gallons of groundwater. Due to the limited groundwater recovery and the slow recharge of groundwater levels in the wells, URS discontinued groundwater batch extraction upon approval of Alameda County Health Care Services Agency (ACHCSA). Based on information within the Regional Water Quality Control Board – San Francisco Bay Region's (RWQCB-SFBR) June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* classifying the area of the site as a Zone B Groundwater Management Zone, an area where groundwater is unlikely to be used as a drinking water source and monitored natural attenuation (MNA) was the recommended remedial alternative based on this designation, URS recommended the submittal of a corrective action plan (CAP) proposing MNA as a potential remedial option for the site (URS, *Discontinuation of Interim Remedial Action, ACEH Case #RO0000066*, October 7, 2004).

In June 2005, URS supervised the installation of two off-site, downgradient groundwater monitoring wells (MW-10 and MW-11) on the Powell Street Plaza property, located south of the site. Soil samples from both of the borings at depths of seven feet bgs (MW-10), and 18 and 23.5 feet bgs did not contain petroleum hydrocarbons or fuel oxygenates at or above laboratory method reporting limits (MRLs). With the exception of a concentration of MTBE in well MW-10 (1.5 µg/L), petroleum hydrocarbons and fuel oxygenates were not detected in groundwater from the wells. The direction of groundwater flow was toward the southwest at a calculated hydraulic gradient of 0.02 feet per foot (ft/ft). URS concluded that the off-site, lateral extent of dissolved impacts had been delineated during this investigation. URS again recommended the submittal of a CAP that will include an outline of possible remedial alternatives, and a proposal for implementing a selected remedial strategy based on the evaluation of historical and current subsurface site conditions, and the past performance of remedial feasibility testing and interim remedial action at the site (URS, *Off-Site Soil and Water Investigation Report*, June 15, 2005).

Current Consultant Information

Stantec Consulting Corporation (Stantec) acquired SECOR on February 1, 2008. Consequently the SECOR corporate name changed to Stantec. Stantec continues to manage the site referenced above on behalf of Atlantic Richfield Company, a BP Affiliated Company and ConocoPhillips.

SENSITIVE RECEPTOR SURVEY

A sensitive receptor survey was initially performed by Alisto during site assessment activities in October 1992. The results of the survey indicated the presence of a surface water body within

1,000 feet of the site. Alisto further indicated that the aquifer beneath the site was not a potential source of drinking water (EMCON, *Baseline Assessment Report*, December 27, 1994).

Attachment B

Stantec's Procedures for Groundwater Monitoring and Sampling, and Equipment Decontamination

Stantec Consulting Corporation

STANDARD PROCEDURE FOR GROUNDWATER SAMPLING

Depth to Groundwater / SPH Thickness Measurements

Prior to purging each of the wells, the depth to groundwater and thickness of SPH, if present, within each well casing is measured to the nearest 0.01 foot using either an electronic water level indicator or an electronic oil-water interface probe. Measurements are taken from a point of known elevation on the top of each well casing as determined in accordance with previous surveys.

Groundwater Monitoring Well Purging

Where purging is conducted prior to sampling wells that do not contain SPH, a dedicated 1-inch diameter polyvinyl chloride (PVC) "stinger," bailer, or groundwater pump may be used to purge the wells. During purging a minimum of three well volumes, measured as the annular space of the well casing below the groundwater surface, are removed from each well. However, in the case of very slow recharging wells, purging is deemed sufficient if the well contents are evacuated during purge operations. Unless recharge takes more than two hours, wells are sampled once the well is recharged to within 80 percent of pre-purge groundwater elevation. For very slow recharging wells (wells pumped dry during purging), samples may be collected after two hours of recharge.

To help assure that the collected samples are representative of fresh formation water, the conductivity, temperature, and pH of the delivered effluent are monitored and recorded using a Cambridge Hydac meter, or another meter similar in nature during purge operations. Purge operations are determined to be sufficient once successive measurements of pH, conductivity, and temperature stabilize to within +/- 10 percent.

Groundwater Sample Acquisition and Handling

Following purging operations, groundwater samples are collected from each of the wells, using pre-cleaned, single-sample polypropylene, disposable bailers. The groundwater sample is discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization.

Collected water samples are discharged directly into laboratory provided, pre-cleaned, 40-milliliter (ml) glass vials and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date and time, type of sample and type of preservative (if applicable) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California Department of Health Services Environmental Laboratory Accreditation Programs to perform the specified tests.

Trip Blanks

To help assure the quality of the collected samples and to evaluate the potential for cross contamination during transport to the laboratory, a distilled-water trip blank accompanies the samples in the cooler. The trip blank is analyzed for the presence of volatile organic compounds of concern. For petroleum hydrocarbons, the trip blank is typically analyzed for GRO, BTEX, and MTBE by EPA Method 8260B.

Containment and Disposal of Waste Water

Waste water generated during decontamination of equipment and purging is pumped into a Stantec truck-mounted water tank. The purge water is then transferred into 55-gallon, steel, Department of Transportation (DOT)-approved drums that are temporarily stored on-site. The waste water is removed from the site by Belshire, and transported to their facility for recycling/disposal.

STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to sampling. Samplers, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

Attachment C

Quarterly Monitoring Field Data Sheets

Stantec Consulting

HYDROLOGIC DATA SHEET

Gauge Date: 12-23-08 **Project Name:** *76 Former BP 11126*

Field Technician: Raymond Goetz **Project Number:** *77BP.11126.02.0427/ 77CP.01731.41.1006*

TOC = Top of Well Casing Elevation
DTP = Depth to Free Product (FP or NAPH) Below TOC
DTW = Depth to Groundwater Below TOC
DTB = Depth to Bottom of Well Casing Below TOC
DIA = Well Casing Diameter
ELEV = Groundwater Elevation
DUP = Duplicate

WELL OR LOCATION	TIME	DTP	DTW	DTB	DIA	ELEV	PURGE & SAMPLE 4Q08	SHEEN CONFIRMATION (w/bailer)	COMMENTS
9 MW-1	710		3.79	12	2.0		Yes		
11 MW-2	732		5.50	12	2.0		Yes		
5 MW-3	646		6.36	12	2.0		Yes		
7 MW-4	700		6.04	12	2.0		Yes		
8 MW-5	921		5.04	13.5	4.0		Yes		
3 MW-6	621		6.90	~~14~~	2.0		Yes	DTB	1240
4 MW-7	630		6.40	14	2.0		Yes		
6 MW-8	650		5.25	14	2.0		Yes		
10 MW-9	721		4.04	14	4.0		Yes		
2 MW-10	610		8.60	20	2.0		Yes		
1 MW-11	600		10.74	24	2.0		Yes		

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: See Work Order | PURGED BY: RG | WELL I.D.: MW-1
CLIENT NAME: 76 (Former BP) #11126 | SAMPLED BY: RG | SAMPLE I.D.:
LOCATION: 1700 Powell St., Emeryville CA | QA SAMPLES:

