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Ms. Dilan Roe
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

ENVIRONMENT

Subject:
Third Quarter and Fourth Quarter 2013
Semi-Annual Groundwater Monitoring Report
Former BP Station #11126,
1700 Powell Street, Emeryville, California
Regulatory Site No: RO0000066

Date:
March 3, 2014

Dear Ms. Roe:

ARCADIS U.S., Inc. (ARCADIS) has prepared this Third Quarter and Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report on behalf of Atlantic Richfield Company (ARCO), a BP affiliated company, for the former ARCO service station listed below.

BP-ARCO Facility No.	ACEH Site No.	Location
11126	RO0000066	1700 Powell Street Emeryville, California

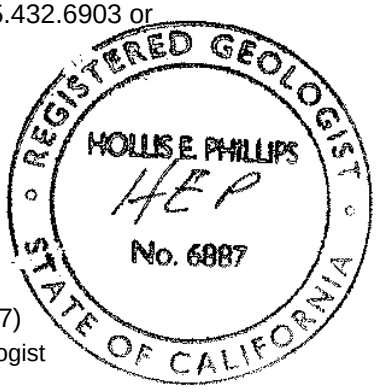
I declare, to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct. If you have any questions or comments regarding the content of this report, please contact Jamey Peterson by telephone at 707.889.6739 or by e-mail at jamey.peterson@arcadis-us.com or Hollis Phillips by telephone at 415.432.6903 or by e-mail at hollis.phillips@arcadis-us.com.

Sincerely,

ARCADIS U.S., Inc.

Jamey Peterson
Staff Geologist

Hollis E. Phillips, P.G. (No. 6887)
Project Manager/ Principal Geologist



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GP09BPNA.C044.N0000

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Our ref:
GP09BPNA.C044.N0000

Dear Ms. Roe:

ARCADIS U.S., Inc. (ARCADIS) has prepared this *Third Quarter and Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report* to document the results of groundwater monitoring and sampling and remediation system performance for the Former BP Station #11126 located in Emeryville, Alameda County, California (the Site; Figure 1).

1. Summary

A summary of the work performed at the Site during this reporting period and the proposed work for the next reporting period is provided below.

Work Performed – Reporting Period (July to December 2013)

- Prepared and submitted the *ACEH Low Threat Closure Policy Checklist and Site Conceptual Model*, dated July 3, 2013.
- Prepared and submitted the *First Quarter and Second Quarter 2013 Monitoring Report*, dated July 18, 2013.
- Conducted groundwater monitoring/sampling for Fourth Quarter on December 13, 2013.

Work Proposed – Reporting Period (January to June 2014)

- Submit this *Third Quarter and Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report*, contained herein.

- Groundwater monitoring/sampling activities are scheduled to be conducted during Second Quarter 2014.

2. Background

The Site is an active 76-branded gasoline station. Historic documents indicate that the three underground storage tanks (USTs) currently present at the Site were installed in the late 1980s. Site features include a station building and two dispenser islands with three dispensers each, for a total of six dispensers. The majority of the Site surface is paved with concrete and asphalt.

Land use in the area of the Site is largely commercial. The Site is bound by Powell Street to the south and Christie Avenue to the east. The Site is approximately 350 feet east of Interstate 80/580. A Denny's restaurant is located adjacent to the west of the Site.

3. Groundwater Monitoring/Sampling Activities and Results

Groundwater monitoring associated with the Site is conducted on a semi-annual frequency during the second and fourth quarters of each year. Fourth Quarter 2013 groundwater monitoring was conducted on December 13, 2013 by Broadbent and Associates, Inc. (BAI) personnel. BAI personnel measured depth to water in MW-1 through MW-11. Depth to water measurements ranged from 3.88 feet (MW-1) to 10.25 feet (MW-11).

Well construction details are summarized in Table 1. Current and historical groundwater monitoring and analytical data are summarized in Table 2, and Fourth Quarter 2013 data is graphically presented on Figures 3 and 4. A rose diagram illustrating groundwater flow direction is provided as Figure 5. A site historical summary is included as Appendix A. The groundwater sampling data package and laboratory analytical reports for the Fourth Quarter 2013 sampling event are included in Appendices B and C, respectively.

Groundwater samples were collected on December 13, 2013 from wells MW-1 through MW-9, consistent with the current monitoring schedule. No irregularities were reported during sampling. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica), of Pleasanton, California, a California Department of Public Health certified analytical laboratory. MW-1 through MW-9 were sampled for the following analytes:

- Total petroleum hydrocarbons as gasoline range organics (GRO) (C6-C12) using United States Environmental Protection Agency (USEPA) Test Method 8260B Modified;

- Fuel additives methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), and tertiary amyl methyl ether (TAME) using USEPA Method 8260B.

Monitoring wells MW-3 through MW-8 were additionally sampled for the following:

- Total petroleum hydrocarbons as diesel range organics (DRO) (C10-C28) using USEPA Test Method 8015B Modified with Silica Gel Cleanup;

Monitoring wells MW-1, MW-2, MW-5, MW-7, and MW-9 were additionally sampled for the following:

- Benzene, toluene, ethylbenzene and xylenes (BTEX compounds) using USEPA Method 8260B.

MW-2 was additionally sampled for additional parameters:

- Di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), 1,2-Dichloroethane (1,2-DCA), and 1,2-Dibromoethane (EDB) using USEPA Method 8260B.

4. Results

- Groundwater flow direction during the recent semi-annual monitoring event was to the southwest at an approximate gradient of 0.017 ft/ft. Historical data indicate the groundwater flow direction is predominately toward the southwest as shown on Figure 5.

- GRO was detected above the laboratory reporting limits in four of the nine wells sampled with concentrations ranging from 270 micrograms per liter (µg/L) (MW-8) to 3,300 µg/L (MW-5). GRO concentrations were below analytical reporting limits at five monitoring wells sampled during this reporting period.

- DRO was detected in three of the six wells sampled with concentrations ranging from 100 µg/L (MW-8) to 600 µg/L (MW-5). DRO concentrations were below analytical reporting limits at three monitoring wells sampled during this reporting period.

- Benzene was detected in four of the five wells sampled with concentrations ranging from 3.3 µg/L (MW-5) to 200 µg/L (MW-2). Benzene concentrations were below analytical reporting limits at one monitoring well sampled during this reporting period (MW-7).

- Toluene was detected in three of five wells sampled with concentrations ranging from 1.0 µg/L (MW-5) to 6.4 µg/L (MW-9). Toluene concentrations were below analytical reporting limits in two monitoring wells sampled during this reporting period (MW-2 and MW-7).

- Ethylbenzene was detected in three of five wells sampled with concentrations ranging from 0.79 µg/L (MW-5) to 4.2 µg/L (MW-9). Ethylbenzene concentrations were below analytical reporting limits in two monitoring wells sampled during this reporting period (MW-2 and MW-7).

- Xylenes were detected in two of five wells sampled with concentrations ranging from 4.1 µg/L (MW-5) to 9.9 µg/L (MW-1). Xylene concentrations were below analytical reporting limits in three monitoring well sampled during this reporting period (MW-2, MW-7, and MW-9).

- MTBE was detected in eight of the nine wells sampled with concentrations ranging from 0.54 µg/L (MW-3) to 220 µg/L (MW-9). MTBE concentrations were below analytical reporting limits in one monitoring well sampled during this reporting period (MW-8).

- TBA was detected in eight of the nine wells sampled with concentrations ranging from 160 µg/L (MW-6) to 32,000 µg/L (MW-2). TBA concentrations were below analytical reporting limits in one monitoring well sampled during this period (MW-8).

- TAME was detected in two of nine wells sampled at concentrations of 1.7 µg/L (MW-1) and 7.7 µg/L (MW-9). TAME concentrations were below analytical reporting limits in seven monitoring wells sampled during this reporting period (MW-2 through MW-8).

- DIPE, ETBE, 1,2-DCA, and EDB were not detected above analytical reporting limits in MW-2.

5. Discussion

As reported to Alameda County Environmental Health (ACEH) in the document *ACEH Low Threat Closure Policy Checklist and Site Conceptual Model*, dated July 3, 2013, ARCADIS recommended that future soil samples collected at the Site should be analyzed for polycyclic aromatic hydrocarbons (PAHs) and naphthalene to assess soil condition in regards to the *Direct Contact and Outdoor Air Exposure (0 to 5 feet bgs)* and *Volatilization to Outdoor Air (5 to 10 feet bgs)* media-specific criteria contained within the State Water Resources Control Board (SWRCB) *Low-Threat Underground Storage Tank Case Closure Policy*, adopted by the State Water Board on May 1, 2012 (SWRCB 2012a). The Low-Threat Closure (LTC) Policy is a statewide policy on the closure of leaking petroleum underground storage tank (UST) sites in California. Additional evaluation of soil sampling results collected from the Site indicates that further soil sampling and analysis of PAHs and naphthalene are not warranted as the Site's benzene concentrations in soil may be used to assess the Media-Specific Criteria for direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air.

Soil samples collected from 0 to 10 feet bgs at the Site have not been analyzed for PAHs and naphthalene. However, benzene exclusion criteria are considered conservative for naphthalene given that naphthalene is less volatile than benzene (i.e., has a much lower solubility value and Henry's Law coefficient than benzene) and is typically present in gasoline at much lower fractions (SWRCB 2012b). Using SWRBC staff precedent from recent case closure reviews, the lack of naphthalene data is not a data gap and site conditions can be assessed by using benzene concentrations (SWRCB 2013): "However, the relative concentration of naphthalene in soil can be conservatively estimated using published relative concentrations of naphthalene and benzene in gasoline." Gasoline mixtures contain approximately 3% benzene and 0.25% naphthalene (Potter, Thomas L. and Simmons, Kathleen, E., 1998). Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of ten.

Site data were evaluated with respect to the Commercial/Industrial screening levels presented in Table 1 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health of the Low-Threat Policy (SWRCB 2012a). Utility Worker screening levels were used as necessary when evaluation was required for hypothetical receptors.

As shown in the table below, the Site qualifies as a low-threat petroleum UST site under the Direct Contact and Outdoor Air Exposure Criteria. The estimated maximum naphthalene concentration (calculated as 1/10 of maximum benzene concentration)

are below the no significant risk values (NSRVs) (Table 1 of SWRCB 2012a) for commercial/ industrial direct contact and volatilization to outdoor air and utility worker direct contact. The requirements of the Soil 0 to 5 feet bgs and 5 to 10 feet bgs scenarios and Volatilization to Outdoor Air scenario are fulfilled. An evaluation with respect to the Low-Threat Policy Direct Contact and Outdoor Air Exposure Criteria is provided below:

Chemical	Commercial/Industrial				Utility Worker	
	0 to 5 feet bgs mg/kg		Volatilization to Outdoor Air (5 to 10 feet bgs) mg/kg		0 to 10 feet bgs mg/kg	
	LTC Policy Table 1	Site Maximum	LTC Policy Table 1	Site Maximum	LTC Policy Table 1	Site Maximum
Benzene	8.2	4.9(1)	12	1.6	14	4.9(1)
Ethylbenzene	89	48(1)	134	5.3	314	48(1)
Naphthalene	0.68	0.49(2)	NA	0.16(2)	4.5	0.49(2)

NA: Not available

(1) As reported in the *ACEH Low Threat Closure Policy Checklist and Site Conceptual Model*, dated July 3, 2013, maximum benzene and ethylbenzene soil concentrations are from soil sample PL-4,3' collected at approximate 3 feet bgs on March 28, 2001. Although a soil sample collected in September 1993 at 4.5 feet bgs from MW-9 contained benzene and ethylbenzene above respective LTC Policy commercial/industrial screening levels, it is not likely that the results of that sample are representative of current soil conditions beneath the Site as this sample was collected over 20 years ago, and it's located in an area that underwent active remediation (excavation). More recent soil samples collected nearby MW-9 in 2001 indicates that benzene and ethylbenzene concentrations are currently below LTC Policy commercial/industrial screening levels.

(2) Naphthalene concentration is assumed to be 1/10 of benzene concentration (Potter, Thomas L. and Simmons, Kathleen, E. 1998)

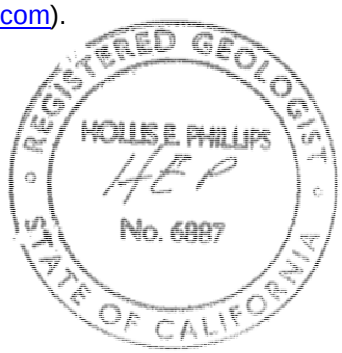
Based on the historical concentrations and the likely reduced current concentrations (table above), it is not expected that residual concentrations petroleum hydrocarbons in soil at the Site will pose unacceptable risks due to attenuation and remediation of soils at the Site.

6. Recommendations

Based on the observed groundwater concentrations, ARCADIS recommends continued groundwater monitoring on a semi-annual basis.

ARCADIS also recommends conducting a statistical evaluation of the available Site groundwater monitoring data to estimate concentration attenuation rates and approximate time to achieve cleanup goals. Following the additional assessment activities ARCADIS will re-evaluate alternative remedial technologies, if necessary, to reduce site constituent concentrations in order to satisfy the LTC Policy groundwater specific criteria.

If you have any questions or comments regarding the contents of this report, please contact Jamey Peterson by telephone (707.889.6739) or by e-mail (Jamey.Peterson@arcadis-us.com), or contact Hollis Phillips by telephone (415.432.6903) or by e-mail (Hollis.Phillips@arcadis-us.com).



Sincerely,

ARCADIS

Prepared by:

Jamey Peterson
Staff Geologist

Approved by:

Hollis E. Phillips, P.G. (No. 6887)
Project Manager/Principal Geologist

Enclosures:

Table 1	Well Construction Details
Table 2	Historical Groundwater Monitoring and Analytical Results
Figure 1	Site Vicinity Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contour Map – December 13, 2013
Figure 4	Groundwater Hydrocarbon Concentration Map – December 13, 2013
Figure 5	Groundwater Flow Direction Rose Diagram
Appendix A	Previous Investigations and Site History Summary

Appendix B Groundwater Sampling Data Package
Appendix C Certified Laboratory Analytical Report

Copies:
GeoTracker upload

References

ARCADIS U.S., Inc. (ARCADIS). 2013. ACEH Low Threat Closure Policy Checklist and Site Conceptual Model, Former BP Station #11126, 1700 Powell Street, Emeryville, California. July 3.

Potter, Thomas L. and Simmons, Kathleen, E. 1998. Composition of Petroleum Mixtures, Volume 2 of the Total Petroleum Hydrocarbon Criteria Working Group Series. May.

State Water Resources Control Board (SWRCB). 2012a. Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closure. Viewed online on February 10, 2014: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

SWRCB. 2012b. California Leaking Underground Fuel Tank Guidance. September 2012. (http://www.swrcb.ca.gov/ust/luft_manual/guidance_manual_sept2012.pdf)

SWRCB. 2013. Proposed Closure of Underground Storage Tank (UST) Cases, UST Case Closure Summaries. Viewed online on July 31, 2013: http://www.waterboards.ca.gov/water_issues/programs/ustcf/prop_closure_cases.shtml

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TABLES

Table 1
Well Construction Details
Former BP Station No. 11126
1700 Powell St., Emeryville, California 94608

Well I.D.	Drill Date	Well		Screen		Screen Length	Comments
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)	(feet)	
Monitoring Wells							
MW-1	10/20/1992	12	2	4	12	8	
MW-2	10/20/1992	12	2	5	12	7	
MW-3	10/20/1992	12	2	5	12	7	
MW-4	10/20/1992	12	2	5	12	7	
MW-5	9/2/1993	13.5	2	3.5	13.5	10	
MW-6	9/3/1993	14	2	4	14	10	
MW-7	9/3/1993	14	2	4	14	10	
MW-8	9/3/1993	14	2	4	14	10	
MW-9	9/3/1993	14	4	4	14	10	
MW-10	4/15/2005	20	2	7	17	10	
MW-11	4/15/2005	24	2	7	17	10	

Notes:

