STREAMBORN

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Oakland CA 94619

17 August 2009

Project No. P257

Letter Report
Groundwater Monitoring Conducted 14 April 2009
4401 Market Street
Oakland CA
Fuel Leak Case No. RO 0000132

Dear Mr. Damele (hardcopy):

This letter report documents the results of groundwater monitoring conducted 14 April 2009 for wells MW1, MW2, MW3, MW4, MW5, and MW6 at/near the subject site. Streamborn repeatedly attempted to obtain permission to access well MW7 located at 903 44th Street; however, the property owner of 903 44th Street did not respond to our inquiries.

The results of groundwater monitoring are summarized in the following:

- Table 1 provides a chronology of environmental activities.
- Table 2 provides a bibliography.
- Table 3 summarizes groundwater level and gradient data since 2001.
- Table 4 summarizes groundwater purging and sampling information since 2001. Purge water generated during sampling was containerized onsite in labeled drums.
- Table 5 summarizes the groundwater analytical data from the monitoring wells.
- Table 6 summarizes free product monitoring conducted during 2001 in selected monitoring wells. Free product was not detected in the monitoring wells.
- Figure 1 provides a location map.
- Figures 2a and 2b shows the exploration locations and well locations.
- Figure 3 shows the most recent groundwater levels and gradient (14 April 2009).
- Figure 4 shows hydrographs for the monitoring wells since 2001.
- Figure 5 shows TPH-gasoline concentrations measured in the monitoring wells since 2001.

- Figure 6 shows benzene concentrations measured in the monitoring wells since 2001.
- Figure 7 shows TPH-gasoline concentrations versus time for wells MW1, MW2, MW4, MW5, and MW6.
- Figure 8 shows benzene concentrations versus time for wells MW2, MW4, MW5, and MW6.
- Attachment 1 contains the groundwater sampling forms.
- Attachment 2 contains the laboratory report and chain-of-custody form.

Elevated concentrations of TPH-gasoline and benzene persist in wells MW2, MW4, MW5, and MW6 (Table 5, Figures 5-8). Since December 2008, the concentrations have been significantly higher than those previously measured in September 2003. The increase from 2003 to 2008 is best explained by examining groundwater elevations; the groundwater elevations in September 2003 were near historic lows whereas the groundwater elevations since December 2008 have been near historic highs (Figure 4). This indicates that most of the soil contamination is present within a smear zone - the smear zone is approximately two feet thick, at an elevation coincident with the normal/typical groundwater elevation. Whenever groundwater elevations drop below the smear zone, groundwater no longer contacts (significantly) contaminated soil and dissolved contaminant concentrations decrease accordingly. The aforementioned site conceptual model is relatively common at petroleum release sites with similar subsurface conditions.

Additional groundwater monitoring should be conducted to confirm natural attenuation mechanisms at the site. In light of the significant relationship between groundwater elevation and groundwater concentrations, future groundwater monitoring should be conducted during seasonal high groundwater (circa March/April). We recommend that future monitoring be conducted once per year, circa March/April.

Please contact us with any questions or comments.

Sincerely,

STREAMBORN

Juli A. Brady, PE
Environmental Engineer

Attachments

cc: Paresh Khatri/Alameda County Health Care Services Agency, Alameda CA (ecopy)

This report was uploaded to the Alameda County Server
This report was uploaded to Geotracker (www.geotracker.swrcb.ca.gov)

Table 1 (Page 1 of 2)