DATE GAUGED 12-23-08 | START (2400hr) 1230 | END (2400hr) 1239
DATE SAMPLED 12-23-08 | SAMPLE TIME (2400hr) 1250
SAMPLE TYPE: Groundwater X | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" ____ 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____ ( )
Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60)

DEPTH TO BOTTOM (feet) = 12.10 | CASING VOLUME (gal) = 1.39
DEPTH TO WATER (feet) = 3.79 | CALCULATED PURGE (gal) = 4.19
WATER COLUMN HEIGHT (feet) = 8.21 | ACTUAL PURGE (gal) = 4.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1235	2	17.4	2.05 ms	7.03	Black	241.6
	1237	3	17.3	2.07 ms	7.00	Clear	98.16
	1239	4	17.4	2.08 ms	6.98	Clear	54.19

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 3.82 | SAMPLE TURBIDITY: 47.71

80% RECHARGE: X YES ___ NO | ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: Yes | SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristalic Pump
- ✓ Bailer (~~Teflon~~ disposable)
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ____

Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristalic Pump
- ___ Bailer (Teflon)
- ✓ Bailer (___ PVC or ✓ disposable)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ____

Other: ____

WELL INTEGRITY: Good | LOCK#: yes

REMARKS: ____

SIGNATURE: Raymond Marks

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-2

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.:

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES:

DATE GAUGED 12-23-08 START (2400hr) 1318 END (2400hr) 1325

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 1345

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 12.0 CASING VOLUME (gal) = 1.10

DEPTH TO WATER (feet) = 5.15 CALCULATED PURGE (gal) = 3.31

WATER COLUMN HEIGHT (feet) = 6.5 ACTUAL PURGE (gal) = ____

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1323	1	19.6	1676	6.55	cloudy	1100
	1325	2	19.8	1727	6.54		
		3					
		Dry at 2.0 gal.					

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 5.56 SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- 1 Submersible Pump
- ___ Peristaltic Pump
- ✓ Bailer (Teflon) disposable
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristaltic Pump
- ___ Bailer (Teflon)
- ✓ Bailer (___ PVC or ✓ disposable)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ____

Other: ____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: ____

SIGNATURE: Raymond Hooks Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-3

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: ______

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: ______

DATE GAUGED: 12-23-08 START (2400hr): 1100 END (2400hr): 1109

DATE SAMPLED: 12-23-08 SAMPLE TIME (2400hr): 1120

SAMPLE TYPE: Groundwater **X** Surface Water ___ Treatment Effluent ___ Other ___

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
	X						
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 12.0 CASING VOLUME (gal) = .95

DEPTH TO WATER (feet) = 6.36 CALCULATED PURGE (gal) = 2.87

WATER COLUMN HEIGHT (feet) = 5.64 ACTUAL PURGE (gal) = ______

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1105	1	20.0	4.07mS	6.92	Cloudy	262.4
	1107	2	19.9	3.98mS	6.92		597.7
	1109	3	20.1	3.93mS	6.93		821.3

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 6.39 SAMPLE TURBIDITY: 741.9

80% RECHARGE: ✓ YES ___ NO

ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes

SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~) disposable
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ______

Other: ______

Pump Depth: ______

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ______

Other: ______

WELL INTEGRITY: Good LOCK#: yes

REMARKS: ______

SIGNATURE: Raymond Gouke Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-4

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: _____

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: _____

DATE GAUGED 12-23-08 START (2400hr) 1200 END (2400hr) 1208

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 1220

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 12.0 CASING VOLUME (gal) = 1.01

DEPTH TO WATER (feet) = 6.04 CALCULATED PURGE (gal) = 3.04

WATER COLUMN HEIGHT (feet) = 5.96 ACTUAL PURGE (gal) = 3.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1204	1	18.6	2.50	7.50	TAN	111.6
	1206	2	18.5	2.52	7.47	TAN	100.1
	1208	3	18.1	2.51	7.44	TAN	87.61

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 6.07 SAMPLE TURBIDITY: 87.60

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~) disposable
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____
Other: _____
Pump Depth: _____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated _____
Other: _____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: _____

SIGNATURE: Raymond Marks Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-5

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: _____

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: _____

DATE GAUGED 12-23-08 START (2400hr) 925 END (2400hr) 933

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 945

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" X (0.17) 3" _____ (0.38) 4" _____ (0.67) 5" _____ (1.02) 6" _____ (1.50) 8" _____ (2.60) Other _____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 13.5 CASING VOLUME (gal) = 1.43

DEPTH TO WATER (feet) = 5.04 CALCULATED PURGE (gal) = 4.31

WATER COLUMN HEIGHT (feet) = 8.46 ACTUAL PURGE (gal) = 3.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	929	1	19.4	816	6.66	Dark	1100
	931	2	19.8	727	6.59		
	933	3	19.6	712	6.58		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 5.07 SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	✓ Bailer (~~Teflon~~ disposable)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	✓ Bailer (___ PVC or ~~___~~ disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
___ Peristalic Pump	___ Dedicated _____	___ Peristalic Pump	___ Dedicated _____
Other: _____		Other: _____	
Pump Depth: _____			

WELL INTEGRITY: Good LOCK#: yes

REMARKS: _____

SIGNATURE: Raymond Morke Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-6

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.:

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES:

DATE GAUGED 12-23-08 START (2400hr) 1000 END (2400hr) 1008

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 1020

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 12.4 CASING VOLUME (gal) = 1.93

DEPTH TO WATER (feet) = 6.9 CALCULATED PURGE (gal) = 2.8

WATER COLUMN HEIGHT (feet) = 5.5 ACTUAL PURGE (gal) = 3.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1004	1	21.3	3.05ms	6.69	Cloudy	1100
	1006	2	21.7	2.53ms	6.80		
	1008	3	21.8	2.36ms	6.85		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 6.93 SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~ disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: ____

SIGNATURE: Raymond Starke

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: See Work Order | PURGED BY: RG | WELL I.D.: MW-7

CLIENT NAME: 76 (Former BP) #11126 | SAMPLED BY: RG | SAMPLE I.D.: _____

LOCATION: 1700 Powell St., Emeryville CA | QA SAMPLES: _____

DATE GAUGED 12-23-08 | START (2400hr) 1030 | END (2400hr) 1038

DATE SAMPLED 12-23-08 | SAMPLE TIME (2400hr) 1050

SAMPLE TYPE: Groundwater X | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" X | 3" ____ | 4" ____ | 5" ____ | 6" ____ | 8" ____ | Other ____ ( )

Casing Volume: (gallons per foot) (0.17) | (0.38) | (0.67) | (1.02) | (1.50) | (2.60)