Wells are of polyvinyl chloride (PVC) construction

bgs = Below ground surface

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-1	11/4/1992		7.76	4.96	--	2.80	--	5,300	1,100	480	<0.5	1,500	--	--	--	--	--	--	--	
MW-1	10/12/1993		7.76	5.26	--	2.50	--	3,600	970	71	100	550	6,111	--	--	--	--	--	--	
MW-1	2/15/1994		7.76	4.98	--	2.78	--	17,000	4,200	510	360	1,600	5,495	--	--	--	--	--	3.90	
MW-1	5/11/1994		7.76	4.55	--	3.21	--	5,500	2,900	37	56	64	705	--	--	--	--	--	8.00	
MW-1	8/1/1994		7.76	5.51	--	2.25	--	15,000	3,600	740	510	2,800	9,718	--	--	--	--	--	2.90	
MW-1	8/1/1994	Dup	7.76	5.51	--	2.25	--	16,000	3,600	750	510	2,800	9,800	--	--	--	--	--	--	(Dup)
MW-1	10/18/1994		7.76	5.11	--	2.65	--	16,000	1,800	61	160	890	15,668	--	--	--	--	--	2.90	
MW-1	10/18/1994	Dup	7.76	5.11	--	2.65	--	16,000	1,900	64	170	950	--	--	--	--	--	--	--	(Dup)
MW-1	1/13/1995	Dup	7.76	--	--	--	--	590	88	0.7	<0.5	55	--	--	--	--	--	--	--	(Dup)(DUP)
MW-1	1/13/1995	Dup	7.76	--	--	--	--	220	7	<0.5	1	23	--	--	--	--	--	--	6.60	(DUP)
MW-1	4/13/1995		7.76	3.84	--	3.92	--	9,300	4,000	300	200	950	--	--	--	--	--	--	7.70	
MW-1	7/11/1995		7.76	3.60	--	4.16	--	15,000	2,200	84	<25	2,500	--	--	--	--	--	--	8.80	
MW-1	11/2/1995		7.76	4.58	--	3.18	--	19,000	920	<100	<100	430	52,000	--	--	--	--	--	7.30	
MW-1	2/5/1996		7.76	4.43	--	3.33	--	4,600	1,400	330	54	247	8,700	--	--	--	--	--	3.20	
MW-1	4/24/1996		7.76	4.00	--	3.76	--	2,000	510	33	61	228	4,500	--	--	--	--	--	7.50	
MW-1	7/15/1996		7.76	4.30	--	3.46	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/16/1996		7.76	--	--	--	--	12,000	2,800	170	390	1,630	64,000	--	--	--	--	--	7.90	
MW-1	7/16/1996	Dup	7.76	--	--	--	--	12,000	2,800	160	390	1,610	63,000	--	--	--	--	--	--	(Dup)
MW-1	7/30/1996		7.76	4.64	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/12/1996		7.76	--	--	--	--	11,000	2,500	160	<10	1,740	440,000	--	--	--	--	--	7.00	
MW-1	11/4/1996		7.76	5.98	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/5/1996		7.76	--	--	--	--	53,000	1,300	43	100	349	42,000	--	--	--	--	--	6.60	
MW-1	5/17/1997		7.76	4.65	--	3.11	--	52,000	1,958	55	305	1,216	140,198	--	--	--	--	--	5.70	
MW-1	8/11/1997		7.76	4.90	--	2.86	--	25,000	540	6.7	<5.0	57	360,000	--	--	--	--	--	7.90	
MW-1	11/17/1997		7.76	6.12	--	1.64	--	93,000	1,200	31	180	40	400,000	--	--	--	--	--	7.60	
MW-1	1/29/1998		7.76	4.90	--	2.86	--	4,800	320	24	52	20	<50	--	--	--	--	--	6.60	
MW-1	6/22/1998		7.76	4.62	--	3.14	--	63,000	180	<5.0	15	69	57,000	--	--	--	--	--	6.00	
MW-1	12/30/1998		7.76	5.41	--	2.35	--	22,000	2,500	24	120	400	15,000	--	--	--	--	--	--	
MW-1	3/9/1999		7.76	3.40	--	4.36	--	16,000	2,000	84	290	510	13,000	--	--	--	--	--	--	
MW-1	6/23/1999		7.76	4.60	--	3.16	--	9,600	4,500	21	160	260	24,000	--	--	--	--	--	--	
MW-1	9/23/1999		7.76	4.21	--	3.55	--	3,800	1,600	32	150	240	7,100	--	--	--	--	--	--	
MW-1	12/28/1999		7.76	4.10	--	3.66	--	3,400	<2,200	17	53	130	5,500	--	--	--	--	--	--	
MW-1	3/22/2000		7.76	5.51	--	2.25	--	6,400	1,100	45	190	330	4,900	--	--	--	--	--	--	
MW-1	5/26/2000		7.76	4.79	--	2.97	--	110,000	700	44	140	250	320,000	--	--	--	--	--	--	
MW-1	9/6/2000		7.76	5.19	--	2.57	--	5,600	1,000	13	57	90	19,000	--	--	--	--	--	--	
MW-1	9/15/2000		7.76	5.73	--	2.03	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/11/2000		7.76	5.82	--	1.94	--	5,500	1,160	47	155	292	3,900	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-1	3/29/2001		7.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-1	6/27/2001		7.76	5.49	--	2.27	--	6,100	1,200	13	17	78	1,780	--	--	--	--	--	--	
MW-1	9/19/2001		7.76	6.19	--	1.57	--	1,800	102	<12.5	<12.5	<37.5	1,090	--	--	--	--	--	--	
MW-1	12/28/2001		7.76	5.27	--	2.49	--	4,000	540	12	20	65	1,120	--	--	--	--	--	--	
MW-1	3/12/2002		7.76	5.68	--	2.08	--	3,700	491	8.4	12	27	1,020	--	--	--	--	--	--	
MW-1	6/13/2002		7.76	5.54	--	2.22	--	1,900	255	<12.5	<12.5	<25	6,490	--	--	--	--	--	--	
MW-1	9/6/2002		7.76	5.56	--	2.20	--	1,100	170	5.1	2.2	20	550	--	--	--	--	--	--	
MW-1	12/13/2002		7.76	5.45	--	2.31	--	2,700	610	10	18	67	470	--	--	--	--	--	--	
MW-1	2/19/2003		7.76	3.00	--	4.76	--	1,500	180	<5.0	<5.0	15	610	--	--	--	--	--	--	
MW-1	6/6/2003		7.76	5.52	--	2.24	--	4,600	620	<25	<25	55	1,400	<1,000	<25	<25	<25	<5,000	--	
MW-1	8/7/2003		7.76	5.55	--	2.21	--	2,000	290	<5.0	<5.0	15	920	560	<5.0	<5.0	12	<1,000	--	
MW-1	11/20/2003		7.76	5.41	--	2.35	--	2,800	420	11	11	53	250	<200	<5.0	<5.0	<5.0	1,800	--	
MW-1	4/28/2004		7.76	5.33	--	2.43	--	1,600	100	5.3	<5.0	8.8	200	950	<5.0	<5.0	<5.0	<1,000	--	
MW-1	8/26/2004		7.76	4.03	--	3.73	--	1,700	220	7.2	15	35	180	320	<2.5	<2.5	<2.5	<500	--	
MW-1	12/1/2004		7.76	3.93	--	3.83	--	2,100	380	8	34	76	170	300	<5.0	<5.0	<5.0	<1,000	--	
MW-1	2/2/2005		7.76	3.61	--	4.15	--	1,100	150	3	12	14	160	6,700	<2.5	<2.5	<2.5	<500	--	
MW-1	4/25/2005		10.16	3.75	--	6.41	--	930	140	3.6	5.3	11	200	5,000	<2.5	<2.5	<2.5	<500	--	
MW-1	9/30/2005		10.16	3.54	--	6.62	--	4,600	1,000	15	78	150	250	1,200	13	<5.0	<5.0	<500	--	
MW-1	12/28/2005		10.16	3.26	--	6.90	--	1,500	200	5.7	32	58	140	1,800	<10	<5.0	<5.0	<1,000	--	
MW-1	3/23/2006		10.16	3.40	--	6.76	--	580	42	<5.0	10	20	40	2,800	<10	<5.0	<5.0	<1,000	--	
MW-1	6/5/2006		10.16	2.97	--	7.19	--	900	230	2.5	28	71	160	1,900	<5.0	<2.5	<2.5	<500	--	
MW-1	9/19/2006		10.16	3.67	--	6.49	--	1,600	240	3.4	11	23	180	1,000	<5.0	<2.5	<2.5	<1,300	--	
MW-1	12/1/2006		10.16	3.64	--	6.52	--	1,400	86	4.3	7	19	150	930	<5.0	<2.5	<2.5	<1,300	--	
MW-1	3/1/2007		10.16	3.55	--	6.61	--	4,200	340	7	34	46	160	510	<4.0	<2.0	2	<1,000	--	
MW-1	6/1/2007		10.16	3.53	--	6.63	--	2,100	200	3.4	34	59	140	1,500	<4.0	<2.0	2.2	<1,000	--	
MW-1	9/13/2007		10.16	4.88	--	5.28	--	540	74	2.4	5.4	10	59	1,300	<4.0	<2.0	<2.0	1,100	--	
MW-1	11/21/2007		10.16	3.70	--	6.46	--	1,800	67	6.2	3.5	12	200	1,300	<4.0	<2.0	2.7	<1,000	--	
MW-1	2/29/2008		10.16	3.49	--	6.67	--	970	100	1.9	37	32	25	1,200	<1.0	<0.5	<0.5	<250	--	
MW-1	5/23/2008		10.16	4.26	--	5.90	--	1,300	170	3.5	15	26	120	1,800	<1.0	<0.5	1.4	<250	--	
MW-1	9/26/2008		10.16	4.29	--	5.87	--	1,800	26	6.1	<1.0	10	120	1,400	<1.0	<1.0	1.9	<250	--	
MW-1	12/23/2008		10.16	3.79	--	6.37	--	1,600	14	6.1	1.2	9.7	75	940	<1.0	<1.0	<1.0	<250	--	
MW-1	3/9/2009		10.16	3.29	--	6.87	--	2,100	200	5.6	16	29	88	1,300	<1.0	<1.0	1.7	<250	--	
MW-1	5/28/2009		10.16	4.02	--	6.14	--	880	64	1.5	3.4	9.4	48	1,800	<1.0	<1.0	1.3	<250	0.46	
MW-1	12/10/2009		10.16	3.92	--	6.24	--	1,300	46	6.9	2.6	10	65	560	<0.50	<0.50	1.1	<100	0.47	
MW-1	6/29/2010		10.16	3.60	--	6.56	--	530	18	1.3	<0.50	4.3	<0.50	2,000	<0.50	<0.50	1.2	<100	0.53	(P)
MW-1	12/30/2010		10.16	3.55	--	6.61	--	1,000	19	3.2	1.4	8.2	46	1,900	<0.50	<0.50	1.0	<250	0.57	(P)
MW-1	6/29/2011		10.16	3.58	--	6.58	--	60	<0.50	<0.50	<0.50	<1.0	3.9	840	--	--	<0.50	--	0.40	(P)
MW-1	1/30/2012		10.16	3.82	--	6.34	--	1,100	42	4.5	0.90	7.2	64	900	--	--	1.3	--	0.66	(P)
MW-1	6/27/2012		10.16	3.79	--	6.37	--	420	15	0.74	<0.50	3.1	18	1,400	--	--	0.83	--	1.62	(P)
MW-1	12/7/2012		10.16	3.30	--	6.86	--	700	6.3	2.3	<0.50	4.8	32	1,400	--	--	0.81	--	1.64	
MW-1	6/6/2013		10.16	3.73	--	6.43	--	240	11	6.7	14	9.8	6.9	170	--	--	<0.50	--	1.09	
MW-1	12/13/2013		10.16	3.88	--	6.28	--	680	23	3.2	3.4	9.9	36	1,500	--	--	1.7	--	2.90	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-2	11/4/1992		8.56	5.88	--	2.68	--	12,000	3,900	1,300	<0.5	2,300	--	--	--	--	--	--	--	
MW-2	11/4/1992	Dup	8.56	5.88	--	2.68	--	12,000	3,200	980	<0.5	1,900	--	--	--	--	--	--	--	(Dup)
MW-2	10/12/1993		8.56	6.29	--	2.27	--	4,500	3,400	180	230	940	442	--	--	--	--	--	--	
MW-2	2/15/1994		8.56	--	--	--	--	1,800	290	160	14	250	--	--	--	--	--	--	--	
MW-2	2/15/1994	Dup	8.56	--	--	--	--	2,000	430	270	28	390	127	--	--	--	--	--	4.00	(Dup)
MW-2	5/11/1994		8.56	5.17	--	3.39	--	14,000	3,900	1,200	440	1,900	953	--	--	--	--	--	8.90	
MW-2	5/11/1994	Dup	8.56	5.17	--	3.39	--	15,000	5,600	1,500	470	2,000	740	--	--	--	--	--	--	(Dup)
MW-2	8/1/1994		8.56	5.43	--	3.13	--	8,200	3,000	420	230	680	1,676	--	--	--	--	--	2.60	
MW-2	10/18/1994		8.56	5.71	--	2.85	--	9,000	2,000	140	150	420	2,417	--	--	--	--	--	7.20	
MW-2	1/13/1995		8.56	4.67	--	3.89	--	7,900	2,200	42	<5.0	770	--	--	--	--	--	--	6.80	
MW-2	4/13/1995		8.56	4.37	--	4.19	--	33,000	8,000	2,500	1,100	6,600	--	--	--	--	--	--	7.50	
MW-2	4/13/1995	Dup	8.56	4.37	--	4.19	--	25,000	6,500	1,500	110	5,300	--	--	--	--	--	--	--	(Dup)
MW-2	7/11/1995		8.56	4.51	--	4.05	--	19,000	3,300	99	7.5	4,600	--	--	--	--	--	--	7.80	
MW-2	7/11/1995	Dup	8.56	4.51	--	4.05	--	28,000	6,800	1,000	900	4,900	--	--	--	--	--	--	--	(Dup)
MW-2	11/2/1995		8.56	5.55	--	3.01	--	20,000	3,800	1,200	570	2,700	15,000	--	--	--	--	--	7.30	
MW-2	11/2/1995	Dup	8.56	5.55	--	3.01	--	22,000	4,000	1,200	600	2,700	19,000	--	--	--	--	--	--	(Dup)
MW-2	2/5/1996		8.56	5.10	--	3.46	--	1,200	320	220	26	187	99	--	--	--	--	--	2.20	
MW-2	2/5/1996	Dup	8.56	5.10	--	3.46	--	910	290	180	19	137	93	--	--	--	--	--	--	(Dup)
MW-2	4/24/1996		8.56	--	--	--	--	<500	100	30	<10	71	<100	--	--	--	--	--	--	
MW-2	4/24/1996	Dup	8.56	--	--	--	--	<500	70	22	<10	61	<50	--	--	--	--	--	7.00	(Dup)
MW-2	7/15/1996		8.56	5.40	--	3.16	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/16/1996		8.56	--	--	--	--	12,000	3,300	1,400	250	2,610	1,400	--	--	--	--	--	7.80	
MW-2	7/30/1996		8.56	5.44	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/4/1996		8.56	7.06	--	1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/5/1996		8.56	--	--	--	--	7,200	1,400	230	38	2,110	1,100	--	--	--	--	--	7.40	
MW-2	11/5/1996	Dup	8.56	--	--	--	--	9,200	1,300	170	<25	2,240	1,100	--	--	--	--	--	--	(Dup)
MW-2	5/17/1997		8.56	5.77	--	2.79	--	570	42	<5.0	5	60	210	--	--	--	--	--	6.90	
MW-2	8/11/1997		8.56	5.71	--	2.85	--	6,300	1,800	130	86	397	2,400	--	--	--	--	--	8.50	
MW-2	11/17/1997		8.56	6.91	--	1.65	--	2,400	220	30	33	259	130	--	--	--	--	--	7.90	
MW-2	1/29/1998		8.56	4.61	--	3.95	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	6.20	
MW-2	6/22/1998		8.56	4.80	--	3.76	--	4,200	640	150	120	650	560	--	--	--	--	--	5.40	
MW-2	12/30/1998		8.56	5.21	--	3.35	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/23/1999		8.56	5.30	--	3.26	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/23/1999		8.56	4.75	--	3.81	--	3,800	760	19	210	960	910	--	--	--	--	--	--	
MW-2	12/28/1999		8.56	4.51	--	4.05	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-2	3/22/2000		8.56	4.21	--	4.35	--	2,500	780	17	44	270	2,800	--	--	--	--	--	--	
MW-2	5/26/2000		8.56	4.66	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/6/2000		8.56	4.71	--	3.85	--	3,700	1,200	5.5	12	170	12,000	--	--	--	--	--	--	
MW-2	9/15/2000		8.56	4.74	--	3.82	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/11/2000		8.56	4.79	--	3.77	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/29/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	6/27/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	9/19/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	12/28/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	3/12/2002		8.56	4.25	--	4.31	--	26,000	1,160	4.4	61	171	37,300	--	--	--	--	--	--	
MW-2	6/13/2002		8.56	4.94	--	3.62	--	18,000	578	<50	<50	<100	84,600	--	--	--	--	--	--	
MW-2	9/6/2002		8.56	5.23	--	3.33	--	26,000	440	<50	<50	<50	45,000	--	--	--	--	--	--	
MW-2	12/13/2002		8.56	4.94	--	3.62	--	69,000	1,200	<500	<500	<500	98,000	--	--	--	--	--	--	
MW-2	2/19/2003		8.56	4.14	--	4.42	--	78,000	1,100	<500	<500	<500	81,000	--	--	--	--	--	--	
MW-2	6/6/2003		8.56	4.66	--	3.90	--	120,000	1,100	<1,000	<1,000	<1,000	72,000	<40,000	<1,000	<1,000	1,300	<200,000	--	
MW-2	8/7/2003		8.56	4.90	(Sheen)	3.66	--	71,000	590	<500	<500	<500	83,000	45,000	<500	<500	1,300	<100,000	--	
MW-2	11/20/2003		8.56	4.59	--	3.97	--	22,000	720	<100	<100	<100	18,000	48,000	<100	<100	200	<20,000	--	
MW-2	4/28/2004		8.56	4.37	--	4.19	--	<25,000	690	<250	<250	<250	31,000	59,000	<250	<250	<250	<50,000	--	
MW-2	8/26/2004		8.56	4.59	--	3.97	--	140,000	8,200	18,000	4,200	19,000	11,000	<10,000	<250	<250	320	<50,000	--	
MW-2	12/1/2004		8.56	4.79	--	3.77	--	98,000	8,400	13,000	4,600	21,000	10,000	<4,000	<100	<100	230	<20,000	--	
MW-2	2/2/2005		8.56	4.27	(Sheen)	4.29	--	92,000	6,600	9,900	4,400	18,000	10,000	4,000	<100	<100	260	<20,000	--	
MW-2	4/25/2005		11.39	4.00	--	7.39	--	80,000	6,700	4,900	4,400	17,000	8,200	3,700	<50	<50	220	<10,000	--	
MW-2	9/30/2005		11.39	4.86	--	6.53	--	98,000	7,700	7,400	4,700	20,000	16,000	4,700	<50	<50	270	<5,000	--	
MW-2	12/28/2005		11.39	4.28	--	7.11	--	210,000	15,000	21,000	7,300	31,000	22,000	6,300	<200	<100	410	<20,000	--	
MW-2	3/23/2006		11.39	3.60	--	7.79	--	79,000	9,100	12,000	4,300	17,000	13,000	5,800	<200	<100	290	<20,000	--	
MW-2	6/5/2006		11.39	4.28	(Sheen)	7.11	--	79,000	9,700	8,700	4,900	20,000	8,000	3,300	<100	<50	280	<10,000	--	
MW-2	9/19/2006		11.39	4.61	--	6.78	--	68,000	12,000	9,300	4,100	14,000	16,000	4,800	<100	<50	370	<25,000	--	
MW-2	12/1/2006		11.39	4.55	--	6.84	--	61,000	15,000	6,900	4,400	17,000	10,000	3,900	<100	<50	270	<25,000	--	
MW-2	3/1/2007		11.39	4.14	--	7.25	--	80,000	9,300	5,500	4,100	15,000	8,300	2,700	<100	<50	210	<25,000	--	
MW-2	6/1/2007		11.39	4.34	--	7.05	--	120,000	12,000	6,400	4,200	11,000	17,000	4,900	260	<100	310	<50,000	--	
MW-2	9/13/2007		11.39	5.35	--	6.04	--	<5,000	770	<50	140	<100	2,300	42,000	<100	<50	50	<25,000	--	
MW-2	11/21/2007		11.39	5.19	--	6.20	--	27,000	4,500	220	1,600	2,800	5,200	5,000	<100	<50	160	<25,000	--	
MW-2	2/29/2008		11.39	4.41	--	6.98	--	44,000	6,100	320	3,800	6,600	4,900	2,500	<100	<50	120	<25,000	--	
MW-2	5/23/2008		11.39	5.25	--	6.14	--	13,000	1,700	<50	300	210	2,500	29,000	140	<50	60	<25,000	--	
MW-2	9/26/2008		11.39	5.81	--	5.58	--	4,800	220	12	20	42	960	77,000	<1.0	2.8	42	<250	--	
MW-2	12/23/2008		11.39	5.50	--	5.89	--	5,700	950	19	170	70	1,800	57,000	<2.0	2.4	51	<500	--	
MW-2	3/9/2009		11.39	4.35	--	7.04	--	25,000	3,200	73	2,800	2,200	2,200	21,000	<20	<20	82	<5,000	--	
MW-2	5/28/2009		11.39	4.90	--	6.49	--	55,000	4,700	740	3,800	8,100	2,800	2,000	<10	<10	110	<2,500	0.27	
MW-2	12/10/2009		11.39	5.29	--	6.10	--	2,200	250	7.3	13	14	360	44,000	0.52	1.4	8.7	<100	0.65	
MW-2	6/29/2010		11.39	5.03	--	6.36	--	5,300	800	<25	250	300	770	31,000	<25	<25	<25	<5,000	0.60	(P, odor)
MW-2	12/30/2010		11.39	4.22	--	7.17	--	19,000	3,500	58	2,000	1,000	1,700	4,700	<25	<25	56	<12,000	--	(P)
MW-2	6/29/2011		11.39	4.51	--	6.88	--	12,000	3,200	41	920	150	2,100	2,400	<25	<25	77	--	0.41	(P)
MW-2	1/30/2012		11.39	4.93	--	6.46	--	13,000	3,000	45	640	370	1,700	1,900	<20	<20	60	--	0.63	(P)
MW-2	6/27/2012		11.39	4.72	--	6.67	--	23,000	3,900	110	2,300	2,000	2,600	2,900	<20	<20	95	--	1.24	(P)
MW-2	12/7/2012		11.39	4.11	--	7.28	--	10,000	2,600	31	350	72	1,300	3,400	<10	<10	51	--	1.03	
MW-2	6/6/2013		11.39	4.95	--	6.44	--	20,000	6,100	86	670	1,200	2,000	2,600	<10	<10	96	--	1.04	
MW-2	12/13/2013		11.39	5.29	--	6.10	--	<10,000	200	<100	<100	<200	140	32,000	<100	<100	<100	--	3.12	