Environmental Chronology

4401 Market Street, Oakland CA

Date	Activities Performed By	Description
Unknown	Unknown	• Four underground gasoline tanks (one 1,000-gallon and three 500-gallon tanks) were installed. • W.A. Craig reported that the structure at 4401 Market Street was constructed in 1943 and used as a gasoline station until the 1970s.
22 June 1990	Environmental Bio-Systems	• The 4 underground gasoline tanks were removed. Removal of the fuel dispensers, product piping, and pump island was not documented. Soil excavated during tank removal was reused to backfill the excavations. • Soil samples were collected from below the tanks. Samples of the excavated soil were also collected. Soil samples were analyzed for TPH-gasoline and BTEX. Soil sampling indicated a release of gasoline.
6 September 1990	W.A. Craig	• Two trenches were excavated to depths of approximately 5 feet in the vicinity of the former dispenser island. • Contaminated soil was observed during excavation but no laboratory analyses were performed. The excavated soil was reused to backfill the trenches.
27 and 28 October 1994	W.A. Craig	• Seven borings were drilled to depths of approximately 25 feet at and near 4401 Market Street (SB1, SB2, SB3, SB4, MW1, MW2, and MW3); three of the borings were completed as monitoring wells (MW1, MW2, and MW3). Soil samples were collected during drilling. • Free product, presumably gasoline, was observed in boring SB2, located near the southwest corner of 4401 Market Street. • Soil samples were analyzed for TPH-gasoline and BTEX.
8 November 1994	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline and BTEX.
14 February 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline and BTEX.
7 June 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline and BTEX.
29 August 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline and BTEX.
8 December 1995	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline and BTEX.
7 March 1996	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline, BTEX, and MtBE.
19 June 1996	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline, BTEX, and MtBE.
20 December 1996	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline, BTEX, and MtBE.
12 June 1997	W.A. Craig	• Groundwater monitoring was conducted for wells MW1, MW2, and MW3. • Samples were analyzed for TPH-gasoline, BTEX, and MtBE.
31 March 1999	Streamborn	• Groundwater levels measured in wells MW1, MW2, and MW3.
April and July 1999	Streamborn	• Nine borings were drilled to depths of approximately 20 feet near 4401 Market Street (B8 through B16). Free product, presumably gasoline, was observed in boring B10, located on the south side of 44th Street, adjacent to 903 44th Street. Soil samples were collected during drilling. Groundwater samples were collected from temporary casings installed in the borings. The borings were grouted upon completion of groundwater sampling. • Soil samples and groundwater samples were analyzed for TPH-gasoline, BTEX, and fuel oxygenates.
4-5 January 2001	Streamborn	• Four monitoring wells (MW4, MW5, MW6, and MW7) were installed to depths of approximately 25 feet near 4401 Market Street. Soil samples were collected during drilling. • Soil samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • An elevation survey was performed for the newly-installed monitoring wells.

Table 1 (Page 2 of 2)

Environmental Chronology

4401 Market Street, Oakland CA

Date	Activities Performed By	Description
1 February 2001	Streamborn	• Wells MW4, MW5, MW6, and MW7 were developed. • Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6, and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
9 March 2001	Streamborn	• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
23 April 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
30 May 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
19 June 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
19 July 2001	Streamborn	• Water levels were measured in MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
22 August 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
29 November 2001	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7.
29 September 2003	Streamborn	• Groundwater samples were collected from wells MW1, MW3, MW4, MW5, MW6 and MW7. Samples were analyzed for TPH-Gasoline, BTEX, and fuel oxygenates. • Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, MW6, and MW7. • Wells MW4, MW5, and MW6 were monitored for free product; no free product was detected.
21 November 2008	Streamborn	• Wells MW1, MW2, MW3, MW4, MW5, and MW6 were redeveloped by surging with a surge block and pumping with a submersible pump. • We could not contact the property owner of 903 44th Street and obtain permission to access well MW7.
15 December 2008	Streamborn	• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, and MW6. • Groundwater samples were collected from wells MW1, MW2, MW3, MW4, MW5, and MW6. Samples were analyzed for TPH-Gasoline/BTEX/fuel oxygenates (EPA Method 8260). • We could not contact the property owner of 903 44th Street and obtain permission to access well MW7.
14 April 2009	Streamborn	• Water levels were measured in wells MW1, MW2, MW3, MW4, MW5, and MW6. • Groundwater samples were collected from wells MW1, MW2, MW3, MW4, MW5, and MW6. Samples were analyzed for TPH-Gasoline/BTEX/fuel oxygenates (EPA Method 8260). • Streamborn repeatedly attempted to contact the property owner of 903 44th Street where well MW7 is located. The property owner did not respond to our inquires.

General Note

(a) TPH = total petroleum hydrocarbons. BTEX = benzene, toluene, ethylbenzene, and xylenes. MtBE = methyl tert-butyl ether.

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Bibliography

4401 Market Street, Oakland CA

ACHCSA (1999a). *Leon's Arco, 4401 Market Street, Oakland CA 94608; StId 812.* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 10 December 1999.

ACHCSA (1999b). *Leon's Arco, 4401 Market Street, Oakland CA 94608; StId 812.* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 29 December 1999.

ACHCSA (2000). *Leon's Arco, 4401 Market Street, Oakland CA 94608; StId 812.* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 13 January 2000.

ACHCSA (2001). *Leon's Arco, 4401 Market Street, Oakland CA 94608, RO0000132.* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 20 September 2001.

ACHCSA (2002). *Fuel Leak Case No. RO0000132, Leon's Arco, 4401 Market Street, Oakland CA 94608.* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 27 December 2002.