DEPTH TO BOTTOM (feet) = 14.10 | CASING VOLUME (gal) = 1.29

DEPTH TO WATER (feet) = 6.40 | CALCULATED PURGE (gal) = 3.87

WATER COLUMN HEIGHT (feet) = 7.70 | ACTUAL PURGE (gal) = 3.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1034	1	22.0	4.42	6.82	cloudy	1100
	1036	2	21.9	3.43	6.84		
	1038	3	21.9	3.49	6.85		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 6.43 | SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO | ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes | SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (~~Teflon~~ disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____

WELL INTEGRITY: Good | LOCK#: yes

REMARKS: ____

SIGNATURE: Raymond Yorke

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-8

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: _____

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: _____

DATE GAUGED 12-23-08 START (2400hr) 1130 END (2400hr) 1138

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 1150

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" _____ 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.10 CASING VOLUME (gal) = 1.49

DEPTH TO WATER (feet) = 5.25 CALCULATED PURGE (gal) = 4.46

WATER COLUMN HEIGHT (feet) = 8.75 ACTUAL PURGE (gal) = 3.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1134	1	20.3	1735	7.00	Clear	11.02
	1136	2	20.8	1724	6.97	Clear	10.19
	1138	3	20.7	1726	6.94	Clear	8.41

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 5.28 SAMPLE TURBIDITY: 8.03

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~) disposable
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: _____

SIGNATURE: Raymond Marks Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-9

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: _____

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: _____

DATE GAUGED 12-23-08 START (2400hr) 1300 END (2400hr) 1308

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 1335

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" ____ 3" ____ 4" X 5" ____ 6" ____ 8" ____ Other ____

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 14.10 CASING VOLUME (gal) = 6.67

DEPTH TO WATER (feet) = 4.04 CALCULATED PURGE (gal) = 20.02

WATER COLUMN HEIGHT (feet) = 9.96 ACTUAL PURGE (gal) = 7.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	1308	7	17.3	591	6.90	Clear	27.16
			Dry at 7 gallons				

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 4.16 SAMPLE TURBIDITY: 27.00

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~) disposable
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: _____

SIGNATURE: Raymond Goke Page ___ of ___

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: **See Work Order** PURGED BY: RG WELL I.D.: MW-10

CLIENT NAME: **76 (Former BP) #11126** SAMPLED BY: RG SAMPLE I.D.: _____

LOCATION: **1700 Powell St., Emeryville CA** QA SAMPLES: _____

DATE GAUGED 12-23-08 START (2400hr) 835 END (2400hr) 847

DATE SAMPLED 12-23-08 SAMPLE TIME (2400hr) 900

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 20.0 CASING VOLUME (gal) = 1.93

DEPTH TO WATER (feet) = 8.60 CALCULATED PURGE (gal) = 5.81

WATER COLUMN HEIGHT (feet) = 11.4 ACTUAL PURGE (gal) = 6.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	841	2	19.9	2.17mS	6.68	cloudy	1100
12-23-08	844	4	20.1	2.27mS	6.67		
	847	6	20.1	2.56mS	6.76		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.63 SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
✓ Bailer (~~Teflon~~) disposable
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (___ PVC or ✓ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

WELL INTEGRITY: Good LOCK#: yes

REMARKS: ____

SIGNATURE: Raymond Noelle

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: See Work Order | PURGED BY: RG | WELL I.D.: MW-11
CLIENT NAME: 76 (Former BP) #11126 | SAMPLED BY: RG | SAMPLE I.D.:
LOCATION: 1700 Powell St., Emeryville CA | QA SAMPLES:

DATE GAUGED 12-23-08 | START (2400hr) 800 | END (2400hr) 815
DATE SAMPLED 12-23-08 | SAMPLE TIME (2400hr) 825
SAMPLE TYPE: Groundwater X | Surface Water | Treatment Effluent | Other

CASING DIAMETER: 2" X (0.17) | 3" (0.38) | 4" (0.67) | 5" (1.02) | 6" (1.50) | 8" (2.60) | Other ( )
Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 24.10 | CASING VOLUME (gal) = 2.75
DEPTH TO WATER (feet) = 10.74 | CALCULATED PURGE (gal) = 6.76
WATER COLUMN HEIGHT (feet) = 13.26 | ACTUAL PURGE (gal) = 6.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
12-23-08	807	2	17.7	1594	6.23	Cloudy	1100
	811	4	18.1	1507	6.74		
	815	6	18.6	1530	6.89		

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.77 | SAMPLE TURBIDITY: 1100

80% RECHARGE: ✓ YES ___ NO | ANALYSES: **GRO/BTEX/MTBE/Oxygenates/1,2-DCA & EDB; TPH-d & TOG additionally for MW-3 only**

ODOR: yes | SAMPLE VESSEL / PRESERVATIVE: **3 preserved voas; MW-3 -two 1-L non-preserved Amber for DRO and one 1-L preserved for TOG.**

PURGING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristaltic Pump
- ✓ Bailer (~~Teflon~~) disposable
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated

Other:
Pump Depth:

SAMPLING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristaltic Pump
- ___ Bailer (Teflon)
- ✓ Bailer (___ PVC or ✓ disposable)
- ___ Bailer (Stainless Steel)
- ___ Dedicated

Other:

WELL INTEGRITY: Good | LOCK#: yes

REMARKS:

SIGNATURE: Raymond Rael | Page ___ of ___

SITE VISITATION REPORT

76 (Former BP) Service Station 11126 - 4Q08 M&S Event

Name(s) Raymond Garcia Date: 12-23-08 Time of Arrival Call-In: _____

Arrival Time: _____ Departure Time: _____ Time of Departure Call-In _____

Who did you call? _____

DRUM INVENTORY

1	WATER	_____	CARBON	Drum Location:
_____	SOIL	0	EMPTY	

METER CALIBRATIONS

pH meter calibration readings 4.01 7.01 10.01 DO meter calibrations _____

LEL calibration readings _____ ORP calibrations _____

HEALTH AND SAFETY ASSESSMENT

HASP
PPE
ERP
Traffic
Exclusion Zones

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

QMS

I arrived on site reviewed paper work and HASP as part of my tailgate meeting. I opened all wells then gauged them. I then purged and sampled MW-10 and MW-11. I met with traffic Control for a tailgate meeting and set up for MW-5. I finished with MW-5 and purged and sampled the remaining wells. I emptied my tank and took samples to Fed Ex.