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Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-3	11/4/1992		8.25	6.38	--	1.87	690	200	1.6	<0.5	<0.5	1.1	--	--	--	--	--	--	--	
MW-3	10/12/1993		8.25	--	--	--	2,100	150	5.6	0.6	<0.5	1.6	--	--	--	--	--	--	--	
MW-3	10/12/1993	Dup	8.25	--	--	--	--	270	5	0.7	<0.5	2.6	96	--	--	--	--	--	--	(Dup)
MW-3	2/15/1994		8.25	6.60	--	1.65	2.3	140	5.7	<0.5	<0.5	<0.5	30	--	--	--	--	--	3.90	
MW-3	5/11/1994		8.25	5.86	--	2.39	2,500	190	2.7	1.9	<0.5	1.9	51	--	--	--	--	--	9.20	
MW-3	8/1/1994		8.25	6.13	--	2.12	1,300	120	1.3	<0.5	0.5	1.1	18	--	--	--	--	--	2.90	
MW-3	10/18/1994		8.25	6.39	--	1.86	2,200	100	2.3	<0.5	<0.5	<0.5	21	--	--	--	--	--	3.60	
MW-3	1/13/1995		8.25	5.47	--	2.78	970	<50	0.8	<0.5	<0.5	<1.0	--	--	--	--	--	--	7.70	
MW-3	4/13/1995		8.25	5.17	--	3.08	<500	530	8.7	1.9	<0.5	3.9	--	--	--	--	--	--	8.40	
MW-3	7/11/1995		8.25	5.37	--	2.88	2,100	78	0.57	<0.5	<0.5	<1.0	--	--	--	--	--	--	8.30	
MW-3	11/2/1995		8.25	6.29	--	1.96	2,000	250	0.73	<0.5	<0.5	1.8	270	--	--	--	--	--	8.30	
MW-3	2/5/1996		8.25	5.80	--	2.45	1,600	<50	<0.5	<1.0	<1.0	2.7	11	--	--	--	--	--	3.50	
MW-3	4/24/1996		8.25	5.69	--	2.56	2,800	<50	<5.0	<10	<10	<10	150	--	--	--	--	--	8.60	
MW-3	7/15/1996		8.25	6.18	--	2.07	3,700	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	7.70	
MW-3	7/30/1996		8.25	6.04	--	2.21	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/4/1996		8.25	7.84	--	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/5/1996		8.25	--	--	--	890	90	<0.5	<1.0	<1.0	<1.0	30	--	--	--	--	--	6.80	
MW-3	5/17/1997		8.25	6.49	--	1.76	2,100	<50	<0.5	<1.0	<1.0	<1.0	52	--	--	--	--	--	6.30	
MW-3	8/11/1997		8.25	6.15	--	2.10	1,900	490	<2.5	<5.0	<5.0	<5.0	170	--	--	--	--	--	7.40	
MW-3	11/17/1997		8.25	7.15	--	1.10	2,500	120	<0.5	<1.0	<1.0	<1.0	46	--	--	--	--	--	7.00	
MW-3	1/29/1998		8.25	5.10	--	3.15	1,700	270	0.53	<1.0	<1.0	<1.0	330	--	--	--	--	--	6.40	
MW-3	6/22/1998		8.25	5.50	--	2.75	2,200	200	<0.5	<1.0	<1.0	<1.0	130	--	--	--	--	--	5.50	
MW-3	12/30/1998		8.25	6.68	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/9/1999		8.25	5.53	--	2.72	840	60	<1.0	<1.0	<1.0	<1.0	19	--	--	--	--	--	--	
MW-3	6/23/1999		8.25	6.60	--	1.65	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/23/1999		8.25	6.17	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/28/1999		8.25	6.00	--	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/22/2000		8.25	4.77	--	3.48	<58	690	4.2	3.1	0.81	2.7	2,900	--	--	--	--	--	--	
MW-3	5/26/2000		8.25	5.28	--	2.97	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/15/2000		8.25	5.58	--	2.67	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/11/2000		8.25	11.74	--	-3.49	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/29/2001		8.25	5.04	--	3.21	<50	650	<2.5	<2.5	<2.5	<7.5	680	--	--	--	--	--	--	
MW-3	6/27/2001		8.25	5.62	--	2.63	690	460	<2.5	<2.5	<2.5	<7.5	560	--	--	--	--	--	--	
MW-3	9/19/2001		8.25	5.80	--	2.45	520	<500	<5.0	<5.0	<5.0	<15	464	--	--	--	--	--	--	
MW-3	12/28/2001		8.25	4.85	--	3.40	550	180	<0.5	<0.5	<0.5	<1.0	180	--	--	--	--	--	--	
MW-3	3/12/2002		8.25	4.39	--	3.86	1,300	410	<2.5	<2.5	<2.5	<5.0	443	--	--	--	--	--	--	
MW-3	6/13/2002		8.25	5.38	--	2.87	2,600	<250	<2.5	<2.5	<2.5	<5.0	395	--	--	--	--	--	--	
MW-3	9/6/2002		8.25	5.68	--	2.57	--	<200	<2.0	<2.0	<2.0	<2.0	650	--	--	--	--	--	--	
MW-3	12/13/2002		8.25	5.37	--	2.88	980	<50	<0.5	<0.5	<0.5	<0.5	60	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-3	2/19/2003		8.25	4.80	--	3.45	380	<1,000	<10	<10	<10	<10	120	--	--	--	--	--	--	
MW-3	6/6/2003		8.25	5.13	--	3.12	620	<500	<5.0	<5.0	<5.0	<5.0	180	<200	<5.0	<5.0	16	<1,000	--	
MW-3	8/7/2003		8.25	5.43	--	2.82	820(N)	<500	5.7	<5.0	<5.0	<5.0	290	<200	<5.0	<5.0	20	<1,000	--	
MW-3	11/20/2003		8.25	4.72	--	3.53	1,200(N)	<50	<0.5	<0.5	<0.5	<0.5	17	<20	<0.5	<0.5	1.4	<100	--	
MW-3	4/28/2004		8.25	4.87	--	3.38	240(N)	<100	<1.0	<1.0	<1.0	<1.0	87	<40	<1.0	<1.0	3.9	<200	--	
MW-3	8/26/2004		8.25	5.42	--	2.83	250(N)	56	<0.5	<0.5	<0.5	<0.5	34	260	<0.5	<0.5	2	<100	--	
MW-3	12/1/2004		8.25	5.69	--	2.56	690	<100	<1.0	<1.0	<1.0	<1.0	7.4	610	<1.0	<1.0	<1.0	<200	--	
MW-3	2/2/2005		8.25	4.72	--	3.53	730	<100	<1.0	<1.0	<1.0	<1.0	20	<40	<1.0	<1.0	1.1	<200	--	
MW-3	4/25/2005		10.73	4.75	--	5.98	520	<250	<2.5	<2.5	<2.5	<2.5	220	160	<2.5	<2.5	10	<500	--	
MW-3	9/30/2005		10.73	5.30	--	5.43	300(N)	<50	<0.5	<0.5	<0.5	<1.0	8.2	270	<0.5	<0.5	0.68	<50	--	
MW-3	12/28/2005		10.73	4.41	--	6.32	100	<50	<0.5	<0.5	<0.5	<1.0	0.66	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-3	3/23/2006		10.73	4.43	--	6.30	260	<50	<0.5	<0.5	<0.5	<1.0	13	130	<1.0	<0.5	0.63	<100	--	
MW-3	6/5/2006		10.73	4.95	--	5.78	340	61	0.69	1.4	0.85	3.6	29	510	<1.0	<0.5	1.6	<100	--	
MW-3	9/19/2006		10.73	5.19	--	5.54	330	<50	<0.5	<0.5	<0.5	<1.0	4.1	420	<1.0	<0.5	<0.5	<250	--	
MW-3	12/1/2006		10.73	5.37	--	5.36	130	<50	<0.5	<0.5	<0.5	<1.0	2	250	<1.0	<0.5	<0.5	<250	--	
MW-3	3/1/2007		10.73	4.62	--	6.11	120	<50	<0.5	<0.5	<0.5	<1.0	3.8	77	<1.0	<0.5	<0.5	<250	--	
MW-3	6/1/2007		10.73	5.53	--	5.20	350	<50	<0.5	<0.5	<0.5	<1.0	3.7	320	<1.0	<0.5	<0.5	<250	--	
MW-3	9/13/2007		10.73	6.17	--	4.56	1,200	<250	<2.5	<2.5	<2.5	<5.0	2.6	2,000	<5.0	<2.5	<2.5	<1,300	--	
MW-3	11/21/2007		10.73	6.16	--	4.57	1,600	<250	<2.5	<2.5	<2.5	<5.0	3.4	2,600	<5.0	<2.5	<2.5	<1,300	--	
MW-3	2/29/2008		10.73	5.38	--	5.35	350	<50	<0.5	<0.5	<0.5	<1.0	0.9	540	<1.0	<0.5	<0.5	<250	--	
MW-3	5/23/2008		10.73	6.07	--	4.66	1,100	<500	<5.0	<5.0	<5.0	<10	<5.0	3,200	<10	<5.0	<5.0	<2,500	--	
MW-3	9/26/2008		10.73	6.46	--	4.27	3,000	120	<1.0	<1.0	<1.0	<1.0	4.8	6,900	<1.0	<1.0	<1.0	<250	--	
MW-3	12/23/2008		10.73	6.36	--	4.37	2,800	87	<1.0	<1.0	<1.0	<1.0	4.9	8,200	<1.0	<1.0	<1.0	<250	--	
MW-3	3/9/2009		10.73	5.31	--	5.42	900	<50	<1.0	<1.0	<1.0	<1.0	<1.0	55	<1.0	<1.0	<1.0	<250	--	
MW-3	5/28/2009		10.73	5.77	--	4.96	1,600	<50	<1.0	<1.0	<1.0	<1.0	2.1	580	<1.0	<1.0	<1.0	<250	0.19	
MW-3	12/10/2009		10.73	5.67	--	5.06	--	<50	<0.50	<0.50	<0.50	<1.0	0.86	270	<0.50	<0.50	<0.50	<100	0.72	
MW-3	6/29/2010		10.73	5.85	--	4.88	2,700	<50	<0.50	<0.50	<0.50	<1.0	1.9	2,900	<0.50	<0.50	<0.50	<100	0.52	(P)
MW-3	12/30/2010		10.73	4.33	--	6.40	520	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<250	--	(P)
MW-3	6/29/2011		10.73	5.00	--	5.73	250	<50	--	--	--	--	0.73	73	--	--	<0.50	--	0.45	(P)
MW-3	1/30/2012		10.73	5.22	--	5.51	160	<50	--	--	--	--	<0.50	65	--	--	<0.50	--	1.21	(P)
MW-3	6/27/2012		10.73	5.19	--	5.54	270	<50	--	--	--	--	1.6	250	--	--	<0.50	--	1.14	(P)
MW-3	12/7/2012		10.73	4.65	--	6.08	110	<50	--	--	--	--	<0.50	20	--	--	<0.50	--	1.10	
MW-3	6/6/2013		10.73	5.51	--	5.22	300	<50	--	--	--	--	1.9	540	--	--	<0.50	--	1.38	
MW-3	12/13/2013		10.73	5.77	--	4.96	<49	<50	--	--	--	--	0.54	680	--	--	<0.50	--	1.92	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-4	11/4/1992		8.12	6.66	--	1.46	--	340	4.5	<0.5	4.3	<0.5	--	--	--	--	--	--	--	
MW-4	10/12/1993		8.12	6.87	--	1.25	--	160	5.8	1.4	0.8	2.7	261	--	--	--	--	--	--	
MW-4	2/15/1994		8.12	6.61	--	1.51	--	110	4.4	0.7	<0.5	2.5	118	--	--	--	--	--	4.30	
MW-4	5/11/1994		8.12	5.89	--	2.23	--	120	0.5	0.8	<0.5	<0.5	137	--	--	--	--	--	9.30	
MW-4	8/1/1994		8.12	6.87	--	1.25	--	140	0.7	2	5.2	15	138	--	--	--	--	--	3.30	
MW-4	10/18/1994		8.12	6.62	--	1.50	--	140	3.5	<0.5	0.5	<0.5	197	--	--	--	--	--	3.00	
MW-4	1/13/1995		8.12	7.27	--	0.85	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	7.90	
MW-4	4/13/1995		8.12	6.51	--	1.61	--	73	1.2	<0.5	<0.5	<1.0	--	--	--	--	--	--	9.90	
MW-4	7/11/1995		8.12	6.21	--	1.91	--	82	0.57	<0.5	<0.5	<1.0	--	--	--	--	--	--	7.20	
MW-4	11/2/1995		8.12	6.78	--	1.34	--	71	1.4	0.96	0.99	2.8	140	--	--	--	--	--	8.60	
MW-4	2/5/1996		8.12	6.41	--	1.71	--	<50	<5.0	<10	<10	<10	200	--	--	--	--	--	4.40	
MW-4	4/24/1996		8.12	6.18	--	1.94	--	<250	<2.5	<5.0	<5.0	<5.0	510	--	--	--	--	--	8.30	
MW-4	7/15/1996		8.12	6.63	--	1.49	--	<50	5.7	<1.0	<1.0	<1.0	550	--	--	--	--	--	7.40	
MW-4	7/30/1996		8.12	6.34	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/4/1996		8.12	8.27	--	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/5/1996		8.12	--	--	--	--	460	<2.5	11	<5.0	<5.0	620	--	--	--	--	--	7.30	
MW-4	5/17/1997		8.12	7.00	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	8/11/1997		8.12	6.81	--	1.31	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/17/1997		8.12	9.19	--	-1.07	--	840	<0.5	<1.0	<1.0	<1.0	880	--	--	--	--	--	7.30	
MW-4	1/29/1998		8.12	7.94	--	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	6/22/1998		8.12	7.49	--	0.63	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/30/1998		8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/9/1999		8.12	7.70	--	0.42	--	1,200	<1.0	<1.0	<1.0	<1.0	2,000	--	--	--	--	--	--	
MW-4	6/23/1999		8.12	8.81	--	-0.69	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/23/1999		8.12	8.32	--	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/28/1999		8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/22/2000		8.12	6.74	--	1.38	--	910	<0.5	<0.5	0.54	1.7	3,800	--	--	--	--	--	--	
MW-4	5/26/2000		8.12	5.13	--	2.99	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/15/2000		8.12	8.20	--	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/11/2000		8.12	8.31	--	-0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-4	3/29/2001		8.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-4	6/27/2001		8.12	7.57	--	0.55	--	2,800	19	<2.5	<2.5	<7.5	4,220	--	--	--	--	--	--	
MW-4	9/19/2001		8.12	7.87	--	0.25	--	2,500	<5.0	<5.0	<5.0	<15	3,340	--	--	--	--	--	--	
MW-4	12/28/2001		8.12	7.80	--	0.32	--	4,400	<5.0	<5.0	<5.0	<10	5,330	--	--	--	--	--	--	
MW-4	3/12/2002		8.12	4.53	--	3.59	--	6,400	72	<5.0	<5.0	<10	8,440	--	--	--	--	--	--	
MW-4	6/13/2002		8.12	6.21	--	1.91	--	1,800	7.5	<5.0	5	13	6,870	--	--	--	--	--	--	
MW-4	9/6/2002		8.12	7.78	--	0.34	--	<2,000	<20	<20	<20	<20	9,600	--	--	--	--	--	--	
MW-4	12/13/2002		8.12	7.87	--	0.25	--	5,600	<50	<50	<50	<50	8,600	--	--	--	--	--	--	
MW-4	2/19/2003		8.12	4.84	--	3.28	--	<10,000	<100	<100	<100	<100	8,000	--	--	--	--	--	--	
MW-4	6/6/2003		8.12	7.98	--	0.14	--	13,000	<50	<50	<50	<50	6,800	2,500	<50	<50	190	<10,000	--	
MW-4	8/7/2003		8.12	7.24	--	0.88	--	6,200	<50	<50	<50	<50	6,600	2,400	<50	<50	160	<10,000	--	
MW-4	11/20/2003		8.12	7.02	--	1.10	--	10,000	<100	<100	<100	<100	11,000	<4,000	<100	<100	310	<20,000	--	
MW-4	4/28/2004		8.12	4.81	--	3.31	--	<25,000	<250	<250	<250	<250	3,600	15,000	<250	<250	<250	<50,000	--	
MW-4	8/26/2004		8.12	5.65	--	2.47	--	<2,500	<25	<25	<25	<25	1,800	16,000	<25	<25	60	--	--	
MW-4	12/1/2004		8.12	7.34	--	0.78	--	1,100	<10	<10	<10	<10	450	19,000	<10	<10	10	<2,000	--	
MW-4	2/2/2005		8.12	7.61	--	0.51	--	1,000	<5.0	<5.0	<5.0	<5.0	410	19,000	<5.0	<5.0	10	<1,000	--	
MW-4	4/25/2005		10.58	7.25	--	3.33	--	720	8	5.3	<5.0	16	170	18,000	<5.0	<5.0	<5.0	<1,000	--	
MW-4	9/30/2005		10.58	7.72	--	2.86	--	<2,500	63	58	46	140	110	30,000	<25	<25	<25	<2,500	--	
MW-4	12/28/2005		10.58	7.48	--	3.10	--	<2,500	<25	<25	<25	<50	34	27,000	<50	<25	<25	<5,000	--	
MW-4	3/23/2006		10.58	4.42	--	6.16	--	<2,500	<25	<25	<25	<50	120	34,000	<50	<25	<25	<5,000	--	
MW-4	6/5/2006		10.58	4.97	--	5.61	--	<5,000	<50	<50	<50	<100	<50	34,000	<100	<50	<50	<10,000	--	
MW-4	9/19/2006		10.58	5.45	--	5.13	--	<5,000	<50	<50	<50	<100	110	27,000	<100	<50	<50	<25,000	--	
MW-4	12/1/2006		10.58	5.14	--	5.44	--	<5,000	<50	<50	<50	<100	68	31,000	<100	<50	<50	<25,000	--	
MW-4	3/1/2007		10.58	7.60	--	2.98	--	<5,000	<50	<50	<50	<100	<50	31,000	<100	<50	<50	<25,000	--	
MW-4	6/1/2007		10.58	5.21	--	5.37	--	2,700	<25	<25	<25	<50	31	32,000	<50	<25	<25	<13,000	--	
MW-4	9/13/2007		10.58	6.45	--	4.13	--	<2,500	<25	<25	<25	<50	<25	10,000	<50	<25	<25	<13,000	--	
MW-4	11/21/2007		10.58	5.68	--	4.90	--	<2,500	<25	<25	<25	<50	<25	38,000	<50	<25	<25	<13,000	--	
MW-4	2/29/2008		10.58	6.44	--	4.14	--	<5,000	<50	<50	<50	<100	<50	32,000	<100	<50	<50	<25,000	--	
MW-4	5/23/2008		10.58	6.01	--	4.57	--	<5,000	<50	<50	<50	<100	<50	42,000	<100	<50	<50	<25,000	--	
MW-4	9/26/2008		10.58	7.37	--	3.21	--	370	<1.0	<1.0	<1.0	<1.0	14	39,000	<1.0	2.8	<1.0	<250	--	
MW-4	12/23/2008		10.58	6.04	--	4.54	--	270	<1.0	<1.0	<1.0	<1.0	15	37,000	<1.0	3.2	<1.0	<250	--	
MW-4	3/9/2009		10.58	5.30	--	5.28	--	140	<1.0	<1.0	<1.0	<1.0	18	27,000	<1.0	3.5	<1.0	<250	--	
MW-4	5/28/2009		10.58	7.06	--	3.52	--	330	<1.0	<1.0	<1.0	<1.0	21	36,000	<1.0	2.9	1.1	<250	0.41	
MW-4	12/10/2009		10.58	6.24	--	4.34	--	660	<0.50	<0.50	<0.50	<1.0	10	39,000	<0.50	2.7	<0.50	<100	0.49	
MW-4	6/29/2010		10.58	6.57	--	4.01	--	<500	<5.0	<5.0	<5.0	<10	7.3	38,000	<5.0	<5.0	<5.0	<1,000	--	(P, well purged dry)
MW-4	12/30/2010		10.58	7.32	--	3.26	--	<500	<5.0	<5.0	<5.0	<10	11	31,000	<5.0	<5.0	<5.0	<2,500	--	(P, well purged dry)
MW-4	6/29/2011		10.58	6.43	--	4.15	610	<500	--	--	--	--	11	30,000	--	--	<5.0	--	0.45	(P)
MW-4	1/30/2012		10.58	6.72	--	3.86	530	72	--	--	--	--	11	23,000	--	--	0.50	--	0.55	(P)
MW-4	6/29/2012		10.58	5.50	--	5.08	480	<500	--	--	--	--	9.3	28,000	--	--	<5.0	--	1.21	(P)
MW-4	12/7/2012		10.58	7.05	--	3.53	330	<500	--	--	--	--	8.7	18,000	--	--	<0.50	--	1.37	
MW-4	6/6/2013		10.58	6.53	--	4.05	600	<500	--	--	--	--	6.7	26,000	--	--	<5.0	--	1.30	
MW-4	12/13/2013		10.58	7.15	--	3.43	<49	<500	--	--	--	--	7.2	19,000	--	--	<5.0	--	3.07	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-5	10/12/1993		7.69	6.01	--	1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	10/13/1993		7.69	--	--	--	--	2,300	160	10	<0.5	26	--	--	--	--	--	--	--	
MW-5	2/15/1994		7.69	5.74	--	1.95	--	5,100	710	16	33	35	153	--	--	--	--	--	4.00	
MW-5	5/11/1994		7.69	5.28	--	2.41	--	11,000	1,100	39	110	57	165	--	--	--	--	--	8.00	
MW-5	8/1/1994		7.69	5.84	--	1.85	--	9,000	730	35	61	41	196	--	--	--	--	--	2.60	
MW-5	10/18/1994		7.69	6.01	--	1.68	--	7,800	330	30	27	27	559	--	--	--	--	--	5.60	
MW-5	1/13/1995		7.69	4.74	--	2.95	--	<500	290	6	<5.0	18	--	--	--	--	--	--	6.80	
MW-5	4/13/1995		7.69	5.50	--	2.19	--	9,100	400	15	52	27	--	--	--	--	--	--	7.40	
MW-5	7/11/1995		7.69	5.75	--	1.94	--	7,300	390	13	28	23	--	--	--	--	--	--	7.20	
MW-5	11/3/1995		7.69	6.65	--	1.04	--	7,200	270	15	38	23	200	--	--	--	--	--	8.40	
MW-5	2/5/1996		7.69	4.83	--	2.86	--	4,600	370	15	53	28	<50	--	--	--	--	--	1.90	
MW-5	4/24/1996		7.69	6.09	--	1.60	--	3,000	180	<10	32	14	<100	--	--	--	--	--	8.10	
MW-5	7/15/1996		7.69	6.57	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	7/16/1996		7.69	--	--	--	--	<50	190	<10	31	16	<100	--	--	--	--	--	8.30	
MW-5	7/30/1996		7.69	5.61	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	8/12/1996		7.69	--	--	--	--	2,000	150	12	25	18	<50	--	--	--	--	--	7.60	
MW-5	11/4/1996		7.69	8.25	--	-0.56	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	11/5/1996		7.69	--	--	--	--	5,200	42	5.5	13	<5.0	1,700	--	--	--	--	--	7.40	
MW-5	5/17/1997		7.69	6.95	--	0.74	--	80	0.56	<1.0	<1.0	<1.0	46	--	--	--	--	--	6.70	
MW-5	8/11/1997		7.69	6.72	--	0.97	--	2,700	20	12	6.7	9.7	1,900	--	--	--	--	--	8.50	
MW-5	11/17/1997		7.69	9.49	--	-1.80	--	8,400	25	12	8.7	5.4	13,000	--	--	--	--	--	7.90	
MW-5	1/29/1998		7.69	7.88	--	-0.19	--	110,000	2,500	110	180	589	180,000	--	--	--	--	--	6.80	
MW-5	6/22/1998		7.69	7.40	--	0.29	--	4,400	47	10	29	21	47	--	--	--	--	--	6.60	
MW-5	12/30/1998		7.69	6.13	--	1.56	--	6,000	18	9.1	22	16	63	--	--	--	--	--	--	
MW-5	3/9/1999		7.69	4.79	--	2.90	--	4,600	8.8	5.5	12	11	24	--	--	--	--	--	--	
MW-5	6/23/1999		7.69	5.95	--	1.74	--	3,400	1,500	8.9	54	87	7,500	--	--	--	--	--	--	
MW-5	9/23/1999		7.69	5.43	--	2.26	--	2,600	510	14	140	650	580	--	--	--	--	--	--	
MW-5	12/28/1999		7.69	5.30	--	2.39	--	3,500	900	18	57	140	4,800	--	--	--	--	--	--	
MW-5	3/22/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	5/26/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/6/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/15/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	12/11/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	3/29/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	6/27/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/19/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	12/28/2001		7.69	4.65	--	3.04	--	4,600	20	25	16	57	72	--	--	--	--	--	--	
MW-5	3/12/2002		7.69	5.35	--	2.34	--	5,100	45	14	22	39	32	--	--	--	--	--	--	

Table 2
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Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-5	6/13/2002		7.69	5.34	--	2.35	--	2,900	32	<12.5	<12.5	<25	616	--	--	--	--	--	--	
MW-5	9/6/2002		7.69	5.46	--	2.23	--	3,400	23	5.5	<5.0	11	230	--	--	--	--	--	--	
MW-5	12/13/2002		7.69	5.47	--	2.22	--	2,500	12	9.3	4.6	8.8	110	--	--	--	--	--	--	
MW-5	2/19/2003		7.69	5.29	--	2.40	--	2,800	11	5.4	9.7	12	6.4	--	--	--	--	--	--	
MW-5	6/6/2003		7.69	5.30	--	2.39	--	3,200	9.1	<5.0	7.6	9.3	<5.0	<200	<5.0	<5.0	<5.0	<1,000	--	
MW-5	8/7/2003		7.69	5.33	--	2.36	--	2,200	7.3	<5.0	<5.0	9.1	18	<200	<5.0	<5.0	<5.0	<1,000	--	
MW-5	11/20/2003		7.69	5.39	--	2.30	--	3,500	12	5.4	6.4	12	12	<100	<2.5	<2.5	<2.5	<500	--	
MW-5	4/28/2004		7.69	5.53	--	2.16	--	5,700	7.8	4.2	5.2	11	11	<100	<2.5	<2.5	<2.5	<500	--	
MW-5	8/26/2004		7.69	5.42	--	2.27	--	2,400	23	4	3.6	11	74	<100	<2.5	<2.5	<2.5	--	--	
MW-5	12/1/2004		7.69	5.38	--	2.31	--	4,300	11	<5.0	5.5	15	<5.0	<200	<5.0	<5.0	<5.0	<1,000	--	
MW-5	2/2/2005		7.69	5.48	--	2.21	--	4,000	8.4	4.8	4	10	11	<100	<2.5	<2.5	<2.5	<500	--	
MW-5	4/25/2005		10.18	5.52	--	4.66	--	5,200	7.6	4	4.3	9.9	12	<100	<2.5	<2.5	<2.5	<500	--	
MW-5	9/30/2005		10.18	5.04	--	5.14	--	4,100	5.3	2.7	2.1	8	16	27	<1.0	<1.0	<1.0	<100	--	
MW-5	12/28/2005		10.18	4.85	--	5.33	--	7,700	7.7	3.3	2.9	7.1	3.8	<20	14	<2.0	<2.0	<400	--	
MW-5	3/23/2006		10.18	5.07	--	5.11	--	5,700	11	3.3	2.4	8.1	8.6	37	<4.0	<2.0	<2.0	<400	--	
MW-5	6/5/2006		10.18	5.39	(Sheen)	4.79	--	5,900	36	5	3.7	15	11	90	<5.0	<2.5	<2.5	<500	--	
MW-5	9/19/2006		10.18	4.75	--	5.43	--	4,600	6.7	<2.5	<2.5	<5.0	12	53	<5.0	<2.5	<2.5	<1,300	--	
MW-5	12/1/2006		10.18	5.29	--	4.89	--	4,400	5	<2.5	<2.5	5.8	14	<25	<5.0	<2.5	2.7	<1,300	--	
MW-5	3/1/2007		10.18	5.01	--	5.17	--	6,400	6.2	3	<2.5	8.7	<2.5	<25	<5.0	<2.5	<2.5	<1,300	--	
MW-5	6/1/2007		10.18	5.34	--	4.84	--	7,000	3.4	<2.5	<2.5	6.6	11	40	32	<2.5	<2.5	<1,300	--	
MW-5	9/13/2007		10.18	5.11	--	5.07	--	7,000	3.8	<2.5	<2.5	<5.0	8.5	<25	<5.0	<2.5	<2.5	<1,300	--	
MW-5	11/21/2007		10.18	5.34	--	4.84	--	4,700	<2.5	<2.5	<2.5	<5.0	11	310	<5.0	<2.5	<2.5	<1,300	--	
MW-5	2/29/2008		10.18	5.33	--	4.85	--	5,100	1.9	1.8	0.93	4.2	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-5	5/23/2008		10.18	5.38	--	4.80	--	4,600	<2.5	<2.5	<2.5	<5.0	3.9	<25	<5.0	<2.5	<2.5	<1,200	--	
MW-5	9/26/2008		10.18	5.26	--	4.92	--	3,400	1.5	<1.0	<1.0	2.2	2.8	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-5	12/23/2008		10.18	5.04	--	5.14	--	3,300	2.7	1.1	<1.0	3.4	1	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-5	3/9/2009		10.18	4.79	--	5.39	--	4,300	1.9	1.8	<1.0	4	<1.0	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-5	5/28/2009		10.18	5.21	--	4.97	--	4,400	<1.0	<1.0	<1.0	1.8	<1.0	<5.0	<1.0	<1.0	<1.0	<250	2.15	
MW-5	12/10/2009		10.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	6/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	12/30/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	6/29/2011		10.18	5.38	--	4.80	--	3,300	1.7	0.60	<0.50	2.4	1.9	<4.0	--	--	<0.50	--	0.46	(P)
MW-5	1/30/2012		10.18	5.24	--	4.94	--	3,200	2.4	1.1	<0.50	3.6	2.1	17	--	--	<0.50	--	1.09	(P)
MW-5	6/27/2012		10.18	5.39	--	4.79	--	--	--	--	--	--	--	--	--	--	--	--	1.52	(P, sampled 6/29/12)
MW-5	6/29/2012		--	--	--	--	--	3,000	1.5	<0.50	<0.50	3.5	2.0	<4.0	--	--	<0.50	--	--	
MW-5	12/7/2012		10.18	5.11	--	5.07	--	3,200	2.9	0.79	0.89	2.9	6.2	89	--	--	<0.50	--	1.26	
MW-5	6/6/2013		10.18	5.47	--	4.71	--	3,800	2.1	0.67	<0.50	3.2	3.7	41	--	--	<0.50	--	1.06	
MW-5	12/13/2013		10.18	5.47	--	4.71	600	3,300	3.3	1.0	0.79	4.1	9.5	410	--	--	<0.50	--	2.87	

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Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-6	10/12/1993		8.52	6.59	--	1.93	--	63	<0.5	<0.5	<0.5	<0.5	44	--	--	--	--	--	--	
MW-6	2/15/1994		8.52	6.31	--	2.21	--	68	<0.5	<0.5	<0.5	<0.5	38	--	--	--	--	--	3.10	
MW-6	5/11/1994		8.52	6.15	--	2.37	--	68	<0.5	<0.5	<0.5	<0.5	49	--	--	--	--	--	8.70	
MW-6	8/1/1994		8.52	6.46	--	2.06	--	91	<0.5	<0.5	<0.5	0.6	60	--	--	--	--	--	2.40	
MW-6	10/18/1994		8.52	6.72	--	1.80	--	<50	<0.5	<0.5	<0.5	<0.5	85	--	--	--	--	--	6.00	
MW-6	1/13/1995		8.52	5.95	--	2.57	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	7.00	
MW-6	4/13/1995		8.52	5.44	--	3.08	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	8.50	
MW-6	7/11/1995		8.52	5.68	--	2.84	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	8.40	
MW-6	11/2/1995		8.52	6.57	--	1.95	--	<50	<0.5	<0.5	<0.5	<1.0	35	--	--	--	--	--	8.30	
MW-6	2/5/1996		8.52	6.27	--	2.25	--	<50	<5.0	<10	<10	<10	<100	--	--	--	--	--	2.20	
MW-6	4/24/1996		8.52	5.95	--	2.57	--	<250	<2.5	<5.0	<5.0	<5.0	62	--	--	--	--	--	8.00	
MW-6	7/15/1996		8.52	6.39	--	2.13	--	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	8.00	
MW-6	7/30/1996		8.52	6.44	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/4/1996		8.52	8.05	--	0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/5/1996		8.52	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.30	
MW-6	5/17/1997		8.52	6.75	--	1.77	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/11/1997		8.52	6.48	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/17/1997		8.52	9.27	--	-0.75	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.70	
MW-6	1/29/1998		8.52	7.98	--	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/22/1998		8.52	7.68	--	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/30/1998		8.52	6.98	--	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/9/1999		8.52	5.90	--	2.62	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/23/1999		8.52	6.93	--	1.59	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/23/1999		8.52	6.45	--	2.07	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/28/1999		8.52	6.33	--	2.19	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/22/2000		8.52	5.15	--	3.37	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/26/2000		8.52	5.72	--	2.80	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/15/2000		8.52	6.02	--	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/11/2000		8.52	6.20	--	2.32	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/29/2001		8.52	5.34	--	3.18	--	750	<2.5	2.9	<2.5	12	820	--	--	--	--	--	--	
MW-6	6/27/2001		8.52	6.00	--	2.52	--	760	33	<2.5	<2.5	<7.5	968	--	--	--	--	--	--	
MW-6	9/19/2001		8.52	6.22	--	2.30	--	<500	<5.0	<5.0	<5.0	<15	879	--	--	--	--	--	--	
MW-6	12/28/2001		8.52	4.71	--	3.81	--	--	--	--	--	--	--	--	--	--	--	--	--	(NS)