ACHCSA (2003). *Fuel Leak Case No. RO0000132, Leon's Arco, 4401 Market Street, Oakland, CA 94608* Correspondence to Casimiro and Josephine Damele, Oakland CA. Correspondence from Don Hwang, Alameda County Environmental Health Services, Alameda CA. 8 April 2003.

ACHCSA (2008a). *Fuel Leak Case No. RO0000132, Arco, 4401 Market Street, Oakland, CA 94608* Correspondence to Casimiro Damele, Oakland CA. Correspondence from Paresh Khatri and Jerry Wickham, Alameda County Environmental Health Services, Alameda CA. 20 June 2008.

ACHCSA (2008b). *Fuel Leak Case No. RO0000132 and Geotracker Global ID T0600100430, Arco, 4401 Market Street, Oakland, CA 94608* Correspondence to Casimiro Damele, Oakland CA. Correspondence from Paresh Khatri and Jerry Wickham, Alameda County Environmental Health Services, Alameda CA. 25 September 2008.

Air Toxics. *Guide to Air Sampling and Analysis.*

CalEPA (1999). *Technical Support Document for Describing Available Cancer Potency Factors.* Prepared by California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxicology and Epidemiology Section, Sacramento CA. April 1999.

Department of Toxic Substances Control and Los Angeles Regional Water Quality Control Board (2003). *Advisory - Active Soil Gas Investigations.* Prepared by the Department of Toxic Substances Control and the Los Angeles Regional Water Quality Control Board, Glendale CA and Los Angeles CA. 28 January 2003.

Department of Toxic Substances Control (2005). *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Interim Final - 15 December 2004, Revised 7 February 2005).* Prepared by the Department of Toxic Substances Control, California Environmental Protection Agency, Sacramento CA. 7 February 2005.

Jon B. Marshack (2000). *A Compilation of Water Quality Goals.* Central Valley Regional Water Quality Control Board, Sacramento CA. August 2000.

RWQCB (1996). *Memorandum, To: San Francisco Bay Area Agencies Overseeing UST cleanup, Supplemental Instruction to State Water Board, December 8, 1995, Interim Guidance on Required Cleanup at Low Risk Fuel Sites.* Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA. 5 January 1996.

RWQCB (2003). *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final - July 2003*. Prepared by the San Francisco Bay Regional Water Quality Control Board, Oakland CA. 21 July 2003.

San Francisco Bay Regional Water Quality Control Board (2008). *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - November 2007, Revised May 2008).* Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA. 27 May 2008. http://www.waterboards.ca.gov/sanfranciscobay/esl.shtml.

Streamborn (1999a). *Workplan, Investigation and Remediation of Gasoline-Contaminated Soil and Groundwater, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 15 October 1999.

Streamborn (1999b). *Revised Workplan, Investigation and Remediation of Gasoline Contaminated Soil and Groundwater, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 22 December 1999.

Streamborn (2001a). *Report, Installation and Sampling of Four New Monitoring Wells, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 23 March 2001.

Streamborn (2001b). *Letter Report, Groundwater Monitoring, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 18 June 2001.

Table 2 (Page 2 of 2)

Bibliography

4401 Market Street, Oakland CA

Streamborn (2001c). *Letter Report, Groundwater Monitoring, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 14 September 2001.

Streamborn (2001d). *Letter Report, Potential Conduit and Sensitive Receptor Study, 4401 Market Street, Oakland CA. Prepared by Streamborn, Berkeley CA. 3 December 2001.*

Streamborn (2002). *Letter Report, Groundwater Monitoring Conducted 29 November 2001, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 18 January 2002.

Streamborn (2003a). *Workplan, Groundwater Monitoring and Site-Specific Risk Assessment, 4401 Market Street, Oakland CA.* Prepared for Casimiro and Josephine Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. 18 March 2003.

Streamborn (2003b). *Letter Report, Groundwater Monitoring Conducted 29 September 2003, 4401 Market Street, Oakland CA.* Prepared for Casimiro Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. Project No. P257. 22 December 2003.

Streamborn (2004). *Letter Report, Site-Specific Risk Assessment and Site Conceptual Model, 4401 Market Street, Oakland CA.* Prepared for Casimiro Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. Project No. P257. 16 January 2004.

Streamborn (2008). *Workplan for Soilgas Sampling, 4401 Market Street, Oakland CA, Fuel Leak Case No. RO 0000132.* Prepared for Casimiro Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. Project No. P257. 5 August 2008.