REMEDIATION MANAGEMENT - AUTHORIZATION TO WORK

PRE-TASK HAZARD REVIEW

TASK	EQUIPMENT
1. CMS	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

Chemical / Products / Material

1. ☐ Hydrogen Sulfide	2. ☑ Benzene	3. ☑ Diesel	4. ☐ Hydrocarbon	5. ☐ Acid	6. ☐ Lead
7. ☑ Carbon Monoxide	8. ☐ Asbestos	9. ☐ Caustic	10. ☑ Gasoline	11. ☐ Heavy Metals	
12. ☐ NORMS	13. ☐ Other:				

Hazardous Energy

19. ☐ Radiation	20. ☑ Electric	21. ☐ Pneumatic	22. ☐ Thermal-Steam
23. ☐ Hydraulic	24. ☐ Pressure	25. ☐ Mechanical	26. ☑ Fluids & Gases
27. ☑ Gravitational		28. ☐ Other:	

Other Potential Hazards

34. ☑ Walking / Working Surfaces	35. ☑ Traffic	36. ☐ Working at Heights	37. ☑ Pinch Points	
38. ☑ Weather	39. ☑ Noise	40. ☐ Grinding	41. ☐ Heavy equipment	42. ☑ Sharp Edges
43. ☑ Hot Work	44. ☑ Security	45. ☑ Congested Area		46. ☐ Overhead Work
47. ☐ Body Position	48. ☑ Static Posture	49. ☑ Wind	50. ☐ Rotating Equipment	51. ☑ Lifting
52. ☐ Housekeeping	53. ☑ Spills	54. ☐ Underground Utility		55. ☐ Slopes and Terrain
56. ☑ Confined Space	57. ☐ Vibration	58. ☐ Ground Disturbance		59. ☐ Rigging
60. ☑ Vehicle Safety – Driving		61. ☑ Repetitive Motion		62. ☐ Container/Drum Labels
63. ☑ Waste	64. ☑ Heat/Cold Stress	65. ☑ Hand & Power Tools		66. ☑ Fitness to Work
67. ☐ Open Pipe	68. ☐ Boom Swing	69. ☐ Lighting	70. ☐ Exposure to poisonous plants / animals / bugs	
71. ☐ Overhead Electrical		72. ☐ Auger/Drill Stem		73. ☐ Other:

Required Safety Precautions

79. ☐ Safety Glasses	80. ☐ Goggles	81. ☐ Face Shield	82. ☐ Ear Plugs	83. ☐ High Visibility Clothing
84. ☐ Hard Hat	85. ☐ Escape Pak	86. ☐ Steel Toe Shoes	87. ☐ Ear Muffs	88. ☐ Respirator:
89. ☐ FRC	90. ☐ Supplied Air	91. ☐ Topical Creams / Repellents		92. ☐ Gloves
93. ☐ Fire Watch	94. ☐ Drip Pans	95. ☐ Plastic Sheeting	96. ☐ Vac Truck	97. ☐ Fall Protection
98. ☐ Barricade	99. ☐ Fire Blanket	100. ☐ Upwind Areas Checked		101. ☐ Warning Signs
102. ☐ Flag Off Area	103. ☐ Life Lines	104. ☐ Fire Extinguisher at Jobsite		105. ☐ Sampling Prohibited
106. ☐ Seal Manholes, Sewers, and Catch Basins		107. ☐ Communication Method		108. ☐ Welding Shields
109. ☐ Continuous Monitoring		110. ☐ Wet Down Area		111. ☐ Ladder Tie Off
112. ☐ Tag Lines	113. ☐ Active Site Hazard Communication			114. ☐ Fence Off Area
115. ☑ No Cell Phone	116. ☐ Limit Work Site	117. ☐ No Smoking		118. ☐ Other:

REQUIRED PROCEDURES

☐ Drilling	☐ MOC	☑ Traffic Control	☐ LO/TO/Blinding
☐ Hoist/Lifting	☐ Journey Hazard Assessment		☐ Ground Disturbance

REQUIRED PERMITS

☑ Hot Work	☐ Trenching/Excavation	☐ Confined Space	☐ Working from Heights	☐ None

Contractor(s) / Employee(s) Signatures: I have reviewed and understand the conditions of this permit, and its attachments. I will report hazardous conditions or acts identified on this job site to my supervisor and / or BP representative so they can be corrected as necessary.

1.	2.	3	4.
5.	6.	7.	8.
9.	10.	11.	12.

Onsite Manager: (Print Name) Raymond Goerie	Date: 12-23-08	Location of Site Work:
Site 1112G	Date/Time Issued: am/pm	Date/Time Expires: am/pm
☑ Is HASP onsite?	☑ Is ERP onsite?	☑ Is JSA onsite?
Authorization Signature: Raymond Goerie		
Exceptions/Comments		

Revision 001, Date: 08/01/05

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: 76(former BP) Service Station No. 11126
BP BU/AR Region/Enfos Segment: Environmental/Retail
State or Lead Regulatory Agency: SCCDEH
Requested Due Date (mm/dd/yy): 14 day TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Lancaster Laboratories	BP/AR Facility No.: 11126	Consultant/Contractor: Stantec Consulting
Address: 2425 New Holland Pike, Lancaster, PA 17601	BP/AR Facility Address: 1700 Powell Street Emeryville, Ca	Address: 3017 Kilgore Rd. Suite 100
	Site Lat/Long: 37.838926108 -122.295216	Rancho Cordova, CA 95670
Lab PM: Megan Moeller	California Global ID No.: T0600100208	Consultant Project No.: 77BP.11126.02.0403/77CP.01731.41.2080
Tele/Fax: 717-656-2300 ext 1246	Enfos Project No.:	Consultant/Contractor PM: Catherine Spelis/Brad Shelton
BP/AR EBM: Paul Supple	Provision or OOC (circle one)	Tele/Fax: 916-861-0400 Ext. 320/329
Address: P.O. Box 1257	Phase/WBS:	Report Type & QC Level: Quarterly Monitoring and Sampling
San Ramon, CA 94583	Sub Phase/Task:	E-mail EDD To: BPCPNCal@stantec.com, bpdata@stantec.com
Tele/Fax: 925-299-8891	Cost Element:	Invoice to: Stantec Consulting

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO/BTEX/ 6 oxygenates/ 1,2-DCA/EDB by EPA 8260B	Requested Analysis: GRO/BTEX/MBE by EPA 8260B	Requested Analysis: TPHd EPA 8015M* ☒ Diesel	Requested Analysis: Total Oil and Grease (EPA 1664	Sample Point Lat/Long and Comments
1	MW-1	1250	12/23		x			3				x		x				
2	MW-2	1345			x			3				x		x				
3	MW-3	1120			x			6				x		x		x	x	
4	MW-4	1220			x			3				x		x				
5	MW-5	945			x			3				x		x				
6	MW-6	1020			x			3				x		x				
7	MW-7	1050			x			3				x		x				
8	MW-8	1150			x			3				x		x				
9	MW-9	1335			x			3				x		x				
10	MW-10	900			x			3				x		x				

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Raymond Goerke						
Sampler's Company: Stantec	Raymond Goerke	12-24-08	800			
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: Bill costs to Stantec. EDF must be in BP format. This for site BP #11126 quarterly monitoring and sampling.