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-6	3/12/2002		8.52	4.96	--	3.56	--	<500	<5.0	<5.0	<5.0	<10	244	--	--	--	--	--	--	
MW-6	6/13/2002		8.52	5.78	--	2.74	--	<250	<2.5	<2.5	<2.5	<5.0	413	--	--	--	--	--	--	
MW-6	9/6/2002		8.52	6.14	--	2.38	--	130	<0.5	<0.5	<0.5	<0.5	240	--	--	--	--	--	--	
MW-6	12/13/2002		8.52	6.05	--	2.47	--	140	<1.0	<1.0	<1.0	<1.0	200	--	--	--	--	--	--	
MW-6	2/19/2003		8.52	5.40	--	3.12	--	<500	<5.0	<5.0	<5.0	<5.0	150	--	--	--	--	--	--	
MW-6	6/6/2003		8.52	5.54	--	2.98	--	1,100	<5.0	<5.0	<5.0	<5.0	140	<200	<5.0	<5.0	21	<1,000	--	
MW-6	8/7/2003		8.52	5.94	--	2.58	--	<500	<5.0	<5.0	<5.0	<5.0	160	<200	<5.0	<5.0	20	<1,000	--	
MW-6	11/20/2003		8.52	5.85	--	2.67	--	95	<0.5	<0.5	<0.5	<0.5	74	<20	<0.5	<0.5	12	<100	--	
MW-6	4/28/2004		8.52	5.45	--	3.07	--	<250	<2.5	<2.5	<2.5	<2.5	120	<100	<2.5	<2.5	12	<500	--	
MW-6	8/26/2004		8.52	6.06	--	2.46	--	<250	<2.5	<2.5	<2.5	<2.5	110	<100	<2.5	<2.5	12	<500	--	
MW-6	12/1/2004		8.52	6.19	--	2.33	--	<250	<2.5	<2.5	<2.5	<2.5	86	<100	<2.5	<2.5	11	<500	--	
MW-6	2/2/2005		8.52	5.20	--	3.32	--	55	<0.5	<0.5	<0.5	<0.5	41	32	<0.5	<0.5	6.2	<100	--	
MW-6	4/25/2005		11.01	5.22	--	5.79	--	64	<0.5	<0.5	<0.5	<0.5	50	45	<0.5	<0.5	6	<100	--	
MW-6	9/30/2005		11.01	5.93	--	5.08	--	200(N)	<2.0	<2.0	<2.0	<4.0	51	280	<2.0	<2.0	4.4	<200	--	
MW-6	12/28/2005		11.01	5.49	--	5.52	--	<50	<0.5	<0.5	<0.5	<1.0	16	160	<1.0	<0.5	2	<100	--	
MW-6	3/23/2006		11.01	4.59	--	6.42	--	<50	<0.5	<0.5	<0.5	<1.0	5.6	35	<1.0	<0.5	0.91	<100	--	
MW-6	6/5/2006		11.01	5.38	--	5.63	--	<50	<0.5	0.54	<0.5	<1.0	14	110	<1.0	<0.5	1.5	<100	--	
MW-6	9/19/2006		11.01	5.93	--	5.08	--	<50	<0.5	<0.5	<0.5	<1.0	8.8	190	<1.0	<0.5	1.4	<250	--	
MW-6	12/1/2006		11.01	6.28	--	4.73	--	<50	<0.5	<0.5	<0.5	<1.0	5.9	98	<1.0	<0.5	0.94	<250	--	
MW-6	3/1/2007		11.01	5.72	--	5.29	--	<50	<0.5	<0.5	<0.5	<1.0	6	96	<1.0	<0.5	0.68	<250	--	
MW-6	6/1/2007		11.01	6.22	--	4.79	--	<50	<0.5	<0.5	<0.5	<1.0	7.4	160	<1.0	<0.5	0.77	<250	--	
MW-6	9/13/2007		11.01	6.57	--	4.44	--	63	<0.5	<0.5	<0.5	<1.0	6.7	120	<1.0	<0.5	0.87	<250	--	
MW-6	11/21/2007		11.01	6.67	--	4.34	--	<50	<0.5	<0.5	<0.5	<1.0	8.4	210	<1.0	<0.5	1	<250	--	
MW-6	2/29/2008		11.01	5.80	--	5.21	--	<50	<0.5	<0.5	<0.5	<1.0	7.1	46	<1.0	<0.5	0.92	<250	--	
MW-6	5/23/2008		11.01	6.53	--	4.48	--	<50	<0.5	<0.5	<0.5	<1.0	8.4	53	<1.0	<0.5	0.95	<250	--	
MW-6	9/26/2008		11.01	6.86	--	4.15	--	<50	<1.0	<1.0	<1.0	<1.0	5.1	56	<1.0	<1.0	<1.0	<250	--	
MW-6	12/23/2008		11.01	6.90	--	4.11	--	<50	<1.0	<1.0	<1.0	<1.0	5.3	54	<1.0	<1.0	<1.0	<250	--	
MW-6	3/9/2009		11.01	6.00	--	5.01	--	<50	<1.0	<1.0	<1.0	<1.0	3.5	62	<1.0	<1.0	<1.0	<250	--	
MW-6	5/28/2009		11.01	6.19	--	4.82	--	<50	<1.0	<1.0	<1.0	<1.0	6.6	55	<1.0	<1.0	<1.0	<250	2.77	
MW-6	12/10/2009		11.01	6.15	--	4.86	--	<50	<0.50	<0.50	<0.50	<1.0	2.0	40	<0.50	<0.50	<0.50	<100	0.60	
MW-6	6/29/2010		11.01	6.18	--	4.83	--	<50	<0.50	<0.50	<0.50	<1.0	2.7	49	<0.50	<0.50	<0.50	<100	0.57	(P)
MW-6	12/30/2010		11.01	5.34	--	5.67	--	<50	<0.50	<0.50	<0.50	<1.0	2.2	44	<0.50	<0.50	<0.50	<250	0.41	(P)
MW-6	6/29/2011		11.01	5.53	--	5.48	2,100	<50	--	--	--	--	3.6	37	--	--	<0.50	--	0.03	(P)
MW-6	1/30/2012		11.01	5.89	--	5.12	710	<50	--	--	--	--	4.0	110	--	--	<0.50	--	0.61	(P)
MW-6	6/27/2012		11.01	5.68	--	5.33	1,200	<50	--	--	--	--	2.2	49	--	--	0.52	--	0.94	(P)
MW-6	12/7/2012		11.01	5.35	--	5.66	610	<50	--	--	--	--	2.4	300	--	--	<0.50	--	1.20	
MW-6	6/6/2013		11.01	5.99	--	5.02	3,900	160	--	--	--	--	3.8	150	--	--	<0.50	--	1.26	
MW-6	12/13/2013		11.01	6.36	--	4.65	140	<50	--	--	--	--	4.4	160	--	--	<0.50	--	2.76	

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Historical Groundwater Monitoring and Analytical Results
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Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-7	10/12/1993		7.61	6.14	--	1.47	--	<50	<0.5	<0.5	<0.5	0.7	<5.0	--	--	--	--	--	--	
MW-7	2/15/1994		7.61	5.88	--	1.73	--	78	<0.5	<0.5	<0.5	0.6	<5.0	--	--	--	--	--	4.00	
MW-7	5/11/1994		7.61	5.76	--	1.85	--	70	<0.5	<0.5	<0.5	0.9	12	--	--	--	--	--	9.10	
MW-7	8/1/1994		7.61	5.97	--	1.64	--	77	<0.5	<0.5	<0.5	0.5	182	--	--	--	--	--	2.50	
MW-7	10/18/1994		7.61	6.24	--	1.37	--	<50	<0.5	<0.5	<0.5	<0.5	52	--	--	--	--	--	6.30	
MW-7	1/13/1995		7.61	5.39	--	2.22	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	8.20	
MW-7	4/13/1995		7.61	5.17	--	2.44	--	63	<0.5	<0.5	<0.5	1.4	--	--	--	--	--	--	8.40	
MW-7	7/11/1995		7.61	5.25	--	2.36	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	7.90	
MW-7	11/2/1995		7.61	6.19	--	1.42	--	<50	<0.5	<0.5	<0.5	<1.0	55	--	--	--	--	--	8.00	
MW-7	2/5/1996		7.61	5.69	--	1.92	--	<50	<0.5	<1.0	<1.0	<1.0	40	--	--	--	--	--	1.90	
MW-7	4/24/1996		7.61	5.59	--	2.02	--	<250	<2.5	<5.0	<5.0	<5.0	53	--	--	--	--	--	8.20	
MW-7	7/15/1996		7.61	6.07	--	1.54	--	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	7.80	
MW-7	7/30/1996		7.61	6.04	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/4/1996		7.61	7.76	--	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/5/1996		7.61	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.80	
MW-7	5/17/1997		7.61	6.42	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/11/1997		7.61	6.06	--	1.55	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/17/1997		7.61	9.07	--	-1.46	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.10	
MW-7	1/29/1998		7.61	7.44	--	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/22/1998		7.61	7.39	--	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/30/1998		7.61	5.51	--	2.10	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/9/1999		7.61	5.57	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/23/1999		7.61	6.69	--	0.92	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/23/1999		7.61	6.23	--	1.38	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/28/1999		7.61	6.08	--	1.53	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/22/2000		7.61	4.88	--	2.73	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/26/2000		7.61	5.42	--	2.19	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/15/2000		7.61	5.79	--	1.82	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/11/2000		7.61	5.93	--	1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/29/2001		7.61	5.24	--	2.37	--	600	<2.5	<2.5	<2.5	<7.5	636	--	--	--	--	--	--	
MW-7	6/27/2001		7.61	5.69	--	1.92	--	590	<2.5	<2.5	<2.5	<7.5	739	--	--	--	--	--	--	
MW-7	9/19/2001		7.61	5.89	--	1.72	--	560	<5.0	<5.0	<5.0	<15	1,190	--	--	--	--	--	--	
MW-7	12/28/2001		7.61	4.53	--	3.08	--	910	23	<2.5	<2.5	<5.0	856	--	--	--	--	--	--	

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1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-7	3/12/2002		7.61	4.71	--	2.90	--	620	<2.5	<2.5	<2.5	<5.0	675	--	--	--	--	--	--	
MW-7	6/13/2002		7.61	5.21	--	2.40	--	860	<2.5	<2.5	<2.5	<5.0	1,470	--	--	--	--	--	--	
MW-7	9/6/2002		7.61	5.77	--	1.84	--	350	<2.5	<2.5	<2.5	<2.5	690	--	--	--	--	--	--	
MW-7	12/13/2002		7.61	5.65	--	1.96	--	1,300	<10	<10	<10	<10	1,800	--	--	--	--	--	--	
MW-7	2/19/2003		7.61	5.07	--	2.54	--	1,700	<10	<10	<10	<10	1,600	--	--	--	--	--	--	
MW-7	6/6/2003		7.61	5.27	--	2.34	--	1,000	<5.0	<5.0	<5.0	<5.0	510	<200	<5.0	<5.0	41	<1,000	--	
MW-7	8/7/2003		7.61	5.52	--	2.09	--	510	<5.0	<5.0	<5.0	<5.0	520	<200	<5.0	<5.0	43	<1,000	--	
MW-7	11/20/2003		7.61	5.79	--	1.82	--	330	<2.5	<2.5	<2.5	<2.5	270	1,300	<2.5	<2.5	8.9	<500	--	
MW-7	4/28/2004		7.61	5.20	--	2.41	--	<250	<2.5	<2.5	<2.5	<2.5	71	880	<2.5	<2.5	3.5	<500	--	
MW-7	8/26/2004		7.61	5.65	--	1.96	--	450	<2.5	<2.5	<2.5	2.8	150	4,800	<2.5	<2.5	7.8	<500	--	
MW-7	12/1/2004		7.61	5.79	--	1.82	--	100	<1.0	<1.0	<1.0	<1.0	25	1,400	<1.0	<1.0	1.1	<200	--	
MW-7	2/2/2005		7.61	4.92	--	2.69	--	81	<0.5	<0.5	<0.5	<0.5	31	830	<0.5	<0.5	1.8	<100	--	
MW-7	4/25/2005		10.11	4.88	--	5.23	--	67	<0.5	<0.5	<0.5	0.64	41	520	<0.5	<0.5	2.1	<100	--	
MW-7	9/30/2005		10.11	5.62	--	4.49	--	58(N)	<0.5	<0.5	<0.5	<1.0	18	450	<0.5	<0.5	1.5	<50	--	
MW-7	12/28/2005		10.11	4.93	--	5.18	--	<500	<5.0	<5.0	<5.0	<10	7.4	1,600	<10	<5.0	<5.0	<1,000	--	
MW-7	3/23/2006		10.11	4.63	--	5.48	--	71	<0.5	<0.5	<0.5	<1.0	25	340	<1.0	<0.5	1.7	<100	--	
MW-7	6/5/2006		10.11	5.08	--	5.03	--	57	<0.5	<0.5	<0.5	<1.0	14	200	<1.0	<0.5	1.2	<100	--	
MW-7	9/19/2006		10.11	5.60	--	4.51	--	<50	<0.5	<0.5	<0.5	<1.0	14	280	<1.0	<0.5	1.6	<250	--	
MW-7	12/1/2006		10.11	6.00	--	4.11	--	<250	<2.5	<2.5	<2.5	<5.0	6.7	1,400	<5.0	<2.5	<2.5	<1,300	--	
MW-7	3/1/2007		10.11	5.69	--	4.42	--	<250	<2.5	<2.5	<2.5	<5.0	4	1,000	<5.0	<2.5	<2.5	<1,300	--	
MW-7	6/1/2007		10.11	5.97	--	4.14	--	120	<0.5	<0.5	<0.5	<1.0	7.5	600	<1.0	<0.5	0.59	<250	--	
MW-7	9/13/2007		10.11	6.31	--	3.80	--	<50	<0.5	<0.5	<0.5	<1.0	10	260	<1.0	<0.5	0.8	<250	--	
MW-7	11/21/2007		10.11	6.39	--	3.72	--	55	<0.5	<0.5	<0.5	<1.0	8.4	1,500	<1.0	<0.5	0.87	<250	--	
MW-7	2/29/2008		10.11	5.78	--	4.33	--	<50	<0.5	<0.5	<0.5	<1.0	6.2	960	<1.0	<0.5	0.73	<250	--	
MW-7	5/23/2008		10.11	6.27	--	3.84	--	53	<0.5	<0.5	<0.5	<1.0	9.6	300	<1.0	<0.5	0.96	<250	--	
MW-7	9/26/2008		10.11	6.52	--	3.59	--	<50	<1.0	<1.0	<1.0	<1.0	7.5	800	<1.0	<1.0	<1.0	<250	--	
MW-7	12/23/2008		10.11	6.40	--	3.71	--	59	<1.0	<1.0	<1.0	<1.0	5.7	3,500	<1.0	<1.0	<1.0	<250	--	
MW-7	3/9/2009		10.11	5.65	--	4.46	--	<50	<1.0	<1.0	<1.0	<1.0	4.4	1,300	<1.0	<1.0	<1.0	<250	--	
MW-7	5/28/2009		10.11	5.91	--	4.20	--	<50	<1.0	<1.0	<1.0	<1.0	5.7	110	<1.0	<1.0	<1.0	<250	1.77	
MW-7	12/10/2009		10.11	5.88	(Sheen)	4.23	--	62	<0.50	<0.50	<0.50	<1.0	6.5	1,200	<0.50	<0.50	0.56	<100	0.56	
MW-7	6/29/2010		10.11	5.48	--	4.63	--	<50	<0.50	<0.50	<0.50	<1.0	3.0	2,000	<0.50	<0.50	<0.50	<100	0.63	(P)
MW-7	12/30/2010		10.11	4.80	--	5.31	--	<50	<0.50	<0.50	<0.50	<1.0	5.6	3,900	<0.50	<0.50	0.58	<250	0.65	(P)
MW-7	6/29/2011		10.11	5.18	--	4.93	--	<500	<5.0	<5.0	<5.0	<10	<5.0	2,200	--	--	<5.0	--	0.47	(P)
MW-7	1/30/2012		10.11	5.29	--	4.82	--	<50	<0.50	<0.50	<0.50	<1.0	4.0	2,700	--	--	<0.50	--	0.69	(P)
MW-7	6/27/2012		10.11	5.19	--	4.92	--	<50	<0.50	<0.50	<0.50	<1.0	2.7	1,400	--	--	0.56	--	1.23	(P)
MW-7	12/7/2012		10.11	4.78	--	5.33	--	<50	<0.50	<0.50	<0.50	<1.0	3.0	2,600	--	--	<0.50	--	1.21	
MW-7	6/6/2013		10.11	5.43	--	4.68	--	<50	<0.50	<0.50	<0.50	<1.0	2.8	1,600	--	--	<0.50	--	1.23	
MW-7	12/13/2013		10.11	5.84	--	4.27	<51	<50	<0.50	<0.50	<0.50	<1.0	4.4	3,100	--	--	<0.50	--	2.75	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-8	10/12/1993		8.60	5.86	--	2.74	--	<50	<0.5	<0.5	<0.5	<0.5	11	--	--	--	--	--	--	
MW-8	2/15/1994		8.60	5.50	--	3.10	--	380	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	3.30	
MW-8	5/11/1994		8.60	5.09	--	3.51	--	330	<0.5	1.2	<0.5	1.9	<5.0	--	--	--	--	--	8.50	
MW-8	8/1/1994		8.60	5.20	--	3.40	--	260	<0.5	1.2	2.9	5.8	<5.0	--	--	--	--	--	2.30	
MW-8	10/18/1994		8.60	5.70	--	2.90	--	82	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	6.40	
MW-8	1/13/1995		8.60	4.96	--	3.64	--	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	6.90	
MW-8	4/13/1995		8.60	5.40	--	3.20	--	270	<0.5	<0.5	<0.5	4.4	--	--	--	--	--	--	8.40	
MW-8	7/11/1995		8.60	6.01	--	2.59	--	320	<0.5	<0.5	<0.5	3.5	--	--	--	--	--	--	8.00	
MW-8	11/2/1995		8.60	6.81	--	1.79	--	100	<0.5	<0.5	<0.5	<1.0	<5.0	--	--	--	--	--	8.70	
MW-8	2/5/1996		8.60	6.12	--	2.48	--	<50	<5.0	<10	<10	<10	<100	--	--	--	--	--	1.50	
MW-8	4/24/1996		8.60	6.23	--	2.37	--	<50	<5.0	<10	<10	<10	<100	--	--	--	--	--	8.70	
MW-8	7/15/1996		8.60	6.70	--	1.90	--	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	8.40	
MW-8	7/30/1996		8.60	6.64	--	1.96	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/4/1996		8.60	8.36	--	0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/5/1996		8.60	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.20	
MW-8	5/17/1997		8.60	7.03	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/11/1997		8.60	6.05	--	2.55	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/17/1997		8.60	9.14	--	-0.54	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	7.70	
MW-8	1/29/1998		8.60	7.90	--	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/22/1998		8.60	7.72	--	0.88	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/30/1998		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	3/9/1999		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	6/23/1999		8.60	4.70	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/23/1999		8.60	4.22	--	4.38	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/28/1999		8.60	4.12	--	4.48	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/22/2000		8.60	4.71	--	3.89	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/26/2000		8.60	4.98	--	3.62	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/15/2000		8.60	4.62	--	3.98	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/11/2000		8.60	4.77	--	3.83	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/29/2001		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	6/27/2001		8.60	5.11	--	3.49	--	570	<2.5	<2.5	2.6	<7.5	3.4	--	--	--	--	--	--	
MW-8	9/19/2001		8.60	5.00	--	3.60	--	<500	<5.0	<5.0	<5.0	<15	<5.0	--	--	--	--	--	--	
MW-8	12/28/2001		8.60	4.15	--	4.45	--	440	<0.5	<0.5	0.98	<1.0	6.3	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-8	3/12/2002		8.60	4.35	--	4.25	--	330	<2.5	<2.5	<2.5	<5.0	8.7	--	--	--	--	--	--	
MW-8	6/13/2002		8.60	5.09	--	3.51	--	<500	<5.0	<5.0	<5.0	<10	16	--	--	--	--	--	--	
MW-8	9/6/2002		8.60	5.18	--	3.42	--	98	<0.5	<0.5	<0.5	<0.5	76	--	--	--	--	--	--	
MW-8	12/13/2002		8.60	4.84	--	3.76	--	120	<0.5	<0.5	0.94	0.52	140	--	--	--	--	--	--	
MW-8	2/19/2003		8.60	4.45	--	4.15	--	<2,500	<25	<25	<25	<25	800	--	--	--	--	--	--	
MW-8	6/6/2003		8.60	5.00	--	3.60	--	<50,000	<500	<500	<500	<500	17,000	<20,000	<500	<500	<500	<100,000	--	
MW-8	8/7/2003		8.60	4.84	--	3.76	--	<2,500	<25	<25	<25	<25	2,400	<1,000	<25	<25	44	<5,000	--	
MW-8	11/20/2003		8.60	4.48	--	4.12	--	<2,500	<25	<25	<25	<25	1,400	4,100	<25	<25	<25	<5,000	--	
MW-8	4/28/2004		8.60	9.66	--	-1.06	--	730	<2.5	<2.5	<2.5	<2.5	170	42,000	<2.5	<2.5	<2.5	<500	--	
MW-8	8/26/2004		8.60	4.73	--	3.87	--	<2,500	<25	<25	<25	<25	170	47,000	<25	<25	<25	--	--	
MW-8	12/1/2004		8.60	4.80	--	3.80	--	<250	<2.5	<2.5	<2.5	<2.5	36	9,700	<2.5	<2.5	<2.5	<500	--	
MW-8	2/2/2005		8.60	4.50	--	4.10	--	810	<0.5	<0.5	<0.5	<0.5	41	<20	<0.5	0.72	0.64	<100	--	
MW-8	4/25/2005		11.08	4.99	--	6.09	--	1,400	<12	<12	<12	<12	32	45,000	<12	<12	<12	<2,500	--	
MW-8	9/30/2005		11.08	4.89	--	6.19	--	840	<5.0	<5.0	<5.0	<10	17	8,500	<5.0	<5.0	<5.0	<500	--	
MW-8	12/28/2005		11.08	4.81	--	6.27	--	<250	<2.5	<2.5	<2.5	<5.0	17	7,400	<5.0	<2.5	<2.5	<500	--	
MW-8	3/23/2006		11.08	4.22	--	6.86	--	660	<2.5	<2.5	<2.5	<5.0	21	11,000	<5.0	<2.5	<2.5	<500	--	
MW-8	6/5/2006		11.08	4.63	--	6.45	--	<2,500	<25	<25	<25	<50	30	34,000	<50	<25	<25	<5,000	--	
MW-8	9/19/2006		11.08	4.82	--	6.26	--	<500	<5.0	<5.0	<5.0	<10	17	7,500	<10	<5.0	<5.0	<2,500	--	
MW-8	12/1/2006		11.08	4.83	--	6.25	--	350	<2.5	<2.5	<2.5	<5.0	16	1,900	<5.0	<2.5	<2.5	<1,300	--	
MW-8	3/1/2007		11.08	4.43	--	6.65	--	<500	<5.0	<5.0	<5.0	<10	20	6,200	<10	<5.0	<5.0	<2,500	--	
MW-8	6/1/2007		11.08	4.74	--	6.34	--	<500	<5.0	<5.0	<5.0	<10	8.7	3,700	<10	<5.0	<5.0	<2,500	--	
MW-8	9/13/2007		11.08	5.25	--	5.83	--	230	<0.5	<0.5	<0.5	<1.0	9.4	630	<1.0	<0.5	<0.5	<250	--	
MW-8	11/21/2007		11.08	5.13	--	5.95	--	350	<0.5	<0.5	<0.5	<1.0	8.7	360	<1.0	<0.5	<0.5	<250	--	
MW-8	2/29/2008		11.08	4.75	--	6.33	--	<1,000	<10	<10	<10	<20	16	7,500	<20	<10	<10	<5,000	--	
MW-8	5/23/2008		11.08	5.01	--	6.07	--	<1,000	<10	<10	<10	<20	15	4,800	<20	<10	<10	<5,000	--	
MW-8	9/26/2008		11.08	5.43	--	5.65	--	190	<1.0	<1.0	<1.0	<1.0	14	1,800	<1.0	<1.0	<1.0	<250	--	
MW-8	12/23/2008		11.08	5.25	--	5.83	--	270	<1.0	<1.0	<1.0	<1.0	10	770	<1.0	<1.0	<1.0	<250	--	
MW-8	3/9/2009		11.08	4.36	--	6.72	--	210	<1.0	<1.0	<1.0	<1.0	15	3,300	<1.0	<1.0	<1.0	<250	--	
MW-8	5/28/2009		11.08	4.98	--	6.10	--	270	<1.0	<1.0	<1.0	<1.0	6.5	710	<1.0	<1.0	<1.0	<250	2.14	
MW-8	12/10/2009		11.08	5.06	--	6.02	--	90	<0.50	<0.50	<0.50	<1.0	9.0	960	<0.50	<0.50	<0.50	<100	0.47	
MW-8	6/29/2010		11.08	4.71	--	6.37	--	170	<0.50	<0.50	<0.50	<1.0	10	1,700	<0.50	<0.50	<0.50	<100	0.38	(P)
MW-8	12/30/2010		11.08	4.37	--	6.71	--	190	<0.50	<0.50	<0.50	<1.0	6.6	1,500	<0.50	<0.50	<0.50	<250	0.52	(P)
MW-8	6/29/2011		11.08	4.57	--	6.51	1,000	140	--	--	--	--	4.7	2,000	--	--	<0.50	--	0.62	(P)
MW-8	1/30/2012		11.08	4.63	--	6.45	1,500	240	--	--	--	--	3.8	250	--	--	<0.50	--	1.52	(P)
MW-8	6/27/2012		11.08	4.49	--	6.59	1,100	300	--	--	--	--	2.2	270	--	--	<0.50	--	1.09	(P)
MW-8	12/7/2012		11.08	3.99	--	7.09	800	210	--	--	--	--	1.2	31	--	--	<0.50	--	1.37	
MW-8	6/6/2013		11.08	4.43	--	6.65	830	200	--	--	--	--	0.50	5.7	--	--	<0.50	--	1.09	
MW-8	12/13/2013		11.08	4.42	--	6.66	100	270	--	--	--	--	<0.50	<10	--	--	<0.50	--	2.86	