Streamborn (2009a). *Letter Report, Groundwater Monitoring Conducted 15 December 2008, 4401 Market Street, Oakland CA, Fuel Leak Case No. RO 0000132.* Prepared for Casimiro Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. Project No. P257. 9 January 2009.

Streamborn (2009b). *Letter Report, Groundwater Monitoring Conducted 14 April 2009, 4401 Market Street, Oakland CA, Fuel Leak Case No. RO 0000132.* Prepared for Casimiro Damele, Oakland CA. Prepared by Streamborn, Berkeley CA. Project No. P257. 17 August 2009.

USEPA (2000). *Preliminary Remediation Goals (PRGs), 2000*. USEPA, Region 9, San Francisco CA. 1 December 2000.

Wiedemeier, T.H., Rifai, H.S., Newell, C.J., and Wilson, J.T. (1999). Natural Attenuation of Fuels and Chlorinated Solvents in the Subsurface. John Wiley & Sons, New York NY. 1999.

Table 3

Groundwater Level and Gradient Data Since 2001

4401 Market Street, Oakland CA

Location	**MW1**		**MW2**		**MW3**		**MW4**		**MW5**		**MW6**		**MW7**		Groundwater Gradient	
Casing Diameter (inches)	2		2		2		2		2		2		2			
Ground Surface	Elev = 998.74		Elev = 998.07		Elev = 999.64		Elev = 998.18		Elev = 997.78		Elev = 998.02		Elev = 999.12			
Measuring Point	**TOC N Side, Elev = 998.22**		**TOC N Side, Elev = 997.73**		**TOC N Side, Elev = 998.90**		**TOC N Side, Elev = 997.87**		**TOC N Side, Elev = 997.33**		**TOC N Side, Elev = 997.50**		**TOC N Side, Elev = 998.69**			
Intercepted Interval	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev		
	19 to 25.5	972.9 to 979.7	19 to 27.5	970.6 to 979.1	19 to 27.5	972.1 to 980.6	9 to 25	973.2 to 989.2	9 to 25	972.8 to 988.8	9 to 25	973.0 to 989.0	9 to 25	974.1 to 990.1	Direction	Magnitude
1 February 2001	13.77	984.45	13.21	984.52	14.01	984.89	13.22	984.65	13.14	984.19	13.31	984.19	14.76	983.93		
9 March 2001	12.54	985.68	12.30	985.43	13.32	985.58	12.28	985.59	11.70	985.63	12.54	984.96	13.94	984.75		
23 April 2001	14.01	984.21	13.36	984.37	14.15	984.75	13.05	984.82	13.30	984.03	13.39	984.11	14.63	984.06		
30 May 2001	14.74	983.48	NM	NM	14.67	984.23	13.93	983.94	14.14	983.19	14.17	983.33	15.79	982.90	N 138˚ W	0.01
19 June 2001	14.83	983.39	13.93	983.80	14.67	984.23	15.47	982.40	14.29	983.04	14.34	983.16	15.87	982.82		
19 July 2001	15.04	983.18	14.51	983.22	14.84	984.06	14.73	983.45	14.48	982.85	14.47	983.03	15.99	982.70		
22 August 2001	15.03	983.19	14.48	983.25	14.83	984.07	14.63	983.24	14.58	982.75	14.57	982.93	16.15	982.54	N 143˚ W	0.01
29 November 2001	12.59	985.63	12.01	985.72	12.66	986.24	12.78	985.09	11.05	986.28	11.42	986.08	12.94	985.75		
29 September 2003	15.05	983.17	14.50	983.23	14.94	983.96	14.53	983.34	14.53	982.80	14.52	982.98	16.19	982.50	N 131˚ W	0.01
15 December 2008	13.12	985.10	12.25	985.48	13.05	985.85	12.39	985.48	12.24	985.09	12.05	985.45	NM	NM	N 88˚ W	0.01
14 April 2009	13.33	984.89	12.51	985.22	13.16	985.74	12.63	985.24	12.56	984.77	12.34	985.16	NM	NM	N 97˚ W	0.01
Total Depth (last measurement)	24.6		24.6		24.6		24.5		24.9		24.8		24.6		Ave = N 119˚ W	Ave = 0.01

General Notes

(a) Measurements are cited in units of feet, referenced to a site-specific datum (NOT Mean Sea Level).

(b) TOC = top of PVC casing. N = north. Measuring points are the top of PVC casing, north side.

(c) The depth to water and total depth were measured relative to the top of PVC casing.