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: 76(former BP) Service Station No. 11126
BP BU/AR Region/Enfos Segment: Environmental/Retail
State or Lead Regulatory Agency: SCCDEH
Requested Due Date (mm/dd/yy): 14 day TAT

On-site Time:	Temp:
Off-site Time:	Temp.
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Lancaster Laboratories	BP/AR Facility No.: 11126	Consultant/Contractor: Stantec Consulting
Address: 2425 New Holland Pike, Lancaster, PA 17601	BP/AR Facility Address: 1700 Powell Street Emeryville, Ca	Address: 3017 Kilgore Rd. Suite 100
	Site Lat/Long: 37.838926108 -122.295216	Rancho Cordova, CA 95670
Lab PM: Megan Moeller	California Global ID No.: T0600100208	Consultant Project No.: 77BP.11126.02.0403/77CP.01731.41.2080
Tele/Fax: 717-656-2300 ext 1246	Enfos Project No.:	Consultant/Contractor PM: Catherine Spelis/Brad Shelton
BP/AR EBM: Paul Supple	Provision or OOC (circle one)	Tele/Fax: 916-861-0400 Ext. 320/329
Address: P.O. Box 1257	Phase/WBS:	Report Type & QC Level: Quarterly Monitoring and Sampling
San Ramon, CA 94583	Sub Phase/Task:	E-mail EDD To: BPCPNCal@stantec.com, bpdata@stantec.com
Tele/Fax: 925-299-8891	Cost Element:	Invoice to: Stantec Consulting

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO/BTEX/ 6 oxygenates/ 1,2-DCA/EDB by EPA 8260B	Requested Analysis: GRO/BTEX/MtBE by EPA 8260B	Sample Point Lat/Long and Comments
1	MW-11	825	12/23		x			3				x		x		37.83772 -122.2958459
2	QCTB	—	↓		x			2				x			x	
3																
4																
5																
6																
7																
8																
9																
10																

Sampler's Name: Raymond Goelz	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stantec	Raymond Goelz	12-24-08	800			
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: Bill costs to Stantec. EDF must be in BP format. This for site BP #11126 quarterly monitoring and sampling.

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Attachment D

Certified Laboratory Analytical Report, Chain-of-Custody Documentation, and Stantec Laboratory Validation Form

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

916-861-0400

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1126251. Samples arrived at the laboratory on Friday, December 26, 2008. The PO# for this group is 77BP.11126.02.0403 and the release number is SUPPLE.

Client Description	Lancaster Labs Number
MW-1 NA Water	5567494
MW-2 NA Water	5567495
MW-3 NA Water	5567496
MW-4 NA Water	5567497
MW-5 NA Water	5567498
MW-6 NA Water	5567499
MW-7 NA Water	5567500
MW-8 NA Water	5567501
MW-9 NA Water	5567502
MW-10 NA Water	5567503
MW-11 NA Water	5567504
QCTB NA Water	5567505

ELECTRONIC COPY TO	Stantec Consulting Inc.	Attn: BPCPNCal
ELECTRONIC COPY TO	Stantec Consulting Inc.	Attn: bpdata

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Megan A Moeller at (717) 656-2300

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567494 **Group No. 1126251**

MW-1 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-1
Collected:12/23/2008 12:50 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	75	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	940	5.0	ug/l	1
05401	Benzene	71-43-2	14	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	6.1	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	1.2	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	9.7	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	1,600	50	ug/l	1

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	12/31/2008 03:06	Michael A Ziegler	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	12/31/2008 03:06	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/31/2008 03:06	Michael A Ziegler	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567494 **Group No. 1126251**

MW-1 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-1
Collected:12/23/2008 12:50 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567495 Group No. 1126251

MW-2 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-2
Collected:12/23/2008 13:45 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 500	500	ug/l	2
02010	Methyl Tertiary Butyl Ether	1634-04-4	1,800	2.0	ug/l	2
02011	di-Isopropyl ether	108-20-3	< 2.0	2.0	ug/l	2
02013	Ethyl t-butyl ether	637-92-3	2.4	2.0	ug/l	2
02014	t-Amyl methyl ether	994-05-8	51	2.0	ug/l	2
02015	t-Butyl alcohol	75-65-0	57,000	2,500	ug/l	500
05401	Benzene	71-43-2	950	20	ug/l	20
05402	1,2-Dichloroethane	107-06-2	< 2.0	2.0	ug/l	2
05407	Toluene	108-88-3	19	2.0	ug/l	2
05412	1,2-Dibromoethane	106-93-4	< 2.0	2.0	ug/l	2
05415	Ethylbenzene	100-41-4	170	2.0	ug/l	2
06310	Xylene (Total)	1330-20-7	70	2.0	ug/l	2
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	5,700	100	ug/l	2

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	12/31/2008 03:32	Michael A Ziegler	2
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	12/31/2008 03:57	Michael A Ziegler	20
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 11:43	Ginelle L Feister	500
06184	TPH GRO in water by 8260B	SW-846 8260B	1	12/31/2008 03:32	Michael A Ziegler	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/31/2008 03:32	Michael A Ziegler	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	12/31/2008 03:57	Michael A Ziegler	20
01163	GC/MS VOA Water Prep	SW-846 5030B	3	01/05/2009 11:43	Ginelle L Feister	500

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Analysis Report

Lancaster Laboratories Sample No. WW5567495 **Group No. 1126251**

MW-2 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-2
Collected:12/23/2008 13:45 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM2

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567496 **Group No. 1126251**

MW-3 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-3
Collected:12/23/2008 11:20 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
06609	TPH-DRO CA C10-C28	n.a.	2,800	100	ug/l	1
08079	HEM (oil & grease)	n.a.	< 5,000	5,000	ug/l	1
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	4.9	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	8,200	250	ug/l	50
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	87	50	ug/l	1

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	12/30/2008 18:49	Diane V Do	1
08079	HEM (oil & grease)	EPA 1664A	1	01/12/2009 07:59	Yolunder Y Bunch	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567496 Group No. 1126251

MW-3 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-3
Collected:12/23/2008 11:20 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
Suite 100
Rancho Cordova CA 95670

POWM3

01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	12/31/2008 04:22	Michael A Ziegler	1
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 12:08	Ginelle L Feister	50
06184	TPH GRO in water by 8260B	SW-846 8260B	1	12/31/2008 04:22	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/31/2008 04:22	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	01/05/2009 12:08	Ginelle L Feister	50
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	12/28/2008 16:15	JoElla L Rice	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5567497 Group No. 1126251

MW-4 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-4
Collected:12/23/2008 12:20 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	15	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	3.2	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	37,000	1,000	ug/l	200
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	270	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 12:33	Ginelle L Feister	1
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/06/2009 02:56	Michael A Ziegler	200
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 12:33	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 12:33	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	01/06/2009 02:56	Michael A Ziegler	200

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Analysis Report

Lancaster Laboratories Sample No. WW5567498 Group No. 1126251

MW-5 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-5
Collected:12/23/2008 09:45 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	1.0	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	< 5.0	5.0	ug/l	1
05401	Benzene	71-43-2	2.7	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	1.1	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	3.4	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	3,300	500	ug/l	10

The GC/MS volatile analysis for C6-C12-TPH-GRO was performed outside of the method specified 14 day holding. An undiluted analysis was also performed within the 14 day holding time but could not be reported, because the concentration exceeded calibration range of the instrument. The concentration was 4,700 ug/l in the undiluted analysis.