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Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-9	10/12/1993		8.08	5.66	0.08	2.48	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/15/1994		8.08	5.32	0.05	2.80	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/11/1994		8.08	5.57	--	2.51	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/1/1994		8.08	6.25	--	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/18/1994		8.08	5.59	0.13	2.59	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/13/1995		8.08	4.42	0.14	3.77	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/13/1995		8.08	4.06	0.11	4.10	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/11/1995		8.08	4.21	0.08	3.93	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/2/1995		8.08	5.22	0.05	2.90	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/5/1996		8.08	4.76	0.01	3.33	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/24/1996		8.08	4.62	0.09	3.53	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/15/1996		8.08	5.11	0.04	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/30/1996		8.08	5.15	--	2.93	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/4/1996		8.08	6.75	0.01	1.34	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/17/1997		8.08	5.42	--	2.66	--	97,000	16,000	7,700	2,300	18,400	40,000	--	--	--	--	--	7.00	
MW-9	5/17/1997	Dup	8.08	5.42	--	2.66	--	97,000	16,000	8,200	2,300	17,300	39,000	--	--	--	--	--	--	(Dup)
MW-9	8/11/1997		8.08	5.37	--	2.71	--	71,000	12,000	340	2,100	4,300	26,000	--	--	--	--	--	9.10	
MW-9	8/11/1997	Dup	8.08	5.37	--	2.71	--	100,000	14,000	360	3,200	5,790	27,000	--	--	--	--	--	--	(Dup)
MW-9	11/17/1997		8.08	5.62	(Sheen)	2.46	--	100,000	22,000	4,800	3,100	17,900	32,000	--	--	--	--	--	8.30	
MW-9	11/17/1997	Dup	8.08	5.62	--	2.46	--	100,000	24,000	5,300	3,500	19,300	35,000	--	--	--	--	--	--	(Dup)(Sheen)
MW-9	1/29/1998		8.08	4.07	(Sheen)	4.01	--	250,000	20,000	21,000	3,100	18,500	110,000	--	--	--	--	--	6.60	
MW-9	1/29/1998	Dup	8.08	4.07	--	4.01	--	250,000	20,000	20,000	3,100	18,400	110,000	--	--	--	--	--	--	(Dup)(Sheen)
MW-9	6/22/1998		8.08	4.28	--	3.80	--	280,000	21,000	18,000	3,800	21,200	110,000	--	--	--	--	--	5.80	
MW-9	6/22/1998	Dup	8.08	4.28	--	3.80	--	290,000	20,000	17,000	3,800	21,200	110,000	--	--	--	--	--	--	(Dup)
MW-9	12/30/1998		8.08	4.95	--	3.13	--	150,000	10,000	3,800	2,000	9,600	86,000	--	--	--	--	--	--	
MW-9	3/9/1999		8.08	3.95	--	4.13	--	82,000	6,800	570	1,400	4,700	100,000	--	--	--	--	--	--	
MW-9	6/23/1999		8.08	5.12	--	2.96	--	41,000	11,000	820	2,300	5,200	92,000	--	--	--	--	--	--	
MW-9	9/23/1999		8.08	4.74	--	3.34	--	57,000	12,000	5,400	1,900	9,500	89,000	--	--	--	--	--	--	
MW-9	12/28/1999		8.08	4.58	--	3.50	--	46,000	15,000	490	2,500	3,500	100,000	--	--	--	--	--	--	
MW-9	3/22/2000		8.08	3.90	--	4.18	--	86,000	18,000	1,800	2,300	6,800	120,000	--	--	--	--	--	--	
MW-9	5/26/2000		8.08	4.15	--	3.93	--	82,000	17,000	680	1,800	3,800	100,000	--	--	--	--	--	--	
MW-9	9/6/2000		8.08	4.47	--	3.61	--	100,000	19,000	280	2,400	6,400	84,000	--	--	--	--	--	--	
MW-9	9/15/2000		8.08	4.34	--	3.74	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/11/2000		8.08	4.41	--	3.67	--	110,000	14,400	768	2,610	6,670	123,000	--	--	--	--	--	--	
MW-9	3/29/2001		8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-9	6/26/2001		8.08	5.03	0.13	3.15	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/19/2001		8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/28/2001		8.08	3.73	--	4.35	--	110,000	15,000	1,500	2,280	5,530	60,900	--	--	--	--	--	--	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-9	3/12/2002		8.08	4.93	--	3.15	--	88,000	12,500	2,600	2,800	8,950	44,000	--	--	--	--	--	--	
MW-9	6/13/2002		8.08	4.13	--	3.95	--	59,000	9,870	161	2,560	5,560	35,600	--	--	--	--	--	--	
MW-9	9/6/2002		8.08	4.39	--	3.69	--	47,000	10,000	<100	2,100	4,600	31,000	--	--	--	--	--	--	
MW-9	12/13/2002		8.08	3.97	--	4.11	--	57,000	11,000	1,000	2,300	5,800	28,000	--	--	--	--	--	--	
MW-9	2/19/2003		8.08	3.25	--	4.83	--	76,000	10,000	2,100	3,000	8,900	11,000	--	--	--	--	--	--	
MW-9	6/6/2003		8.08	3.94	--	4.14	--	66,000	9,000	<500	2,500	4,400	17,000	<20,000	<500	<500	<500	<100,000	--	
MW-9	8/7/2003		8.08	3.92	(Sheen)	4.16	--	53,000	7,600	<250	2,600	4,700	17,000	<10,000	<250	<250	350	<50,000	--	
MW-9	11/20/2003		8.08	4.89	--	3.19	--	40,000	6,800	<250	860	1,100	16,000	12,000	<250	<250	<250	<50,000	--	
MW-9	4/28/2004		8.08	3.19	(Sheen)	4.89	--	47,000	5,600	690	2,300	6,800	8,500	<5,000	<120	<120	170	<25,000	--	
MW-9	8/26/2004		8.08	3.61	--	4.47	--	35,000	3,700	500	1,300	5,300	6,500	2,600	<50	<50	140	--	--	
MW-9	12/1/2004		8.08	3.99	--	4.09	--	36,000	3,500	<250	1,200	4,300	8,300	<10,000	<250	<250	<250	<50,000	--	
MW-9	2/2/2005		8.08	3.71	(Sheen)	4.37	--	21,000	1,800	130	670	2,000	3,600	5,600	<50	<50	88	<10,000	--	
MW-9	4/25/2005		10.55	3.31	(Sheen)	7.24	--	5,900	190	<5.0	120	77	540	1,400	<5.0	<5.0	14	<1,000	--	
MW-9	9/30/2005		10.55	4.02	--	6.53	--	26,000	2,400	360	1,600	4,200	2,400	520	<20	<20	61	<2,000	--	
MW-9	12/28/2005		10.55	2.99	--	7.56	--	14,000	1,400	22	350	450	2,200	1,800	<20	<10	49	<2,000	--	
MW-9	3/23/2006		10.55	2.50	--	8.05	--	4,100	250	<10	130	110	330	2,400	<20	<10	<10	<2,000	--	
MW-9	6/5/2006		10.55	3.34	--	7.21	--	8,200	2,200	79	500	1,200	1,800	1,100	<25	<13	75	<2,500	--	
MW-9	9/19/2006		10.55	4.06	--	6.49	--	9,000	2,600	15	440	370	3,100	3,900	<25	<13	100	<6,300	--	
MW-9	12/1/2006		10.55	3.88	--	6.67	--	5,400	1,600	15	310	140	1,400	2,400	<25	<13	46	<6,300	--	
MW-9	3/1/2007		10.55	2.79	--	7.76	--	6,300	250	<13	270	75	240	580	<25	<13	<13	<6,300	--	
MW-9	6/1/2007		10.55	3.53	--	7.02	--	6,500	980	16	250	95	1,800	2,300	<25	<13	50	<6,300	--	
MW-9	9/13/2007		10.55	4.78	--	5.77	--	4,500	170	14	79	27	640	7,300	<25	<13	28	<6,300	--	
MW-9	11/21/2007		10.55	4.41	--	6.14	--	4,600	790	<13	97	34	2,000	3,500	<25	<13	42	<6,300	--	
MW-9	2/29/2008		10.55	3.41	--	7.14	--	6,800	700	19	250	98	1,100	2,400	<25	<13	35	<6,300	--	
MW-9	5/23/2008		10.55	4.53	--	6.02	--	5,300	390	22	130	68	1,200	6,800	<25	<12	33	<6,200	--	
MW-9	9/26/2008		10.55	5.07	--	5.48	--	10,000	94	11	26	35	280	12,000	<1.0	<1.0	6.2	<250	--	
MW-9	12/23/2008		10.55	4.04	--	6.51	--	2,600	420	7.9	110	84	870	1,000	<1.0	<1.0	23	<250	--	
MW-9	3/9/2009		10.55	3.45	--	7.10	--	3,400	45	2.2	51	18	180	610	<1.0	<1.0	4	<250	--	
MW-9	5/28/2009		10.55	4.17	--	6.38	--	4,400	420	14	270	170	720	840	<1.0	<1.0	21	<250	0.94	
MW-9	12/10/2009		10.55	4.11	(Sheen)	6.44	--	4,400	240	7.9	17	19	780	4,200	<2.5	<2.5	15	<500	--	
MW-9	6/29/2010		10.55	4.30	--	6.25	--	4,200	680	15	110	130	1,200	4,200	<10	<10	30	<2,000	0.37	(P)
MW-9	12/30/2010		10.55	2.79	--	7.76	--	420	6.7	<0.50	2.1	2.0	13	22	<0.50	<0.50	<0.50	<250	0.79	(P)
MW-9	6/29/2011		10.55	3.72	--	6.83	--	4,700	600	13	370	120	900	960	--	--	29	--	0.48	(P)
MW-9	1/30/2012		10.55	4.09	--	6.46	--	2,300	210	5.1	10	20	630	1,600	--	--	20	--	0.75	(P)
MW-9	6/27/2012		10.55	3.51	--	7.04	--	810	78	<2.5	4.6	7.9	130	160	--	--	4.9	--	1.43	(P)
MW-9	12/7/2012		10.55	3.38	--	7.17	--	2,000	130	5.1	6.1	11	250	340	--	--	9.6	--	1.04	
MW-9	6/6/2013		10.55	4.30	--	6.25	--	3,400	480	14	8.9	15	680	2,200	--	--	33	--	1.12	
MW-9	12/13/2013		10.55	4.60	--	5.95	--	1,600	110	6.4	4.2	<5.0	220	2,500	--	--	7.7	--	2.91	

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-10	4/25/2005		12.53	8.37	--	4.16	--	<50	<0.5	<0.5	<0.5	<0.5	1.5	<20	<0.5	<0.5	<0.5	<100	--	
MW-10	9/30/2005		12.53	8.41	--	4.12	--	<50	<0.5	<0.5	<0.5	<1.0	1.5	<5.0	<0.5	<0.5	<0.5	<50	--	
MW-10	12/28/2005		12.53	7.78	--	4.75	--	<50	<0.5	<0.5	<0.5	<1.0	0.78	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-10	3/23/2006		12.53	7.77	--	4.76	--	<50	<0.5	<0.5	<0.5	<1.0	0.67	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-10	6/5/2006		12.53	8.38	--	4.15	--	<50	<0.5	<0.5	<0.5	<1.0	1.8	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-10	9/19/2006		12.53	7.99	--	4.54	--	<50	<0.5	<0.5	<0.5	<1.0	0.59	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	12/1/2006		12.53	5.47	--	7.06	--	<50	<0.5	<0.5	<0.5	<1.0	0.89	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	3/1/2007		12.53	7.92	--	4.61	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	6/1/2007		12.53	8.55	--	3.98	--	<50	<0.5	<0.5	<0.5	<1.0	1.2	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	9/13/2007		12.53	8.71	--	3.82	--	<50	<0.5	<0.5	<0.5	<1.0	0.94	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	11/21/2007		12.53	8.84	--	3.69	--	<50	<0.5	<0.5	<0.5	<1.0	2.2	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	2/29/2008		12.53	8.20	--	4.33	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	5/23/2008		12.53	8.49	--	4.04	--	<50	<0.5	<0.5	<0.5	<1.0	2.2	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-10	9/26/2008		12.53	9.91	--	2.62	--	<50	<1.0	<1.0	<1.0	<1.0	3	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-10	12/23/2008		12.53	8.60	--	3.93	--	<50	<1.0	<1.0	<1.0	<1.0	2.7	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-10	3/9/2009		12.53	7.68	--	4.85	--	<50	<1.0	<1.0	<1.0	<1.0	<1.0	6.2	<1.0	<1.0	<1.0	<250	--	
MW-10	5/28/2009		12.53	8.71	--	3.82	--	<50	<1.0	<1.0	<1.0	<1.0	1.3	<5.0	<1.0	<1.0	<1.0	<250	2.76	
MW-10	12/10/2009		12.53	8.35	--	4.18	--	<50	<0.50	<0.50	<0.50	<1.0	1.5	<4.0	<0.50	<0.50	<0.50	<100	1.81	
MW-10	6/29/2010		12.53	8.43	--	4.10	--	<50	<0.50	<0.50	<0.50	<1.0	1.6	<4.0	<0.50	<0.50	<0.50	<100	1.00	(P)
MW-10	12/30/2010		12.53	6.62	--	5.91	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<250	1.26	(P)
MW-10	6/29/2011		12.53	7.16	--	5.37	--	--	--	--	--	--	<0.50	--	--	--	--	--	0.49	(P)
MW-10	1/30/2012		12.53	7.33	--	5.20	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/27/2012		12.53	7.70	--	4.83	--	--	--	--	--	--	<0.50	--	--	--	--	--	1.14	(P)
MW-10	12/7/2012		12.53	6.29	--	6.24	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-10	6/6/2013		12.53	7.65	--	4.88	--	--	--	--	--	--	<0.50	--	--	--	--	--	1.34	
MW-10	12/13/2013		12.53	8.10	--	4.43	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)

Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes
MW-11	4/25/2005		14.55	9.29	--	5.26	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<100	--	
MW-11	9/30/2005		14.55	10.23	--	4.32	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	--	
MW-11	12/28/2005		14.55	9.09	--	5.46	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-11	3/23/2006		14.55	8.75	--	5.80	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-11	6/5/2006		14.55	9.47	--	5.08	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<100	--	
MW-11	9/19/2006		14.55	10.16	--	4.39	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	12/1/2006		14.55	10.46	--	4.09	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	3/1/2007		14.55	9.62	--	4.93	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	6/1/2007		14.55	9.97	--	4.58	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	9/13/2007		14.55	10.42	--	4.13	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	11/21/2007		14.55	10.64	--	3.91	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	2/29/2008		14.55	9.76	--	4.79	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	5/23/2008		14.55	10.51	--	4.04	--	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<1.0	<0.5	<0.5	<250	--	
MW-11	9/26/2008		14.55	10.51	--	4.04	--	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-11	12/23/2008		14.55	10.74	--	3.81	--	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-11	3/9/2009		14.55	9.50	--	5.05	--	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	--	
MW-11	5/28/2009		14.55	10.40	--	4.15	--	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<250	3.06	
MW-11	12/10/2009		14.55	10.41	--	4.14	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	1.03	
MW-11	6/29/2010		14.55	10.19	--	4.36	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<100	0.47	(P)
MW-11	12/30/2010		14.55	9.22	--	5.33	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<250	0.63	(P)
MW-11	6/29/2011		14.55	9.40	--	5.15	--	--	--	--	--	--	<0.50	--	--	--	--	--	0.75	(P)
MW-11	1/30/2012		14.55	9.49	--	5.06	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	6/27/2012		14.55	9.70	--	4.85	--	--	--	--	--	--	<0.50	--	--	--	--	--	1.13	(P)
MW-11	12/7/2012		14.55	8.85	--	5.70	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-11	6/6/2013		14.55	10.03	--	4.52	--	--	--	--	--	--	<0.50	--	--	--	--	--	1.62	
MW-11	12/13/2013		14.55	10.25	--	4.30	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)

Notes:

TOC = Top of casing (surveyed)
DTW = Depth to water
LNAPL = Light non-aqueous phase liquid
GW Elev = Calculated groundwater elevation; adjusted assuming a specific gravity of 0.75 for SPH when present.
DRO = Diesel range organics
GRO = Gasoline range organics
ORO = Motor oil range organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes, total
MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
DO = Dissolved oxygen; rounded to the nearest tenth
VOCs = Volatile organic compounds
SPH = Separate phase hydrocarbons
P/NP = Well purged/not purged prior to sampling

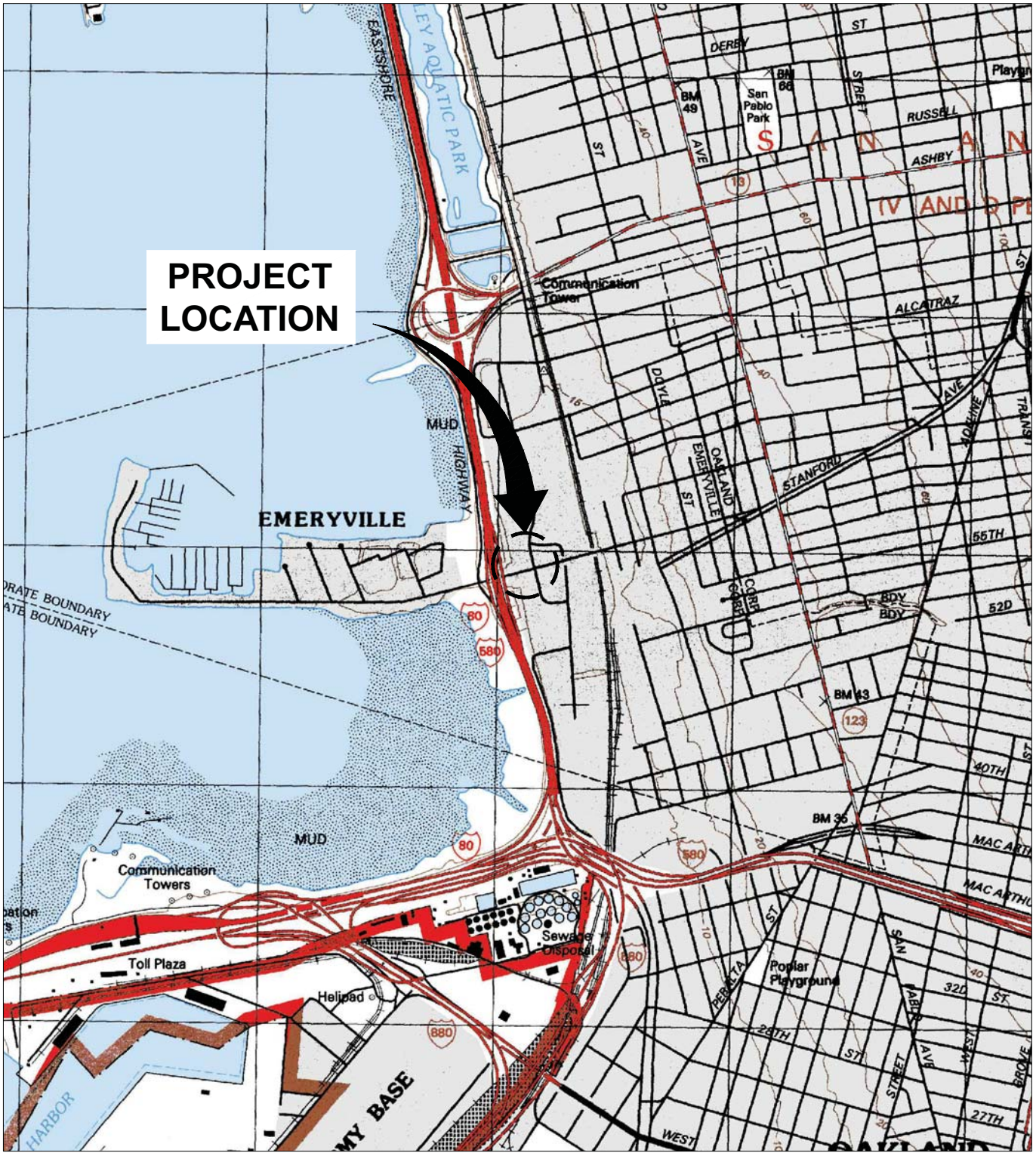
Table 2
Historical Groundwater Monitoring and Analytical Results
Former BP Station No. 11126
1700 Powell St, Emeryville, CA 94608

Well ID	Date	Type	TOC (ft)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft)	DRO (µg/L)	GRO (µg/L)	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)	DO (mg/l)	Notes

ft = Feet
mg/L = Milligrams per liter
µg/L = Micrograms per liter
< = Analyte was not detected above the specified method detection limit
-- = Not measured or analyzed
ND = Not detected (historical data; reporting limit not reported)
DUP = Duplicate sample
INA = Well inaccessible; not sampled
NS = Well not sampled
NSP = Well not sampled this event in accordance with groundwater sampling schedule.
a = DRO and ORO samples collected from MW-3 on 12/10/2009.
b = Identity of contaminant uncertain (hydrocarbon pattern atypical of indicated analyte); see lab report
1. Post-May 2005 TOC and groundwater elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level. Wells were resurveyed to the North American Vertical Datum of 1988 (NAVD '88) in May 2005.
2. All TOC and groundwater elevations starting in May 2005 are listed with respect to NAVD '88
3. Beginning in the first quarter 2003, TPHg and VOCs analyzed by EPA Method 8260B.
4. The data within this table collected prior to December 2009 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company

ARCADIS

FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA

0 2000' 4000'

Approximate Scale: 1 in. = 200

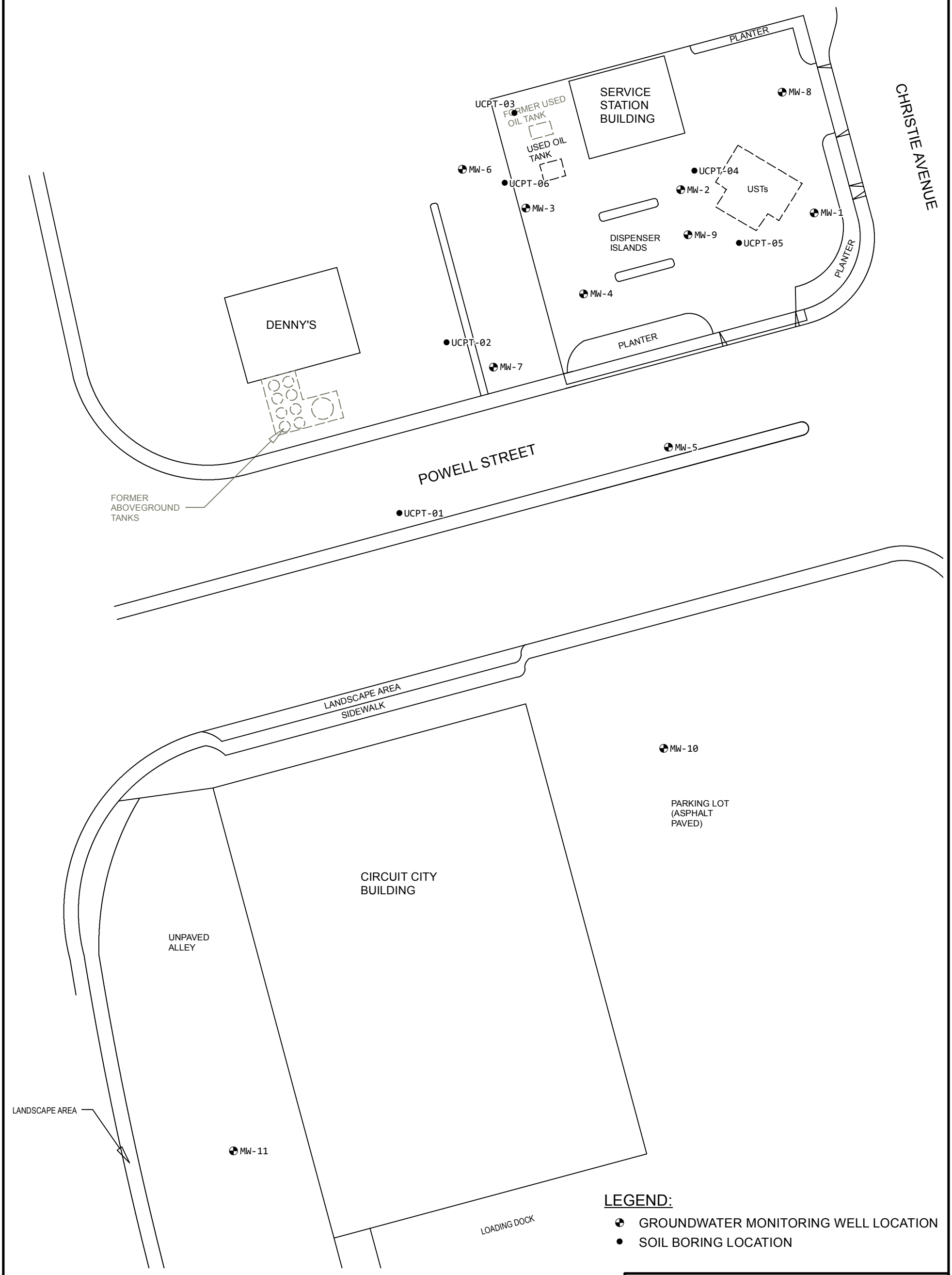
FORMER BP STATION #11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

SITE VICINITY MAP

ARCADIS

FIGURE
1

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\Q4_2013\CA11126_FIG2_SITEPLAN.MXD DATE: 2/19/2014 12:38:36 PM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

0 40 80
SCALE IN FEET

FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

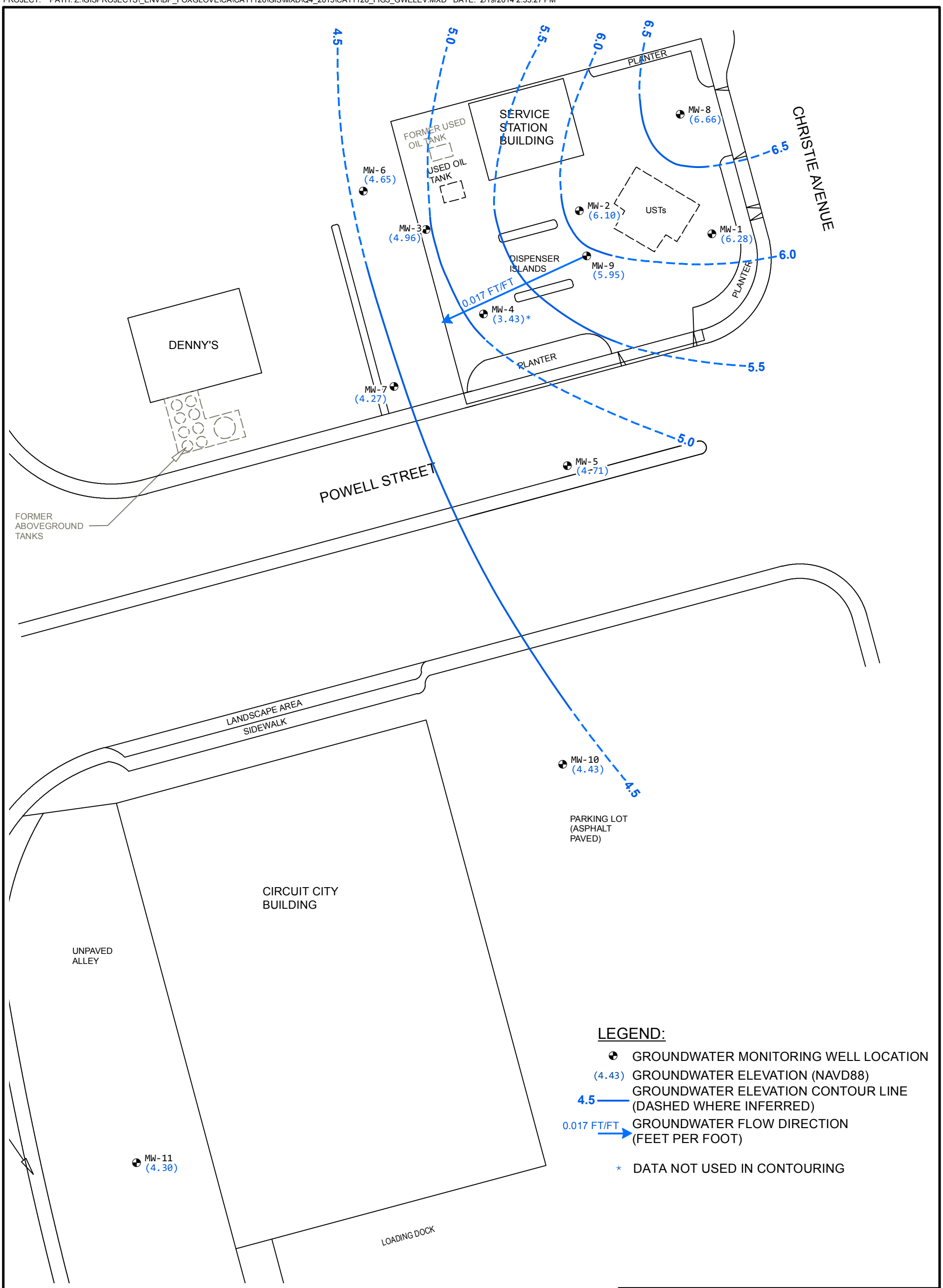
THIRD AND FOURTH QUARTER 2013
SEMI-ANNUAL GROUNDWATER MONITORING REPORT

SITE PLAN

ARCADIS

FIGURE
2

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\Q4_2013\CA11126_FIG3_GWELEV.MXD DATE: 2/19/2014 2:35:27 PM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- (4.43) GROUNDWATER ELEVATION (NAVD88)
- 4.5 GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- 0.017 FT/FT GROUNDWATER FLOW DIRECTION (FEET PER FOOT)
- * DATA NOT USED IN CONTOURING

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

0 40 80
SCALE IN FEET

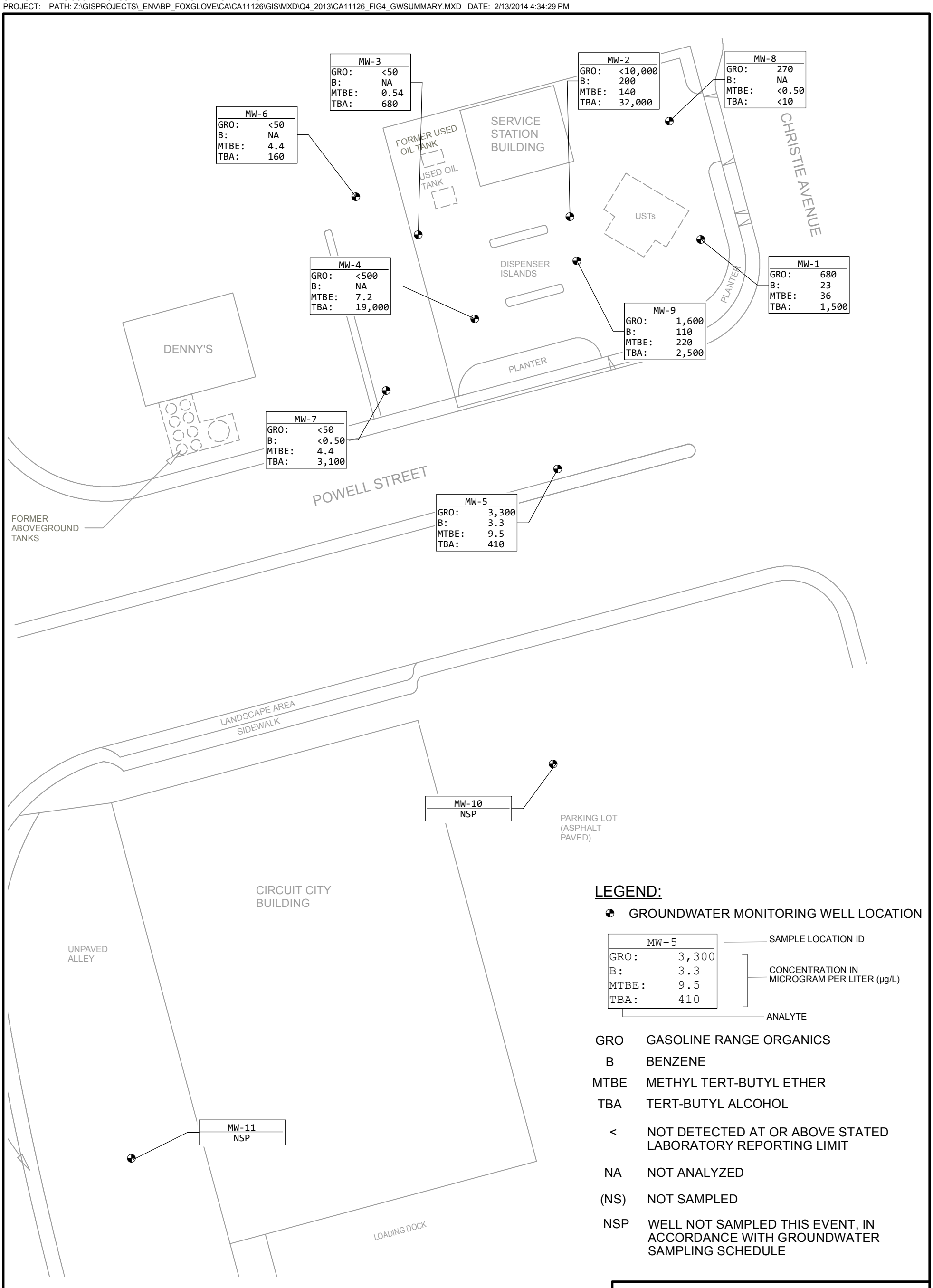
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

THIRD AND FOURTH QUARTER 2013
SEMI-ANNUAL GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR MAP DECEMBER 13, 2013

ARCADIS

FIGURE
3



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION

MW-5	
GRO:	3,300
B:	3.3
MTBE:	9.5
TBA:	410

MW-5 — SAMPLE LOCATION ID

GRO, B, MTBE, TBA — CONCENTRATION IN MICROGRAM PER LITER (µg/L)

ANALYTE

GRO	GASOLINE RANGE ORGANICS
B	BENZENE
MTBE	METHYL TERT-BUTYL ETHER
TBA	TERT-BUTYL ALCOHOL
<	NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
(NS)	NOT SAMPLED
NSP	WELL NOT SAMPLED THIS EVENT, IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED

0 40 80

SCALE IN FEET

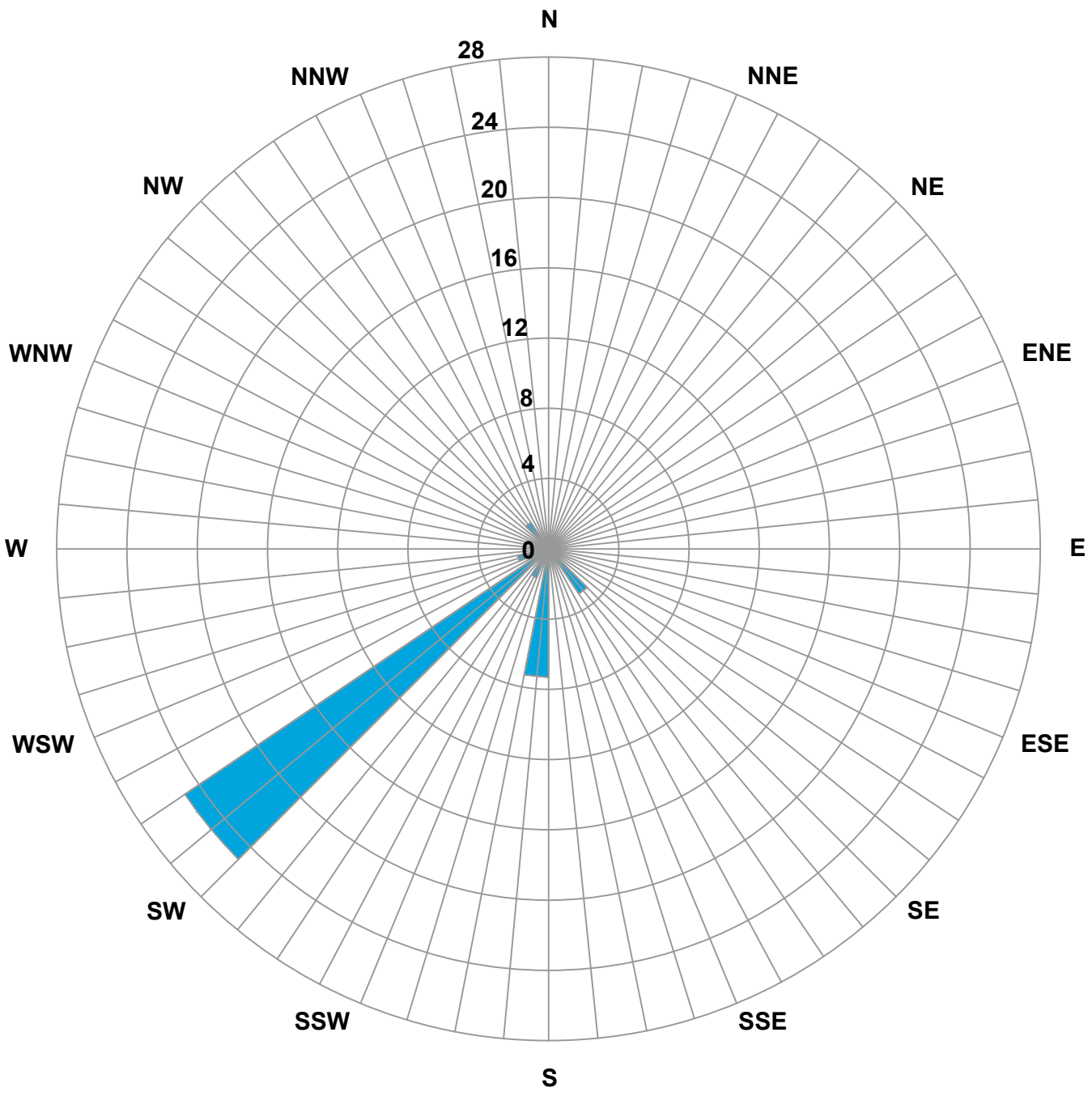
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

**THIRD AND FOURTH QUARTER 2013
SEMI-ANNUAL GROUNDWATER MONITORING REPORT**

GROUNDWATER HYDROCARBON CONCENTRATION MAP DECEMBER 13, 2013

ARCADIS

FIGURE
4



LEGEND

CONCENTRIC CIRCLES REPRESENT 44 MONITORING EVENTS CONDUCTED BETWEEN THE FIRST QUARTER 2001 AND THE FOURTH QUARTER 2013.

GROUNDWATER FLOW DIRECTION

FORMER BP STATION #11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

ARCADIS

FIGURE
5

Appendix A

Previous Investigations and Site History Summary

Site Description

Former BP service station No. 11126 (the Site) is located at 1700 Powell Street in Emeryville. The property is identified as APN 49-1494-4-10. Land use in this area is largely commercial. The Site is approximately 350 feet east of Interstate 80/580.

The site is currently in use as a 76-branded service station. BP acquired the gasoline retail outlet from Mobil Oil Corporation in 1989. In 1994, BP transferred the gasoline retail outlet to Tosco Corporation (Tosco, now ConocoPhillips). The Site surface structures consist of a station building located in the northwestern portion of the Site, two dispenser islands in the southwestern portion of the Site, a concrete slab and canopy. Three underground gasoline storage tanks (USTs; one 6,000-gallon UST, one 10,000 gallon UST, and one 12,000-gallon UST) are located east of the dispenser islands. Historical documents indicate that these USTs were installed in the late 1980s (SECOR 2007). The majority of the Site surface is paved with concrete and asphalt.

The area surrounding the Site was historically used for industrial purposes before being developed into commercial and retail shopping centers. Surrounding land use is largely commercial: a Denny's restaurant is located west of the Site; a shopping plaza is located south of the Site, a bank and offices are located to the north, and a furniture store is located to the east.

The topography of the surrounding area slopes gently to the west, toward San Francisco Bay. The Site is situated at an approximate elevation of 8 feet above mean sea level.

Previous Site Investigations and Cleanup Activities

A soil gas survey was conducted on April 10, 1989, by Target Environmental Services, Inc. on behalf of Mobil Oil Corporation 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 4 feet below ground surface (ft bgs) across the site (locations were not provided in historic documents). 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 in the vicinity of the pump islands and east of the USTs (TES 1989; SECOR 2007).

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 (the actual size is not documented) in a separate excavation. Soil samples collected from beneath the removed waste oil UST and sidewalls excavation contained detectable concentrations of total oil and grease (TOG), total petroleum hydrocarbons as diesel (TPHd), and total petroleum hydrocarbons as gasoline (TPHg). Additional soil samples were collected from the sidewalls of the new waste oil UST excavation (NWO-1 through NWO-4), located approximately 20 feet (ft) south of the former waste oil tank. All analytes were below laboratory reporting limits with the exception of TPHd and TOG which were both detected at NWO-4. TPHd was detected at 370 parts per million and TOG was detected at 10,000 ppm.

The UST pit also contained detectable concentrations of TOG and TPHd (Alisto 1994). 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, Hazardous Materials Division (EMCON 1994; SECOR 2007).

In October 1992, 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 4 ft to 20 ft 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 up to a depth of 5.5 ft bgs from the borings advanced in the immediate vicinity of the USTs and dispenser islands contained detectable concentrations of TPHg and benzene.

Groundwater samples collected from the wells in November 1992 also contained detectable concentrations of TPHd, TPHg and benzene (SECOR 2007).

In September 1993, Alisto installed five additional groundwater monitoring wells: MW- 5 through MW-7 off-site and MW-8 and MW-9) on-site. Soil samples collected from approximately 4.5 ft bgs from borings MW-5 and MW-9 contained detectable concentrations of TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX). Well MW-9, which is located in the area of the product dispensers contained separate phase hydrocarbons (SPH) at an initial thickness of 0.08 ft. A product recovery canister was subsequently installed to assist in the removal of SPH from beneath the site (SECOR 2007).

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 [CP]) 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 onsite using cone penetrometer testing (CPT) equipment. Refusal was encountered in TB-2 and TPH-3 at 10 ft and 4.5 ft bgs, respectively. Soil samples collected during this investigation contained detectable concentrations of TPHd, TPHg, TOG and benzene. Hydropunch™ groundwater samples collected during this investigation contained detectable concentrations of TPHg, TOG, 1,2-dichloroethane (1,2-DCA,), and 1,2-dichlorethene (1,2-DCE) (EMCON 1994). 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 (EMCON 1994). Grab soil samples collected from beneath the fuel dispensers (TD-1, TD-2, TD-3 and TD-4) also contained detectable concentrations of TPHg and TPHd (SECOR 2007).

In 1999, 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 (SECOR 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 one excavation. One soil sample collected from the waste oil UST excavation contained detectable concentrations of TPHd, TPHg, benzene, and total petroleum hydrocarbons as motor oil (TPHo). A grab groundwater sample collected from 7.5 ft bgs from the waste oil UST excavation contained detectable concentrations of TPHd, TPHo, benzene, and methyl tertiary butyl ether (MTBE). Soil samples collected from beneath the former clarifier (4 ft bgs), former Hoist No. 1 (8 ft bgs), and the former Hoist No. 2 (8 ft bgs) also contained detectable concentrations of TPHg, TPHd, TPHo, benzene, and lead. MTBE was not detected in soil samples collected from the excavations (SECOR 2007).

Based on the previous detections of petroleum hydrocarbons in soil in the clarifier and hoist areas, over-excavation was conducted on May 7, 1999 (SECOR 1999). Soil samples collected from the clarifier excavation at 5 ft bgs, and the hoist excavations at 5 ft bgs contained detectable concentrations of TPHg, TPHd, TPHo, and lead. 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 TPHo and 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 2007).

On March 28 and 30, 2001, Gettler-Ryan Incorporated (GRI) oversaw the removal and replacement of product lines, dispensers, and the station canopy (SECOR, 2001). 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 ft to 3.5 ft bgs prior to sampling, resulting in the removal of approximately 150 cubic yards (yd^3) 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 yd^3 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 milligrams per kilogram (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 yd^3 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 excavation (SECOR 2007).

In June 2005, URS supervised the installation of two off-site, down-gradient groundwater monitoring wells (MW-10 and MW-11) at the Powell Street Plaza property, located south of the site (URS 2005). Soil samples from both of the borings at depths of 7 ft bgs (MW-10), and 18 and 23.5 ft bgs (MW-11) did not contain petroleum hydrocarbons or fuel oxygenates at or above laboratory method reporting limits (MRLs). With the exception of a concentration of MTBE collected at 7 ft bgs 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 foot per foot (ft/ft). URS concluded that the off-site, lateral extent of dissolved impacts had been delineated during this investigation.

SECOR prepared a Remedial Action Plan (RAP), dated March 30, 2007, to perform source area remediation at the Site. Based on their feasibility analysis and review of previous site assessment and remedial activities, SECOR recommended that oxygen

injections be implemented at the Site (SECOR 2007). However, no testing was conducted.

On June 1, 2009, Stantec Consulting Corporation (Stantec) submitted the Work Plan (WP) for Additional Assessment and Extension Request to ACEH, proposing the installation of one off-site monitoring well and three on-site soil borings to 6 ft bgs. The ACEH directive, issued on July 10, 2009 in response to this WP, indicated that:

- One monitoring well was likely not sufficient to provide off-site plume characterization as there were potentially two hydraulic gradient directions;

- Soil borings should be advanced beyond 6 ft bgs to evaluate residual source contamination because historical groundwater levels had ranged between 4 and 10 ft bgs; and

- A preferential pathway study should be conducted.

On August 2, 2010, ARCADIS submitted the Work Plan Addendum for Additional Assessment (the WP Addendum) based on the original Stantec WP and the ACEH directive. In the WP Addendum, ARCADIS proposed to: (1) conduct CPT with laser induced fluorescence [LIF] to evaluate both off-site groundwater and on-site soil; and (2) perform a preferential pathway study to assess the probability of on-site contaminants migrating off-site via potential conduits. ARCADIS completed the proposed soil and groundwater investigation field activities in January 2011, as documented in the Soil and Water Investigation Report (ARCADIS 2011) and briefly summarized below:

- Five CPTs (CPT-01 through CPT-06 both on- and off-site) were advanced to approximately 25 ft bgs to collect lithologic data (Figure 3). The CPT logs were consistent with historical boring logs for nearby monitoring wells;

- Four LIF profiles were collected with the CPT rods to identify poly-aromatic hydrocarbons (PAHs), and free phase and residual non-aqueous phase liquid (NAPL) in the subsurface. Based on the LIF results NAPL is not present at the Site;

- A total of three Hydropunch^{TM} grab groundwater samples were collected from off-site borings UCPT-1 and UCPT-2. Samples were collected at 7 ft bgs from both borings, and at 21 ft bgs from UCPT-2 only. MTBE and TBA were detected at

UCPT-1 at concentrations of 14 µg/L and 63 µg/L, respectively. No analytes were detected at UCPT-2 at concentrations above the laboratory reporting limits.; and

- A total of five soil samples were collected from three borings (UCPT-3 at 7 ft bgs, UCPT-4 at 7.5 and 12.5 ft bgs, and UCPT-5 at 11.5 and 14.5 ft bgs) based on the CPT lithology and UVOST results. Concentrations of MTBE and TBA were detected in four samples; TPHg and ethylbenzene were detected in three samples; and benzene and total xylenes were detected in two samples.

The investigation results indicated no to low impacts of off-site groundwater contamination, and very low levels of soil contamination on-site.

On August 23, 2011, ARCADIS conducted slug-out tests at on-site monitoring wells MW-2, MW-4, and MW-9. A total of 4.5 gallons of groundwater were removed from MW-2, 4 gallons were removed from MW-4, and 18 gallons were removed from MW-9 over the course of two tests in each well; and depth-to-water was monitored and recorded at each well until water levels returned to near static conditions. Results of the slug-out tests indicate projected injection rates of generally less than one gallon per minute (gpm) in all tested monitoring wells and less than approximately 0.1 gpm at MW-9 (ARCADIS 2011b).