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/06/2009 03:20	Michael A Ziegler	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/14/2009 04:21	Holly Berry	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/06/2009 03:20	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	01/14/2009 04:21	Holly Berry	10

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Analysis Report

Lancaster Laboratories Sample No. WW5567498 **Group No. 1126251**

MW-5 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-5
Collected:12/23/2008 09:45 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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Analysis Report

Lancaster Laboratories Sample No. WW5567499 Group No. 1126251

MW-6 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-6
Collected:12/23/2008 10:20 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM6

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	5.3	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	54	5.0	ug/l	1
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	< 50	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	12/30/2008 23:22	Michael A Ziegler	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	12/30/2008 23:22	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/30/2008 23:22	Michael A Ziegler	1

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Analysis Report

Lancaster Laboratories Sample No. WW5567500 Group No. 1126251

MW-7 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-7
Collected:12/23/2008 10:50 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM7

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	5.7	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	3,500	100	ug/l	20
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	59	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 13:23	Ginelle L Feister	1
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/06/2009 03:45	Michael A Ziegler	20
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 13:23	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 13:23	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	01/06/2009 03:45	Michael A Ziegler	20

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Analysis Report

Lancaster Laboratories Sample No. WW5567501 Group No. 1126251

MW-8 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-8
Collected:12/23/2008 11:50 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM8

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	10	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	770	5.0	ug/l	1
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	270	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 13:48	Ginelle L Feister	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 13:48	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 13:48	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW5567502 Group No. 1126251

MW-9 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-9
Collected:12/23/2008 13:35 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POWM9

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	870	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	23	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	1,000	50	ug/l	10
05401	Benzene	71-43-2	420	10	ug/l	10
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	7.9	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	110	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	84	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	2,600	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 14:13	Ginelle L Feister	1
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 14:37	Ginelle L Feister	10
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 14:13	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 14:13	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	01/05/2009 14:37	Ginelle L Feister	10

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Analysis Report

Lancaster Laboratories Sample No. WW5567503 Group No. 1126251

MW-10 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-10
Collected:12/23/2008 09:00 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POW10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	2.7	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	< 5.0	5.0	ug/l	1
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	< 50	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 15:02	Ginelle L Feister	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 15:02	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 15:02	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW5567504 **Group No. 1126251**

MW-11 NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 MW-11
Collected:12/23/2008 08:25 by RG

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

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POW11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH					
01587	Ethanol	64-17-5	< 250	250	ug/l	1
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 1.0	1.0	ug/l	1
02011	di-Isopropyl ether	108-20-3	< 1.0	1.0	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	< 1.0	1.0	ug/l	1
02014	t-Amyl methyl ether	994-05-8	< 1.0	1.0	ug/l	1
02015	t-Butyl alcohol	75-65-0	< 5.0	5.0	ug/l	1
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05412	1,2-Dibromoethane	106-93-4	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	< 50	50	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01594	BTEX+5 Oxygenates+EDC+EDB+ETOH	SW-846 8260B	1	01/05/2009 15:27	Ginelle L Feister	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 15:27	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 15:27	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW5567505 **Group No. 1126251**

QCTB NA Water
BP 11126 SIRC
1700 Powell St-Emeryville T0600100208 QCTB
Collected:12/23/2008

Account Number: 12607

Submitted: 12/26/2008 10:30
Reported: 01/14/2009 at 14:46
Discard: 02/14/2009

Stantec Consulting Inc.
3017 Kilgore Road
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Rancho Cordova CA 95670

POWTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 1.0	1.0	ug/l	1
05401	Benzene	71-43-2	< 1.0	1.0	ug/l	1
05407	Toluene	108-88-3	< 1.0	1.0	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.0	1.0	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.0	1.0	ug/l	1
06184	TPH GRO in water by 8260B					
06383	C6-C12-TPH-GRO	n.a.	< 50	50	ug/l	1

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 7.

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	01/05/2009 19:10	Ginelle L Feister	1
06184	TPH GRO in water by 8260B	SW-846 8260B	1	01/05/2009 19:10	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	01/05/2009 19:10	Ginelle L Feister	1

Quality Control Summary

Client Name: Stantec Consulting Inc. Group Number: 1126251
Reported: 01/14/09 at 02:46 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 083620004A	Sample number(s): 5567496							
TPH-DRO CA C10-C28	< 100	100.	ug/l	88	91	63-119	4	20
Batch number: 09012807901A	Sample number(s): 5567496							
HEM (oil & grease)	< 5,000	5,000.	ug/l	84	90	78-114	7	16
Batch number: Z083653AA	Sample number(s): 5567494-5567496,5567499							
Ethanol	< 250	250.	ug/l	87	107	45-156	20	30
Methyl Tertiary Butyl Ether	< 1.0	1.0	ug/l	106	108	73-119	3	30
di-Isopropyl ether	< 1.0	1.0	ug/l	97	98	70-123	2	30
Ethyl t-butyl ether	< 1.0	1.0	ug/l	95	98	74-120	2	30
t-Amyl methyl ether	< 1.0	1.0	ug/l	97	98	79-113	2	30
t-Butyl alcohol	< 5.0	5.0	ug/l	96	104	74-117	8	30
Benzene	< 1.0	1.0	ug/l	98	98	78-119	0	30
1,2-Dichloroethane	< 1.0	1.0	ug/l	96	97	69-135	1	30
Toluene	< 1.0	1.0	ug/l	99	99	85-115	0	30
1,2-Dibromoethane	< 1.0	1.0	ug/l	89	91	81-114	2	30
Ethylbenzene	< 1.0	1.0	ug/l	101	100	82-119	1	30
Xylene (Total)	< 1.0	1.0	ug/l	105	104	83-113	0	30
C6-C12-TPH-GRO	< 50	50.	ug/l	111	113	76-154	2	30
Batch number: Z090051AA	Sample number(s): 5567495-5567497,5567500-5567505							
Ethanol	< 250	250.	ug/l	84	103	45-156	20	30
Methyl Tertiary Butyl Ether	< 1.0	1.0	ug/l	107	103	73-119	4	30
di-Isopropyl ether	< 1.0	1.0	ug/l	96	93	70-123	3	30
Ethyl t-butyl ether	< 1.0	1.0	ug/l	97	96	74-120	2	30
t-Amyl methyl ether	< 1.0	1.0	ug/l	99	96	79-113	3	30
t-Butyl alcohol	< 5.0	5.0	ug/l	102	107	74-117	5	30
Benzene	< 1.0	1.0	ug/l	98	96	78-119	2	30
1,2-Dichloroethane	< 1.0	1.0	ug/l	96	95	69-135	1	30
Toluene	< 1.0	1.0	ug/l	100	97	85-115	3	30
1,2-Dibromoethane	< 1.0	1.0	ug/l	90	91	81-114	0	30
Ethylbenzene	< 1.0	1.0	ug/l	101	99	82-119	2	30
Xylene (Total)	< 1.0	1.0	ug/l	105	103	83-113	2	30
C6-C12-TPH-GRO	< 50	50.	ug/l	142	141	76-154	1	30
Batch number: Z090053AA	Sample number(s): 5567497-5567498,5567500							
Ethanol	< 250	250.	ug/l	96		45-156		
Methyl Tertiary Butyl Ether	< 1.0	1.0	ug/l	103		73-119		
di-Isopropyl ether	< 1.0	1.0	ug/l	93		70-123		
Ethyl t-butyl ether	< 1.0	1.0	ug/l	94		74-120		
t-Amyl methyl ether	< 1.0	1.0	ug/l	95		79-113		
t-Butyl alcohol	< 5.0	5.0	ug/l	108		74-117		
Benzene	< 1.0	1.0	ug/l	96		78-119		
1,2-Dichloroethane	< 1.0	1.0	ug/l	95		69-135		
Toluene	< 1.0	1.0	ug/l	99		85-115		
1,2-Dibromoethane	< 1.0	1.0	ug/l	90		81-114		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Stantec Consulting Inc. Group Number: 1126251
Reported: 01/14/09 at 02:46 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ethylbenzene	< 1.0	1.0	ug/l	100		82-119		
Xylene (Total)	< 1.0	1.0	ug/l	105		83-113		
Batch number: Z090131AA	Sample number(s): 5567498							
C6-C12-TPH-GRO	< 50	50.	ug/l	100	100	76-154	0	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: Z083653AA	Sample number(s): 5567494-5567496,5567499 UNSPK: 5567499								
Ethanol	93		32-164						
Methyl Tertiary Butyl Ether	107		69-127						
di-Isopropyl ether	97		68-129						
Ethyl t-butyl ether	99		78-119						
t-Amyl methyl ether	97		72-125						
t-Butyl alcohol	103		70-121						
Benzene	100		83-128						
1,2-Dichloroethane	97		70-143						
Toluene	97		83-127						
1,2-Dibromoethane	91		78-120						
Ethylbenzene	88		82-129						
Xylene (Total)	89		82-130						
Batch number: Z090051AA	Sample number(s): 5567495-5567497,5567500-5567505 UNSPK: P568400								
Ethanol	94		32-164						
Methyl Tertiary Butyl Ether	118 (2)		69-127						
di-Isopropyl ether	99		68-129						
Ethyl t-butyl ether	101		78-119						
t-Amyl methyl ether	101		72-125						
t-Butyl alcohol	106		70-121						
Benzene	103		83-128						
1,2-Dichloroethane	100		70-143						
Toluene	106		83-127						
1,2-Dibromoethane	94		78-120						
Ethylbenzene	107		82-129						
Xylene (Total)	111		82-130						
Batch number: Z090053AA	Sample number(s): 5567497-5567498,5567500 UNSPK: P568994								
Ethanol	101	111	32-164	10	30				
Methyl Tertiary Butyl Ether	106	105	69-127	1	30				
di-Isopropyl ether	98	97	68-129	1	30				
Ethyl t-butyl ether	99	101	78-119	1	30				
t-Amyl methyl ether	99	101	72-125	1	30				
t-Butyl alcohol	102	106	70-121	3	30				
Benzene	104	105	83-128	0	30				
1,2-Dichloroethane	99	98	70-143	1	30				
Toluene	108	108	83-127	0	30				
1,2-Dibromoethane	92	92	78-120	0	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Stantec Consulting Inc. Group Number: 1126251
Reported: 01/14/09 at 02:46 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Ethylbenzene	108	108	82-129	0	30				
Xylene (Total)	111	112	82-130	1	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-DRO CA C10-C28
Batch number: 083620004A

	Orthoterphenyl
5567496	74
Blank	65
LCS	80
LCSD	84
Limits:	59-131

Analysis Name: BTEX+5 Oxygenates+EDC+EDB+ETOH
Batch number: Z083653AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5567494	94	89	93	92
5567495	93	91	93	94
5567496	91	89	92	91
5567499	94	90	92	92
Blank	92	87	92	92
LCS	92	89	92	94
LCSD	91	89	92	93
MS	93	89	92	93
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+5 Oxygenates+EDC+EDB+ETOH
Batch number: Z090051AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5567497	92	88	92	92
5567500	92	88	92	91
5567501	93	88	92	91
5567502	91	87	91	92
5567503	93	88	92	91
5567504	94	90	91	90
5567505	93	87	92	91
Blank	92	89	92	91
LCS	92	90	92	93
LCSD	92	88	92	92
MS	94	90	92	93

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Stantec Consulting Inc. Group Number: 1126251
Reported: 01/14/09 at 02:46 PM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+5 Oxygenates+EDC+EDB+ETOH
Batch number: Z090053AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5567498	93	88	91	94
Blank	93	87	92	90
LCS	93	90	92	93
MS	93	90	93	94
MSD	93	90	93	93
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 8260 Master Scan (water)
Batch number: Z090131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	90	88	92	87
LCS	90	86	91	91
LCSD	89	86	91	92
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Case Narrative

Project Name: 11126 - Emeryville, CA
LLI Group #: 1126251

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Chronicle section of the Analysis Report for the method references

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

06184: TPH GRO in water by 8260B

Sample #s: 5567494, 5567496

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.

Sample #s: 5567505

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 7.

Sample #s: 5567498

The GC/MS volatile analysis for C6-C12-TPH-GRO was performed outside of the method specified 14 day holding. An undiluted analysis was also performed within the 14 day holding time but could not be reported, because the concentration exceeded calibration range of the instrument. The concentration was 4,700 ug/l in the undiluted analysis.