References

Alisto Engineering Group, 1994, Supplemental Site Investigation Report. April 8.

ARCADIS U.S., Inc., 2011a. Soil and Water Investigation Report, 76 (Former BP) Service Station No. 11126, 1700 Powell Street, Emeryville, California, ACEH Case # RO0000066. February 11.

ARCADIS U.S., Inc., 2011b. Feasibility Study and Corrective Action Plan, Former BP Station No. 11126. October 14.

EMCON Environmental, Inc. (EMCON), 1994, Baseline Assessment Report. December 27.

SECOR International, Inc. (SECOR), 1999, Removal of Waste Oil UST, Hoists No. 1 & No. 2 and Clarifier. June 29.

SECOR International, Inc., 2001. Removal and Replacement of Product Lines, Dispensers and Canopy. May 4.

SECOR International Inc., 2007. Remedial Action Plan; 76 (Former BP) Service Station No. 11126, 1700 Powell Street, Emeryville, California. March 30.

Target Environmental Services, Inc. (TES), 1989. Soil Gas Survey. April.

Appendix B

Groundwater Sampling Data Package

BROADBENT

DAILY REPORT

Page 1 of 1

Project: Arcadis 11126 Project No.: 09-88-662

Field Representative(s): Alex Martinez Day: Friday Date: 12/13/13

Time Onsite: From: 0630 To: 1200; From: _____ To: _____; From: _____ To: _____

x Signed HASP x Safety Glasses x Hard Hat x Steel Toe Boots x Safety Vest

x UST Emergency System Shut-off Switches Located x Proper Gloves

x Proper Level of Barricading ___ Other PPE (describe) _____

Weather: Sunny & Cool

Equipment In Use: Water Level meter, U22 meter, peristaltic pump

Visitors: Statewide

TIME:	WORK DESCRIPTION:
0630	Arrive onsite.
0635	Set up to gauge offsite wells MW-10 & 11
0700	Set up @ MW-3
0740	Set up @ MW-6
0810	Set up @ MW-7
0840	Set up @ MW-4 / Statewide arrive onsite
0910	Set up @ MW-5
0955	Set up @ MW-1
1020	Set up @ MW-9
1050	Set up @ MW-8
1120	Set up @ MW-2
1200	Completed field work & offsite.

Signature: Aly Martinez

Revision: 1/24/2012

BROADBENT

GROUNDWATER MONITORING SITE SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM Elevation: _____

Formation recharge rate is historically: High Low *(circle one)*

W. L. Indicator ID #: _____ Oil/Water Interface ID #: _____ *(List #s of all equip used.)*

WELL ID RECORD					WELL GAUGING RECORD					NOTES
Well ID	Well Sampling Order	As-Built Well Diameter (inches)	As-Built Well Screen Interval (ft)	Previous Depth to Water (ft)	Time (24:00)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)*	Depth to Water (ft)	Well Total Depth (ft)	
MW-1					1002	–	–	3.88	11.52	
MW-2					1122	–	–	5.29	12.00	
MW-3					0709	–	–	5.77	11.60	
MW-4					0844	–	–	7.15	11.00	
MW-5					0917	–	–	5.47	12.45	
MW-6					0743	–	–	6.36	12.10	
MW-7					0816	–	–	5.84	13.44	
MW-8					1051	–	–	4.42	13.85	
MW-9					1026	–	–	4.60	14.02	
MW-10					0649	–	–	8.10	17.18	
MW-11					0642	–	–	10.25	16.93	

* Device used to measure LNAPL thickness: Bailer Oil/Water Interface Meter *(circle one)*

If bailer used, note bailer dimensions (inches): Entry Diameter _____ Chamber Diameter _____

Signature: _____

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-1 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell
X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
(Good) Improvement Needed *(circle one)*

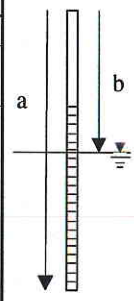
PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___(ft)
Initial Depth to Water (b): ___(ft)
Water Column Height (WCH) = (a - b): ___(ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___(gal)
Three Casing Volumes = WCV x 3: ___(gal)
Five Casing Volumes = WCV x 5: ___(gal)
Pump Depth (if pump used): ___(ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___(lpm)
Total Well Depth (a): 11.52 (ft)
Initial Depth to Water (b): 3.88 (ft)
Pump In-take Depth = b + (a-b)/2: 7.70 (ft)
Maximum Allowable Drawdown = (a-b)/8: 0.93 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1006	0.0	18.47	6.75	1.37	4.63	-143	21.3	
1008	0.5	18.46	6.67	1.39	3.36	-150	10.6	
1010	1.0	18.40	6.65	1.40	3.11	-155	4.0	
1012	1.5	18.47	6.64	1.42	3.01	-158	3.8	
1014	2.0	18.67	6.63	1.44	2.90	-161	2.3	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 4.60 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-1 Sample Collection Time: 1015 (24:00)
Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber
___ Other: ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: Alyssa Mosher

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-2 Start Time: - End Time: - Total Time (minutes):

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell
X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments: Bolts missing & well box missing bolt holes.
Good Improvement Needed (circle one)

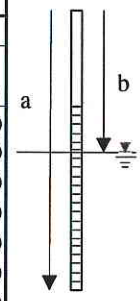
PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) (circle one)

1" | (0.04)	1.25" | (0.08)	2" | (0.17)	3" | (0.38)	Other:
4" | (0.66)	6" | (1.50)	8" | (2.60)	12" | (5.81)	___" | (___)

Total Well Depth (a): ___ (ft)
Initial Depth to Water (b): ___ (ft)
Water Column Height (WCH) = (a - b): ___ (ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)
Three Casing Volumes = WCV x 3: ___ (gal)
Five Casing Volumes = WCV x 5: ___ (gal)
Pump Depth (if pump used): ___ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)
Total Well Depth (a): 12.00 (ft)
Initial Depth to Water (b): 5.29 (ft)
Pump In-take Depth = b + (a-b)/2: 8.64 (ft)
Maximum Allowable Drawdown = (a-b)/8: 0.83 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1127	0.0	20.25	6.93	1.69	5.76	-147	2.4	Lt- HC odor
1129	0.5	20.24	6.94	1.68	3.68	-159	2.9	
1131	1.0	20.34	6.94	1.68	3.33	-166	13.5	
1133	1.5	20.21	6.94	1.69	3.22	-170	8.5	
1135	2.0	20.24	6.95	1.69	3.12	-172	5.6	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 6.40 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-2 Sample Collection Time: 1135 (24:00)
Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber
___ Other: ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-3 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell
X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
(Good) Improvement Needed *(circle one)*

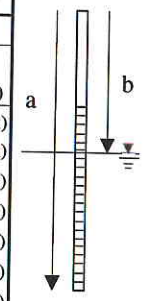
PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___ (ft)
Initial Depth to Water (b): ___ (ft)
Water Column Height (WCH) = (a - b): ___ (ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)
Three Casing Volumes = WCV x 3: ___ (gal)
Five Casing Volumes = WCV x 5: ___ (gal)
Pump Depth (if pump used): ___ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)
Total Well Depth (a): 11.60 (ft)
Initial Depth to Water (b): 5.77 (ft)
Pump In-take Depth = b + (a-b)/2: 8.68 (ft)
Maximum Allowable Drawdown = (a-b)/8: 0.79 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0715	0.0	16.41	6.22	1.17	4.35	116	3.9	
0717	0.5	18.70	6.39	1.19	1.77	86	0.9	
0719	1.0	19.06	6.48	1.20	1.77	40	0.9	
0721	1.5	19.16	6.52	1.26	1.82	1	0.9	
0723	2.0	19.15	6.56	1.28	1.92	-33	0.0	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 5.99 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-3 Sample Collection Time: 0725 (24:00)
Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber
2 Other: 1 L Amber ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-4 Start Time: – End Time: – Total Time (minutes): –

PURGE EQUIPMENT

___ Disp. Bailer ___ 120V Pump X Flow Cell

X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:

(Good) Improvement Needed *(circle one)*

PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:

4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___ (ft)

Initial Depth to Water (b): ___ (ft)

Water Column Height (WCH) = (a - b): ___ (ft)

Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)

Three Casing Volumes = WCV x 3: ___ (gal)

Five Casing Volumes = WCV x 5: ___ (gal)

Pump Depth (if pump used): ___ (ft)

LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)

Total Well Depth (a): 11.00 (ft)

Initial Depth to Water (b): 7.15 (ft)

Pump In-take Depth = b + (a-b)/2: 9.07 (ft)

Maximum Allowable Drawdown = (a-b)/8: 0.48 (ft)

Low-Flow Purge Rate: 0.25 (Lpm)*

Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0847	0.0	19.39	7.35	2.28	5.37	-183	11.9	
0849	0.5	19.11	7.28	2.27	3.60	-186	11.6	
0851	1.0	19.09	7.24	2.27	3.25	-187	10.9	
0853	1.5	19.14	7.22	2.26	3.09	-190	10.0	
0855	2.0	19.22	7.20	2.26	3.07	-191	13.4	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes

___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 8.66 (ft)

Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing

X Disp. Pump Tubing Other:

Sample ID: MW-4 Sample Collection Time: 0900 (24:00)

Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber

2 Other: 1 L Amber ___ Other:

___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: [signature]

Revision: 3/15/2013

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-5 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:

(Good) Improvement Needed *(circle one)*

PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

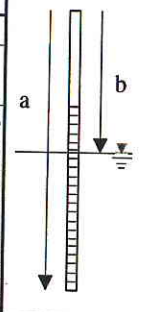
PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:

4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a):	___ (ft)
Initial Depth to Water (b):	___ (ft)
Water Column Height (WCH) = (a - b):	___ (ft)
Water Column Volume (WCV) = WCH x Unit Volume:	___ (gal)
Three Casing Volumes = WCV x 3:	___ (gal)
Five Casing Volumes = WCV x 5:	___ (gal)
Pump Depth (if pump used):	___ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate:	___ (lpm)
Total Well Depth (a):	12.45 (ft)
Initial Depth to Water (b):	5.47 (ft)
Pump In-take Depth = b + (a-b)/2:	8.96 (ft)
Maximum Allowable Drawdown = (a-b)/8:	0.87 (ft)
Low-Flow Purge Rate:	0.25 (Lpm)*
Comments:	

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0920	0.0	18.31	6.97	1.10	6.11	-139	0.6	Lt-mod. HC odor
0922	0.5	19.19	6.83	1.09	3.65	-136	0.5	
0924	1.0	19.60	6.77	1.08	3.16	-138	0.5	
0926	1.5	19.85	6.73	1.08	2.99	-140	0.5	
0928	2.0	20.06	6.71	1.08	2.87	-142	0.7	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes ___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 6.13 (ft)

Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing X Disp. Pump Tubing Other:

Sample ID: MW-5 Sample Collection Time: 0930 (24:00)

Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber

2 Other: 1 L Amber ___ Other:

___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126   Project No.: 09-88-662   Date: 12/13/13

Field Representative: AM

Well ID: MW-6   Start Time: –   End Time: –   Total Time (minutes): –

PURGE EQUIPMENT
___ Disp. Bailer   ___ 120V Pump   X Flow Cell
X Disp. Tubing   ___ 12V Pump   X Peristaltic Pump   Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.)   Comments:
(Good) Improvement Needed *(circle one)*

PURGING/SAMPLING METHOD   Predetermined Well Volume   (Low-Flow)   Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*
1" | (0.04)   1.25" | (0.08)   2" | (0.17)   3" | (0.38)   Other:
4" | (0.66)   6" | (1.50)   8" | (2.60)   12" | (5.81)   ___" | (___)

Total Well Depth (a): ___ (ft)
Initial Depth to Water (b): ___ (ft)
Water Column Height (WCH) = (a - b): ___ (ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)
Three Casing Volumes = WCV x 3: ___ (gal)
Five Casing Volumes = WCV x 5: ___ (gal)
Pump Depth (if pump used): ___ (ft)

LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)
Total Well Depth (a): 12.10 (ft)
Initial Depth to Water (b): 6.36 (ft)
Pump In-take Depth = b + (a-b)/2: 9.23 (ft)
Maximum Allowable Drawdown = (a-b)/8: 0.71 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0748	0.0	20.67	6.94	6.71	4.11	-157	9.7	Mild-Mod. hydro-
0750	0.5	21.15	6.98	6.63	3.07	-175	7.3	carbon odor
0752	1.0	21.31	7.02	6.38	2.83	-184	9.4	
0754	1.5	21.38	7.05	6.02	2.78	-191	6.4	
0756	2.0	21.37	7.06	5.71	2.76	-194	3.3	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD   X Low Flow & Parameters Stable   ___ 3 Casing Volumes & Parameters Stable   ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 7.20 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing   Other:
Sample ID: MW-6   Sample Collection Time: 0800 (24:00)
Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber
2 Other: 1L Amber   ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: [signature]

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-[redacted]7 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump x Flow Cell
x Disp. Tubing ___ 12V Pump x Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
(Good) Improvement Needed *(circle one)*

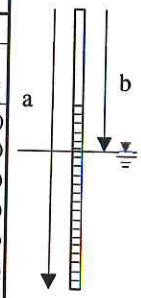
PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___ (ft)
Initial Depth to Water (b): ___ (ft)
Water Column Height (WCH) = (a - b): ___ (ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)
Three Casing Volumes = WCV x 3: ___ (gal)
Five Casing Volumes = WCV x 5: ___ (gal)
Pump Depth (if pump used): ___ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)
Total Well Depth (a): 13.44 (ft)
Initial Depth to Water (b): 5.84 (ft)
Pump In-take Depth = b + (a-b)/2: 9.64 (ft)
Maximum Allowable Drawdown = (a-b)/8: 0.95 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0819	0.0	19.88	7.37	7.77	5.74	-148	0.0	
0821	0.5	21.08	7.30	7.48	3.39	-159	0.0	
0823	1.0	21.56	7.28	5.55	2.92	-174	0.0	
0825	1.5	21.67	7.25	5.09	2.85	-182	0.0	
0827	2.0	21.74	7.22	4.59	2.75	-189	0.0	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD x Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 6.05 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
x Disp. Pump Tubing Other:
Sample ID: MW-[redacted]7 Sample Collection Time: 0830 (24:00)
Containers (#): 3 VOA (x preserved or ___ unpreserved) ___ Liter Amber
2 Other: 1 L Amber ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

Revision: 3/15/2013

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 111126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-8 Start Time: — End Time: — Total Time (minutes): —

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:

(Good) Improvement Needed *(circle one)*

PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:

4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ____" | (____)

Total Well Depth (a): _____(ft)

Initial Depth to Water (b): _____(ft)

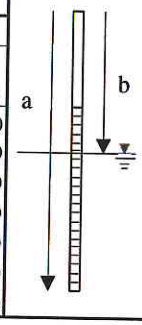
Water Column Height (WCH) = (a - b): _____(ft)

Water Column Volume (WCV) = WCH x Unit Volume: _____(gal)

Three Casing Volumes = WCV x 3: _____(gal)

Five Casing Volumes = WCV x 5: _____(gal)

Pump Depth (if pump used): _____(ft)



LOW-FLOW

Previous Low-Flow Purge Rate: _____(lpm)

Total Well Depth (a): 13.85 (ft)

Initial Depth to Water (b): 4.42 (ft)

Pump In-take Depth = b + (a-b)/2: 9.13 (ft)

Maximum Allowable Drawdown = (a-b)/8: 1.17 (ft)

Low-Flow Purge Rate: 0.25 (Lpm)*

Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1056	0.0	21.15	7.07	0.999	4.72	-159	2.0	
1058	0.5	21.28	6.95	0.909	3.25	-171	2.1	
1100	1.0	21.38	6.92	0.999	2.99	-178	5.5	
1102	1.5	21.34	6.95	0.999	2.98	-181	3.4	
1104	2.0	21.40	6.93	0.999	2.86	-182	2.5	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes

___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 5.21 (ft)

Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing

X Disp. Pump Tubing Other:

Sample ID: MW-8 Sample Collection Time: 1105 (24:00)

Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber

2 Other: 1 L Amber ___ Other:

___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: Arcadis 11126 Project No.: 09-88-662 Date: 12/13/13

Field Representative: AM

Well ID: MW-9 Start Time: ~ End Time: ~ Total Time (minutes): ~

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell
X Disp. Tubing ___ 12V Pump X Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
(Good) Improvement Needed *(circle one)*

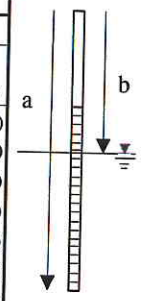
PURGING/SAMPLING METHOD Predetermined Well Volume (Low-Flow) Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___(ft)
Initial Depth to Water (b): ___(ft)
Water Column Height (WCH) = (a - b): ___(ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___(gal)
Three Casing Volumes = WCV x 3: ___(gal)
Five Casing Volumes = WCV x 5: ___(gal)
Pump Depth (if pump used): ___(ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___(lpm)
Total Well Depth (a): 14.02 (ft)
Initial Depth to Water (b): 4.60 (ft)
Pump In-take Depth = b + (a-b)/2: 9.31 (ft)
Maximum Allowable Drawdown = (a-b)/8: 1.17 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
Comments:

**Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or (L)	Temperature °C	pH	Conductivity µS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1031	0.0	19.08	6.85	1.04	6.38	-117	20.7	
1033	0.5	19.35	6.81	1.01	3.42	-128	4.5	
1035	1.0	19.46	6.81	1.02	3.07	-134	4.3	
1037	1.5	19.49	6.81	1.02	2.99	-137	3.2	
1039	2.0	19.53	6.80	1.02	2.91	-139	2.4	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes
___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 5.00 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-9 Sample Collection Time: 1040 (24:00)
Containers (#): 3 VOA (X preserved or ___ unpreserved) ___ Liter Amber
___ Other: ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

Revision: 3/15/2013

San Francisco
1220 Quarry Lane

Pleasanton, CA 94566
phone 925.484.1919 fax 925.600.3002

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Kristene Tidwell	Site Contact/Sampler: Alex Martinez	Date:	COC No:
Broadbent & Associates, Inc.	Tel/Fax: 707-455-7290 / 707-455-7295	Lab Contact: Dimple Sharma	Carrier:	____ of ____ COCs
875 Cotting Lane, Suite G	**Analysis Turnaround Time**			Job No.
Vacaville, CA 95688	Calendar (C) or Work Days (W) ____			
Phone: 707-455-7290	TAT if different from Below STD			SDG No.
Fax: 707-455-7295	☒ 2 weeks			
Project Name: Arcadis 11126	☐ 1 week			
1700 Powell Street, Emeryville, CA	☐ 2 days			
P O # GP09BPNA.C044	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by 8260B	DRO (w/silica gel cleanup) by 8015M	BTEX by 8260	TBA, MTBE & TAME by 8260	5 Fuel Oxygenates & 1,2-DCA by 8260	EDB by 8260	Sample Specific Notes:
MW-1	12/13/13	1015	GRAB	Water	3		X		X	X			
MW-2		1135			3		X		X		X	X	
MW-3		0725			5		X	X		X			
MW-4		0900			5		X	X		X			
MW-5		0930			5		X	X	X	X			
MW-6		0800			5		X	X		X			
MW-7		0830			5		X	X	X	X			
MW-8		1105			5		X	X		X			
MW-9	↓	1040	↓		3		X		X	X			
TB-11126-12132013	—	—	—	↓	2								On Hold

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* *Archive for* ____ *Months*

Special Instructions:

4-7°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Alex Martinez	Broadbent	12/13/13 1245	Joan Mullen	TestAmerica	12-13-13 1245
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

559116

7T2786

STATEWIDE TRAFFIC SAFETY & SIGNS

☐ Arcata ☐ Poway ☐ Anaheim ☐ Long Beach ☐ San Jose ☐ Redding
☐ Nipomo ☒ Sacramento ☐ Fairfield ☐ Fresno ☐ Bakersfield

TRAFFIC CONTROL WORK ORDER REPORT

CONTRACTOR: BROADBENT	CONTACT:	PHONE:	DATE: 12-13-13
LOCATION:		CONTRACT#	JOB #

Work Description: 1 MAN #09-88-662

DATE 12-13-13

CUSTOMER BROADBENT CITY EMERYVILLE

CLOSURE LOCATION/STREET 1700 POWELL ST

JOBSITE CONTACT ALEX

FWY	ST	HWY/STREET LANE CLOSURES	Length/ Qty	TCSC Work Window Start Time	TCSC Work Window End Time	TCSC Work Window Total Hours	Contractor Work Window Start Time	Contractor Work Window End Time	Contractor Work Window Total Hours	Notes
☐	☒	1 Lane 1 Direction (T-10) 1 MAN					8:30	12:30	4	5 SCCS(S) 5 SIGNS 5C CONES
☐	☐	2 Lanes 1 Direction (T-10)								
☐	☐	3 Lanes 1 Direction (T-10)								
☐	☐	Additional 1 Lane Different Location (T-10)								
☐	☐	Additional 2 Lanes Different Location (T-10)								
☐	☐	Additional 3 Lanes Different Location (T-10)								
☐	☐	Connector Closure Only (T-14 Mod)								
☐	☐	Off-Ramp Closure during Lane/Street Closure (T-14 Mod)								
☐	☐	On-Ramp Closure during Lane/Street Closure (T-14)								
☐	☐	Connector Closure during Lane Closure (T-14 Mod)								
☐	☐	Complete Freeway/Street Closure (T-14A)								
☐	☐	Flagging (T-13)								
☐	☐	Movin Lane Closure (T-15, T-16)								
☐	☐									
☐	☐									

	QTY	Asset #	Start Time	End Time	Total Hours	Notes
Impact Attenuator Vehicle TL-3 & Driver TRUCK 0993	1		8:30	12:30	4	
Pilot Car						
Additional Man						
Additional Lanes						
Portable Changeable Message Sign						
Portable Light Towers						
Arrow Boards						

EMPLOYEE	Reg Hrs	OT	DT
JEFF ALLEN	4		

Foreman JP ALL

Contractor ALEX MEL

R/E Inspector

White - dispatch / Pink - billing / Blue - other / Canary - customer

SSS-TC-WO 8/2012

Appendix C

Certified Laboratory Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-54371-1
Client Project/Site: BP #11126, Emeryville

For:
ARCADIS U.S., Inc.
100 Montgomery Street
Suite 300
San Francisco, California 94104

Attn: Hollis Phillips

Authorized for release by:
12/30/2013 4:03:01 PM
Micah Smith, Project Manager I
( )
micah.smith@testamericainc.com

Designee for

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F	MS/MSD Recovery and/or RPD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-54371-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-54371-1

Comments
No additional comments.