Atlantic Richfield Company
bp
A BP affiliated company

Account# 126007 Group# 1126251 Sample# 556794-05

Chain of Custody Record

Project Name: 76(former BP) Service Station No. 11126
BP BU/AR Region/Enfos Segment: Environmental/Retail
State or Lead Regulatory Agency: SCCDEH
Requested Due Date (mm/dd/yy): 14 day TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Lancaster Laboratories	BP/AR Facility No.: 11126	Consultant/Contractor: Stantec Consulting
Address: 2425 New Holland Pike, Lancaster, PA 17601	BP/AR Facility Address: 1700 Powell Street Emeryville, Ca	Address: 3017 Kilgore Rd. Suite 100
	Site Lat/Long: 37.838926108 -122.295216	Rancho Cordova, CA 95670
Lab PM: Megan Moeller	California Global ID No.: T0600100208	Consultant Project No.: 77BP.11126.02.0403/77CP.01731.41.2080
Tele/Fax: 717-656-2300 ext 1246	Enfos Project No.:	Consultant/Contractor PM: Catherine Spelis/Brad Shelton
BP/AR EBM: Paul Supple	Provision or OOC (circle one)	Tele/Fax: 916-861-0400 Ext. 320/329
Address: P.O. Box 1257	Phase/WBS:	Report Type & QC Level: Quarterly Monitoring and Sampling
San Ramon, CA 94583	Sub Phase/Task:	E-mail EDD To: BPCPNCal@stantec.com, bpdata@stantec.com
Tele/Fax: 925-299-8891	Cost Element:	Invoice to: Stantec Consulting

Lab Bottle Order No:

Matrix

Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air		Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analysis: GRO/BTEX/ 6 oxygenates/ 1,2-DCA/EDB by EPA 8260B	GRO/BTEX/MtBE by EPA 8260B	TPHd EPA 8015M* ☒ Diesel	Total Oil and Grease (EPA 1664							Sample Point Lat/Long and Comments	
1	MW-1	1250	12/23		x				3				x			x											
2	MW-2	1345	↓		x				3				x			x											
3	MW-3	1120			x				6				x			x		x	x								
4	MW-4	1220			x				3				x			x											
5	MW-5	945			x				3				x			x											
6	MW-6	1020			x				3				x			x											
7	MW-7	1050			x				3				x			x											
8	MW-8	1150			x				3				x			x											
9	MW-9	1335			x				3				x			x											
10	MW-10	900	↓		x				3				x			x											

Sampler's Name: Raymond Goeke	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stantec	Raymond Goeke	12-24-08	800			
Shipment Date:						
Shipment Method:						
Shipment Tracking No:				Kara Nathone	12/26/08	10:30

Special Instructions: Bill costs to Stantec. EDF must be in BP format. This for site BP #11126 quarterly monitoring and sampling.

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 2.8-3.9 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Account # 12607 Group # 1126251

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record Sample# 5567494-05

Project Name: 76(former BP) Service Station No. 11126
BP BU/AR Region/Enfos Segment: Environmental/Retail
State or Lead Regulatory Agency: SCCDEH
Requested Due Date (mm/dd/yy): 14 day TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Lancaster Laboratories	BP/AR Facility No.: 11126	Consultant/Contractor: Stantec Consulting
Address: 2425 New Holland Pike, Lancaster, PA 17601	BP/AR Facility Address: 1700 Powell Street Emeryville, Ca	Address: 3017 Kilgore Rd. Suite 100
	Site Lat/Long: 37.838926108 -122.295216	Rancho Cordova, CA 95670
Lab PM: Megan Moeller	California Global ID No.: T0600100208	Consultant Project No.: 77BP.11126.02.0403/77CP.01731.41.2080
Tele/Fax: 717-656-2300 ext 1246	Enfos Project No.:	Consultant/Contractor PM: Catherine Spelis/Brad Shelton
BP/AR EBM: Paul Supple	Provision or OOC (circle one)	Tele/Fax: 916-861-0400 Ext. 320/329
Address: P.O. Box 1257	Phase/WBS:	Report Type & QC Level: Quarterly Monitoring and Sampling
San Ramon, CA 94583	Sub Phase/Task:	E-mail EDD To: BPCPNCal@stantec.com, bpdata@stantec.com
Tele/Fax: 925-299-8891	Cost Element:	Invoice to: Stantec Consulting

Lab Bottle Order No:

Matrix

Preservative

Requested Analysis

Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	GRO/BTEX/ 6 oxygenates/ 1,2-DCA/EDB by EPA 8260B	GRO/BTEX/MBE by EPA 8260B	Sample Point Lat/Long and Comments
1	MW-11	825	12/23		x			3				x		x		37.83772 -122.2958459
2	QCTB	—	↓		x			2				x			x	
3																
4																
5																
6																
7																
8																
9																
10																

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Raymond Goelz	Raymond Goelz	12-24-08	800			
Sampler's Company: Stantec						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:				Katie Nantone	12/26/08	10:30

Special Instructions: Bill costs to Stantec. EDF must be in BP format. This for site BP #11126 quarterly monitoring and sampling.

Custody Seals In Place: Yes / (No) | Temp Blank: Yes / (No) | Cooler Temp on Receipt 2-8 °F/C (3.9) | Trip Blank: (Yes) / No | MS/MSD Sample Submitted: Yes / (No)

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Is Data Valid? (circle)
YES
NO

Preservation Temperature
(If Known)

2.8-3.9 (°C)

Stantec Lab Validation Form

Project/Client: **BP (Former 76) Service Station No. 11126 / BP-CP**
Project No.: **77BP.11126.02.0436 and 77CP.01731.41.1007**
Lab Work Order No.: **1126251**
Date of Validation: **01/15/2009**
Date of Analysis: **12/30/2008 – 1/14/2009**
Date of Sampling: **12/23/2008**
Completed By: **Kimber Collins**

Signature: Kimber Collins

Circle/Highlight
Yes or No

1.	Was the analysis the one requested?	**Yes** / No
2.	Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?	**Yes** / No
3.	Were samples prepared (extracted, filtered, etc.) within EPA holding times?	Yes / **No**
4.	Once prepared/extracted, were the samples analyzed within the EPA holding times?	Yes / **No**
5.	Were Laboratory blanks performed, if so, were they below non-detect?	**Yes** / No
6.	Are the units correct? (i.e., soil samples in mg/kg or µg/g, water samples mg/L, µg/L, and air samples in volume mg/m^3,etc.)	**Yes** / No
7.	Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?	**Yes** / No
8.	In lieu of MS/ MSD, were surrogate spike (SS) or surrogate spike duplicate (SSD) samples included in the laboratory batch samples?	**Yes** / No
9.	Were MS/ MSD (or SS/SSD) within the acceptable range of % recovery (i.e., approx 80-120% depending on analyte)?	**Yes** / No
10.	Were MS/MSD (or SS/SSD) values used to calculate Relative Percent Difference (RPD)?	**Yes** / No
11.	Were Relative Percent Difference values within the acceptable range (i.e. ± 25%)?	**Yes** / No

If any answer is no, explain why and what corrective action was taken:

Preservation requirements were not met for samples #5567494 (MW-1), #5567496 (MW-3), and #5567505 (QCTB). The vials submitted for volatile analysis did not have a pH of <2.

The GC/MS volatile analysis for C6-C12-TPH-GRO for sample #5567498 (MW-5) was performed outside of the method specified 14 day holding.