Receipt
The samples were received on 12/13/2013 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.7° C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch #150130 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch #150209 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-1 — Lab Sample ID: 720-54371-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	36		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	23		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	3.4		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	3.2		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	9.9		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	680		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	1500		10		ug/L	1		8260B/CA_LUFT MS	Total/NA
TAME	1.7		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 720-54371-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	140		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Benzene	200		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
TBA	32000		2000		ug/L	200		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 720-54371-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.54		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	680		10		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 720-54371-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	7.2		5.0		ug/L	10		8260B/CA_LUFT MS	Total/NA
TBA	19000		100		ug/L	10		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 720-54371-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	9.5		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	3.3		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	0.79		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 720-54371-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	4.1		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	3300		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	410		10		ug/L	1		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	600		52		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-6 — Lab Sample ID: 720-54371-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	4.4		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	160		10		ug/L	1		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	140		53		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-7 — Lab Sample ID: 720-54371-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	4.4		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	3100		50		ug/L	5		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-8 — Lab Sample ID: 720-54371-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C12	270		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	100		53		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-9 — Lab Sample ID: 720-54371-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	220		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Benzene	110		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	4.2		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Toluene	6.4		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1600		250		ug/L	5		8260B/CA_LUFT MS	Total/NA
TBA	2500		50		ug/L	5		8260B/CA_LUFT MS	Total/NA
TAME	7.7		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-1
Date Collected: 12/13/13 10:15
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	36		0.50		ug/L			12/16/13 18:46	1
Benzene	23		0.50		ug/L			12/16/13 18:46	1
Ethylbenzene	3.4		0.50		ug/L			12/16/13 18:46	1
Toluene	3.2		0.50		ug/L			12/16/13 18:46	1
Xylenes, Total	9.9		1.0		ug/L			12/16/13 18:46	1
Gasoline Range Organics (GRO) -C6-C12	680		50		ug/L			12/16/13 18:46	1
TBA	1500		10		ug/L			12/16/13 18:46	1
TAME	1.7		0.50		ug/L			12/16/13 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*67 - 130*		*12/16/13 18:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*		*12/16/13 18:46*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*12/16/13 18:46*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-2
Date Collected: 12/13/13 11:35
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**140**		100		ug/L			12/14/13 01:23	200
Benzene	**200**		100		ug/L			12/14/13 01:23	200
EDB	ND		100		ug/L			12/14/13 01:23	200
1,2-DCA	ND		100		ug/L			12/14/13 01:23	200
Ethylbenzene	ND		100		ug/L			12/14/13 01:23	200
Toluene	ND		100		ug/L			12/14/13 01:23	200
Xylenes, Total	ND		200		ug/L			12/14/13 01:23	200
Gasoline Range Organics (GRO) -C6-C12	ND		10000		ug/L			12/14/13 01:23	200
TBA	**32000**		2000		ug/L			12/14/13 01:23	200
DIPE	ND		100		ug/L			12/14/13 01:23	200
TAME	ND		100		ug/L			12/14/13 01:23	200
Ethyl t-butyl ether	ND		100		ug/L			12/14/13 01:23	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*67 - 130*		*12/14/13 01:23*	*200*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*12/14/13 01:23*	*200*
Toluene-d8 (Surr)	*103*		*70 - 130*		*12/14/13 01:23*	*200*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-3
Date Collected: 12/13/13 07:25
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-3
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**0.54**		0.50		ug/L			12/16/13 17:20	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/16/13 17:20	1
TBA	**680**		10		ug/L			12/16/13 17:20	1
TAME	ND		0.50		ug/L			12/16/13 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*67 - 130*		*12/16/13 17:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*		*12/16/13 17:20*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*12/16/13 17:20*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		49		ug/L		12/19/13 10:53	12/20/13 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 5*	*12/19/13 10:53*	*12/20/13 14:54*	*1*
p-Terphenyl	*87*		*31 - 150*	*12/19/13 10:53*	*12/20/13 14:54*	*1*

Client Sample ID: MW-4
Date Collected: 12/13/13 09:00
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**7.2**		5.0		ug/L			12/17/13 02:19	10
Gasoline Range Organics (GRO) -C6-C12	ND		500		ug/L			12/17/13 02:19	10
TBA	**19000**		100		ug/L			12/17/13 02:19	10
TAME	ND		5.0		ug/L			12/17/13 02:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*67 - 130*		*12/17/13 02:19*	*10*
1,2-Dichloroethane-d4 (Surr)	*88*		*72 - 130*		*12/17/13 02:19*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/17/13 02:19*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		49		ug/L		12/19/13 10:53	12/20/13 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 5*	*12/19/13 10:53*	*12/20/13 15:23*	*1*
p-Terphenyl	*96*		*31 - 150*	*12/19/13 10:53*	*12/20/13 15:23*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-5
Date Collected: 12/13/13 09:30
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	9.5		0.50		ug/L			12/17/13 02:45	1
Benzene	3.3		0.50		ug/L			12/17/13 02:45	1
Ethylbenzene	0.79		0.50		ug/L			12/17/13 02:45	1
Toluene	1.0		0.50		ug/L			12/17/13 02:45	1
Xylenes, Total	4.1		1.0		ug/L			12/17/13 02:45	1
Gasoline Range Organics (GRO) -C6-C12	3300		50		ug/L			12/17/13 02:45	1
TBA	410		10		ug/L			12/17/13 02:45	1
TAME	ND		0.50		ug/L			12/17/13 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*67 - 130*		*12/17/13 02:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*		*12/17/13 02:45*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/17/13 02:45*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	600		52		ug/L		12/19/13 10:53	12/20/13 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*12/19/13 10:53*	*12/20/13 15:53*	*1*
p-Terphenyl	*96*		*31 - 150*	*12/19/13 10:53*	*12/20/13 15:53*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-6
Date Collected: 12/13/13 08:00
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-6
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**4.4**		0.50		ug/L			12/17/13 03:11	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/17/13 03:11	1
TBA	**160**		10		ug/L			12/17/13 03:11	1
TAME	ND		0.50		ug/L			12/17/13 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*67 - 130*		*12/17/13 03:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*		*12/17/13 03:11*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*12/17/13 03:11*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**140**		53		ug/L		12/19/13 10:53	12/20/13 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*12/19/13 10:53*	*12/20/13 14:54*	*1*
p-Terphenyl	*95*		*31 - 150*	*12/19/13 10:53*	*12/20/13 14:54*	*1*

Client Sample ID: MW-7
Date Collected: 12/13/13 08:30
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-7
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**4.4**		0.50		ug/L			12/17/13 03:36	1
Benzene	ND		0.50		ug/L			12/17/13 03:36	1
Ethylbenzene	ND		0.50		ug/L			12/17/13 03:36	1
Toluene	ND		0.50		ug/L			12/17/13 03:36	1
Xylenes, Total	ND		1.0		ug/L			12/17/13 03:36	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/17/13 03:36	1
TBA	**3100**		50		ug/L			12/17/13 13:54	5
TAME	ND		0.50		ug/L			12/17/13 03:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*83*		*67 - 130*		*12/17/13 03:36*	*1*
4-Bromofluorobenzene	*107*		*67 - 130*		*12/17/13 13:54*	*5*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*		*12/17/13 03:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*12/17/13 13:54*	*5*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/17/13 03:36*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*12/17/13 13:54*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		12/19/13 10:53	12/20/13 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.06*		*0 - 5*	*12/19/13 10:53*	*12/20/13 15:23*	*1*
p-Terphenyl	*97*		*31 - 150*	*12/19/13 10:53*	*12/20/13 15:23*	*1*

Client Sample ID: MW-8
Date Collected: 12/13/13 11:05
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-8
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/17/13 04:02	1
Gasoline Range Organics (GRO) -C6-C12	270		50		ug/L			12/17/13 04:02	1
TBA	ND		10		ug/L			12/17/13 13:24	1
TAME	ND		0.50		ug/L			12/17/13 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*67 - 130*		*12/17/13 04:02*	*1*
4-Bromofluorobenzene	*111*		*67 - 130*		*12/17/13 13:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*72 - 130*		*12/17/13 04:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*72 - 130*		*12/17/13 13:24*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*12/17/13 04:02*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*12/17/13 13:24*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	100		53		ug/L		12/19/13 10:53	12/20/13 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.006*		*0 - 5*	*12/19/13 10:53*	*12/20/13 15:53*	*1*
p-Terphenyl	*98*		*31 - 150*	*12/19/13 10:53*	*12/20/13 15:53*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-9
Date Collected: 12/13/13 10:40
Date Received: 12/13/13 12:45

Lab Sample ID: 720-54371-9
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	220		2.5		ug/L			12/17/13 04:28	5
Benzene	110		2.5		ug/L			12/17/13 04:28	5
Ethylbenzene	4.2		2.5		ug/L			12/17/13 04:28	5
Toluene	6.4		2.5		ug/L			12/17/13 04:28	5
Xylenes, Total	ND		5.0		ug/L			12/17/13 04:28	5
Gasoline Range Organics (GRO) -C6-C12	1600		250		ug/L			12/17/13 04:28	5
TBA	2500		50		ug/L			12/17/13 04:28	5
TAME	7.7		2.5		ug/L			12/17/13 04:28	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*67 - 130*		*12/17/13 04:28*	*5*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*		*12/17/13 04:28*	*5*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/17/13 04:28*	*5*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-150082/4
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			12/13/13 20:35	1
Benzene	ND		0.50		ug/L			12/13/13 20:35	1
EDB	ND		0.50		ug/L			12/13/13 20:35	1
1,2-DCA	ND		0.50		ug/L			12/13/13 20:35	1
Ethylbenzene	ND		0.50		ug/L			12/13/13 20:35	1
Toluene	ND		0.50		ug/L			12/13/13 20:35	1
Xylenes, Total	ND		1.0		ug/L			12/13/13 20:35	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/13/13 20:35	1
DIPE	ND		0.50		ug/L			12/13/13 20:35	1
Ethyl t-butyl ether	ND		0.50		ug/L			12/13/13 20:35	1
TBA	ND		10		ug/L			12/13/13 20:35	1
TAME	ND		0.50		ug/L			12/13/13 20:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*67 - 130*		*12/13/13 20:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*12/13/13 20:35*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*12/13/13 20:35*	*1*

Lab Sample ID: LCS 720-150082/5
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	24.8		ug/L		99	62 - 130
Benzene	25.0	26.4		ug/L		106	79 - 130
EDB	25.0	27.5		ug/L		110	70 - 130
1,2-DCA	25.0	24.4		ug/L		98	61 - 132
Ethylbenzene	25.0	27.3		ug/L		109	80 - 120
Toluene	25.0	26.0		ug/L		104	78 - 120
DIPE	25.0	23.1		ug/L		93	69 - 134
Ethyl t-butyl ether	25.0	23.6		ug/L		94	70 - 130
TBA	500	474		ug/L		95	70 - 130
TAME	25.0	25.0		ug/L		100	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 720-150082/7
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	514		ug/L		103	58 - 120

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-150082/7
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 720-150082/6
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	23.9		ug/L		96	62 - 130	4	20
Benzene			25.0	26.0		ug/L		104	79 - 130	2	20
EDB			25.0	26.8		ug/L		107	70 - 130	2	20
1,2-DCA			25.0	23.6		ug/L		94	61 - 132	4	20
Ethylbenzene			25.0	27.1		ug/L		108	80 - 120	1	20
Toluene			25.0	25.8		ug/L		103	78 - 120	1	20
DIPE			25.0	22.2		ug/L		89	69 - 134	4	20
Ethyl t-butyl ether			25.0	23.0		ug/L		92	70 - 130	3	20
TBA			500	476		ug/L		95	70 - 130	0	20
TAME			25.0	24.4		ug/L		97	79 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 720-150082/8
Matrix: Water
Analysis Batch: 150082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	511		ug/L		102	58 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 720-150130/5
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/16/13 09:26	1
Benzene	ND		0.50		ug/L			12/16/13 09:26	1
Ethylbenzene	ND		0.50		ug/L			12/16/13 09:26	1
Toluene	ND		0.50		ug/L			12/16/13 09:26	1
Xylenes, Total	ND		1.0		ug/L			12/16/13 09:26	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-150130/5
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/16/13 09:26	1
TBA	ND		10		ug/L			12/16/13 09:26	1
TAME	ND		0.50		ug/L			12/16/13 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*67 - 130*		*12/16/13 09:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*		*12/16/13 09:26*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*12/16/13 09:26*	*1*

Lab Sample ID: LCS 720-150130/6
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	24.4		ug/L		98	62 - 130
Benzene	25.0	26.0		ug/L		104	79 - 130
Ethylbenzene	25.0	26.9		ug/L		108	80 - 120
Toluene	25.0	25.5		ug/L		102	78 - 120
TBA	500	465		ug/L		93	70 - 130
TAME	25.0	25.0		ug/L		100	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCS 720-150130/8
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	497		ug/L		99	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 720-150130/7
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	25.3		ug/L		101	62 - 130	4	20
Benzene	25.0	26.4		ug/L		105	79 - 130	1	20
Ethylbenzene	25.0	27.3		ug/L		109	80 - 120	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-150130/7
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			25.0	25.9		ug/L		103	78 - 120	1	20
TBA			500	481		ug/L		96	70 - 130	3	20
TAME			25.0	25.8		ug/L		103	79 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 720-150130/9
Matrix: Water
Analysis Batch: 150130

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	523		ug/L		105	58 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: 720-54371-3 MS
Matrix: Water
Analysis Batch: 150130

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	0.54		25.0	29.6		ug/L		116	60 - 138
Benzene	ND		25.0	29.5		ug/L		118	60 - 140
Ethylbenzene	ND		25.0	28.2		ug/L		113	60 - 140
Toluene	ND		25.0	27.1		ug/L		108	60 - 140
TBA	680		500	999		ug/L		63	60 - 140
TAME	ND		25.0	29.7		ug/L		119	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: 720-54371-3 MSD
Matrix: Water
Analysis Batch: 150130

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	0.54		25.0	29.0		ug/L		114	60 - 138	2	20
Benzene	ND		25.0	28.5		ug/L		114	60 - 140	3	20
Ethylbenzene	ND		25.0	27.7		ug/L		111	60 - 140	2	20
Toluene	ND		25.0	26.6		ug/L		106	60 - 140	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-54371-3 MSD
Matrix: Water
Analysis Batch: 150130

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TBA	680		500	988		ug/L		61	60 - 140	1	20
TAME	ND		25.0	29.3		ug/L		117	60 - 140	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 720-150132/5
Matrix: Water
Analysis Batch: 150132

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/16/13 18:35	1
Benzene	ND		0.50		ug/L			12/16/13 18:35	1
Ethylbenzene	ND		0.50		ug/L			12/16/13 18:35	1
Toluene	ND		0.50		ug/L			12/16/13 18:35	1
Xylenes, Total	ND		1.0		ug/L			12/16/13 18:35	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/16/13 18:35	1
TBA	ND		10		ug/L			12/16/13 18:35	1
TAME	ND		0.50		ug/L			12/16/13 18:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*67 - 130*		*12/16/13 18:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*		*12/16/13 18:35*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*12/16/13 18:35*	*1*

Lab Sample ID: LCS 720-150132/6
Matrix: Water
Analysis Batch: 150132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	26.6		ug/L		106	62 - 130
TBA	500	447		ug/L		89	70 - 130
TAME	25.0	27.1		ug/L		108	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*81*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-150132/8
Matrix: Water
Analysis Batch: 150132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	464		ug/L		93	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 720-150132/7
Matrix: Water
Analysis Batch: 150132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			25.0	26.3		ug/L		105	62 - 130	1	20
Benzene			25.0	25.4		ug/L		101	79 - 130	2	20
Ethylbenzene			25.0	24.1		ug/L		97	80 - 120	11	20
Toluene			25.0	24.4		ug/L		98	78 - 120	16	20
TBA			500	445		ug/L		89	70 - 130	0	20
TAME			25.0	26.9		ug/L		107	79 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*72 - 130*
Toluene-d8 (Surr)	*81*		*70 - 130*

Lab Sample ID: LCSD 720-150132/9
Matrix: Water
Analysis Batch: 150132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	473		ug/L		95	58 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 720-150209/4
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/17/13 09:17	1
Benzene	ND		0.50		ug/L			12/17/13 09:17	1
Ethylbenzene	ND		0.50		ug/L			12/17/13 09:17	1
Toluene	ND		0.50		ug/L			12/17/13 09:17	1
Xylenes, Total	ND		1.0		ug/L			12/17/13 09:17	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-150209/4
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			12/17/13 09:17	1
TBA	ND		10		ug/L			12/17/13 09:17	1
TAME	ND		0.50		ug/L			12/17/13 09:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*67 - 130*		*12/17/13 09:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*72 - 130*		*12/17/13 09:17*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*12/17/13 09:17*	*1*

Lab Sample ID: LCS 720-150209/5
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	25.8		ug/L		103	62 - 130
Benzene	25.0	25.4		ug/L		102	79 - 130
Ethylbenzene	25.0	27.1		ug/L		108	80 - 120
Toluene	25.0	25.5		ug/L		102	78 - 120
TBA	500	518		ug/L		104	70 - 130
TAME	25.0	26.0		ug/L		104	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCS 720-150209/7
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	542		ug/L		108	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*113*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 720-150209/6
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	27.9		ug/L		112	62 - 130	8	20
Benzene	25.0	25.5		ug/L		102	79 - 130	0	20
Ethylbenzene	25.0	25.6		ug/L		102	80 - 120	6	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-150209/6
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			25.0	26.3		ug/L		105	78 - 120	3	20
TBA			500	526		ug/L		105	70 - 130	2	20
TAME			25.0	28.1		ug/L		113	79 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 720-150209/8
Matrix: Water
Analysis Batch: 150209

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	520		ug/L		104	58 - 120	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 720-54371-8 MS
Matrix: Water
Analysis Batch: 150209

Client Sample ID: MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	ND		25.0	26.0		ug/L		104	60 - 138
Benzene	ND		25.0	26.7		ug/L		107	60 - 140
Ethylbenzene	ND		25.0	29.0		ug/L		116	60 - 140
Toluene	ND		25.0	27.6		ug/L		110	60 - 140
TBA	ND		500	280	F	ug/L		55	60 - 140
TAME	ND		25.0	26.3		ug/L		105	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: 720-54371-8 MSD
Matrix: Water
Analysis Batch: 150209

Client Sample ID: MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		25.0	30.0		ug/L		120	60 - 138	14	20
Benzene	ND		25.0	28.5		ug/L		114	60 - 140	7	20
Ethylbenzene	ND		25.0	29.0		ug/L		116	60 - 140	0	20
Toluene	ND		25.0	27.7		ug/L		111	60 - 140	0	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-54371-8 MSD
Matrix: Water
Analysis Batch: 150209

Client Sample ID: MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TBA	ND		500	278	F	ug/L		55	60 - 140	1	20
TAME	ND		25.0	29.9		ug/L		120	60 - 140	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-150439/1-A
Matrix: Water
Analysis Batch: 150499

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 150439

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		12/19/13 10:53	12/20/13 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 5*	*12/19/13 10:53*	*12/20/13 12:57*	*1*
p-Terphenyl	*80*		*31 - 150*	*12/19/13 10:53*	*12/20/13 12:57*	*1*

Lab Sample ID: LCS 720-150439/2-A
Matrix: Water
Analysis Batch: 150499

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 150439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1900		ug/L		76	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*117*		*31 - 150*

Lab Sample ID: LCSD 720-150439/3-A
Matrix: Water
Analysis Batch: 150499

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 150439

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2500	1620		ug/L		65	32 - 119	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*116*		*31 - 150*

GC/MS VOA

Analysis Batch: 150082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-2	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150082/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150082/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150082/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150082/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-150082/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 150130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-1	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-3	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-3 MS	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-3 MSD	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150130/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150130/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150130/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150130/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-150130/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 150132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-4	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-5	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-6	MW-6	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-7	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-8	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-9	MW-9	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150132/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150132/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150132/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150132/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS VOA (Continued)

Analysis Batch: 150132 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-150132/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 150209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-7	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-8	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-8 MS	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
720-54371-8 MSD	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150209/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-150209/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150209/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-150209/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-150209/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC Semi VOA

Prep Batch: 150439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
720-54371-4	MW-4	Silica Gel Cleanup	Water	3510C SGC	
720-54371-5	MW-5	Silica Gel Cleanup	Water	3510C SGC	
720-54371-6	MW-6	Silica Gel Cleanup	Water	3510C SGC	
720-54371-7	MW-7	Silica Gel Cleanup	Water	3510C SGC	
720-54371-8	MW-8	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-150439/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-150439/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-150439/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 150499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-3	MW-3	Silica Gel Cleanup	Water	8015B	150439
720-54371-4	MW-4	Silica Gel Cleanup	Water	8015B	150439
720-54371-5	MW-5	Silica Gel Cleanup	Water	8015B	150439
LCS 720-150439/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	150439
LCSD 720-150439/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	150439
MB 720-150439/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	150439

Analysis Batch: 150500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-54371-6	MW-6	Silica Gel Cleanup	Water	8015B	150439
720-54371-7	MW-7	Silica Gel Cleanup	Water	8015B	150439
720-54371-8	MW-8	Silica Gel Cleanup	Water	8015B	150439

Client Sample ID: MW-1

Lab Sample ID: 720-54371-1

Date Collected: 12/13/13 10:15

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150130	12/16/13 18:46	ASC	TAL PLS

Client Sample ID: MW-2

Lab Sample ID: 720-54371-2

Date Collected: 12/13/13 11:35

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		200	150082	12/14/13 01:23	PDR	TAL PLS

Client Sample ID: MW-3

Lab Sample ID: 720-54371-3

Date Collected: 12/13/13 07:25

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150130	12/16/13 17:20	ASC	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150499	12/20/13 14:54	DCH	TAL PLS

Client Sample ID: MW-4

Lab Sample ID: 720-54371-4

Date Collected: 12/13/13 09:00

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		10	150132	12/17/13 02:19	ASC	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150499	12/20/13 15:23	DCH	TAL PLS

Client Sample ID: MW-5

Lab Sample ID: 720-54371-5

Date Collected: 12/13/13 09:30

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150132	12/17/13 02:45	ASC	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150499	12/20/13 15:53	DCH	TAL PLS

Client Sample ID: MW-6

Lab Sample ID: 720-54371-6

Date Collected: 12/13/13 08:00

Matrix: Water

Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150132	12/17/13 03:11	ASC	TAL PLS

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Client Sample ID: MW-6

Lab Sample ID: 720-54371-6

Date Collected: 12/13/13 08:00
Matrix: Water
Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150500	12/20/13 14:54	DCH	TAL PLS

Client Sample ID: MW-7

Lab Sample ID: 720-54371-7

Date Collected: 12/13/13 08:30
Matrix: Water
Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150132	12/17/13 03:36	ASC	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		5	150209	12/17/13 13:54	YYB	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150500	12/20/13 15:23	DCH	TAL PLS

Client Sample ID: MW-8

Lab Sample ID: 720-54371-8

Date Collected: 12/13/13 11:05
Matrix: Water
Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	150132	12/17/13 04:02	ASC	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	150209	12/17/13 13:24	YYB	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			150439	12/19/13 10:53	JRM	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	150500	12/20/13 15:53	DCH	TAL PLS

Client Sample ID: MW-9

Lab Sample ID: 720-54371-9

Date Collected: 12/13/13 10:40
Matrix: Water
Date Received: 12/13/13 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	150132	12/17/13 04:28	ASC	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-54371-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-54371-1	MW-1	Water	12/13/13 10:15	12/13/13 12:45
720-54371-2	MW-2	Water	12/13/13 11:35	12/13/13 12:45
720-54371-3	MW-3	Water	12/13/13 07:25	12/13/13 12:45
720-54371-4	MW-4	Water	12/13/13 09:00	12/13/13 12:45
720-54371-5	MW-5	Water	12/13/13 09:30	12/13/13 12:45
720-54371-6	MW-6	Water	12/13/13 08:00	12/13/13 12:45
720-54371-7	MW-7	Water	12/13/13 08:30	12/13/13 12:45
720-54371-8	MW-8	Water	12/13/13 11:05	12/13/13 12:45
720-54371-9	MW-9	Water	12/13/13 10:40	12/13/13 12:45

San Francisco
1220 Quarry Lane

Pleasanton, CA 94566
phone 925.484.1919 fax 925.600.3002

Chain of Custody Record

720-54371

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
150673
TestAmerica Laboratories, Inc.

12/30/2013

Client Contact	Project Manager: Kristene Tidwell	Site Contact/Sampler: Alex Martinez	Date:	COC No:
Broadbent & Associates, Inc.	Tel/Fax: 707-455-7290 / 707-455-7295	Lab Contact: Dimple Sharma	Carrier:	____ of ____ COCs
875 Cotting Lane, Suite G	**Analysis Turnaround Time**			Job No.
Vacaville, CA 95688	Calendar (C) or Work Days (W) ____			
Phone: 707-455-7290	TAT if different from Below STD			SDG No.
Fax: 707-455-7295	☒ 2 weeks			
Project Name: Arcadis 11126	☐ 1 week			
1700 Powell Street, Emeryville, CA	☐ 2 days			
P O # GP09BPNA.C044	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by 8260B	DRO (w/silica gel cleanup) by 8015M	BTEX by 8260	TBA, MTBE & TAME by 8260	5 Fuel Oxygenates & 1,2-DCA by 8260	EDB by 8260	Sample Specific Notes:
MW-1	12/13/13	1015	GRAB	Water	3		X		X	X			
MW-2		1135			3		X		X		X	X	
MW-3		0725			5		X	X		X			
MW-4		0900			5		X	X		X			
MW-5		0930			5		X	X	X	X			
MW-6		0800			5		X	X		X			
MW-7		0830			5		X	X	X	X			
MW-8		1105			5		X	X		X			
MW-9	↓	1040	↓		3		X		X	X			
TB-11126-12132013	—	—	—	↓	2								On Hold

720-54371 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* *Archive for* ____ *Months*

Special Instructions:

4-7°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Alex Martinez	Broadbent	12/13/13 1245	Joan Mullen	TestAmerica	12-13-13 1245
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-54371-1

Login Number: 54371

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

Submittal Type:	GEO_REPORT
Report Title:	Third Quarter and Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report 030314
Report Type:	Monitoring Report - Semi-Annually
Report Date:	3/3/2014
Facility Global ID:	T0600100208
Facility Name:	BP #11126
File Name:	CA-11126 140303 BP - 3Q4Q13 GWMR.pdf
Organization Name:	ARCADIS
Username:	ARCADISBP
IP Address:	70.39.231.172
Submittal Date/Time:	3/3/2014 10:59:48 AM
Confirmation Number:	4182290256