(d) The depth of the intercepted interval was measured relative to the ground surface and corresponds to the sand pack interval.

Table 4

Groundwater Purging and Sampling Information Since 2001

4401 Market Street, Oakland CA

Location	Sample Date	Sample Type	Dissolved Oxygen (mg/L)	pH	Specific Conductance (µS/cm)	Temper-ature (˚C)	ORP (mV)	Turbidity and Color	Purge Method	Purge Duration (minutes)	Volume Purged (gallons)	Purged Dry ?	Standing Water Casing Volumes Removed
MW1	1 Feb 2001	GB	3.1	6.7	530	18.3	-210	Clear, none	SP	9	±5	**Yes**	±3
	30 May 2001	GB	1.0	6.8	560	24.2	30	Clear, none	SP	40	±5	**Yes**	±3
	22 Aug 2001	GB	3.0	6.9	510	20.4	50	Clear, none	SP	8	±5	**Yes**	±3
	29 Nov 2001	GB	NM	6.7	480	20.9	-170	Clear, none	SP	15	±4	**Yes**	±2
	29 Sep 2003	GB	1.6	6.3	520	21.5	130	Clear, none	SP	15	±5	**Yes**	±3
	15 Dec 2008	GB	1.0	6.6	410	18.0	80	Clear, none	SP	9	±6	no	±3
	14 Apr 2009	GB	1.1	6.5	400	17.5	180	Clear, none	SP	18	±7	no	±4
MW2	29 Sep 2003	GB	1.6	6.6	560	21.9	-80	Clear, none	SP	20	±5	no	±3
	15 Dec 2008	GB	1.1	6.6	590	18.5	-60	Clear, none	SP	11	±6	no	3
	14 Apr 2009	GB	1.1	6.1	610	19.5	-80	Clear, none	SP	27	±7	no	±4
MW3	1 Feb 2001	GB	5.0	6.7	370	17.4	-230	Clear, none	SP	4	±5	no	±3
	30 May 2001	GB	5.8	7.0	390	23.6	60	Clear, none	SP	26	±5	**Yes**	±3
	22 Aug 2001	GB	4.5	7.1	370	21.5	90	Cloudy, brown	SP	6	±5	**Yes**	±3
	29 Nov 2001	GB	NM	6.8	330	19.3	20	Clear, none	SP	10	±6	**Yes**	±3
	29 Sep 2003	GB	4.5	6.6	370	19.6	190	Clear, none	SP	10	±5	**Yes**	±3
	15 Dec 2008	GB	3.0	6.6	390	17.6	100	Clear, none	SP	9	±6	no	±3
	14 Apr 2009	GB	4.6	6.1	400	19.4	220	Clear, none	SP	28	±7	no	±4
MW4	1 Feb 2001	GB	5.2	6.8	580	18.2	-210	Cloudy, gray	SP	47	±15	**Yes**	±9
	30 May 2001	GB	1.5	6.8	700	22.8	20	Clear, none	SP	23	±6	**Yes**	±3
	22 Aug 2001	GB	2.1	6.9	540	21.2	-20	Clear, none	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.7	550	19.5	-170	Clear, none	SP	16	±5	**Yes**	±3
	29 Sep 2003	GB	1.5	6.5	560	22.4	30	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	1.0	6.6	500	18.8	-20	Clear, none	SP	9	±6	no	±3
	14 Apr 2009	GB	0.9	6.0	510	20.7	-20	Clear, none	SP	22	±6	no	±3
MW5	1 Feb 2001	GB	0.8	6.7	640	18.1	-250	Turbid, brown	SP	18	±20	no	±10
	30 May 2001	GB	1.2	7.0	630	19.6	20	Clear, none	SP	4	±6	no	±3
	22 Aug 2001	GB	2.2	7.0	600	20.0	-40	Clear, none	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.9	610	19.6	-170	Clear, none	SP	8	±7	no	±3
	29 Sep 2003	GB	1.6	6.7	560	21.9	-60	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	0.8	6.7	690	18.5	-50	Translucent, gray	SP	6	±6	no	±3
	14 Apr 2009	GB	0.9	6.5	680	17.8	10	Clear, none	SP	23	±6	no	±3
MW6	1 Feb 2001	GB	2.8	6.7	510	18.7	-360	Opaque, brown	SP	23	±20	no	±11
	30 May 2001	GB	2.9	6.8	470	24.2	80	Turbid, brown	SP	5	±6	no	±3
	22 Aug 2001	GB	2.6	6.9	400	21.0	30	Turbid, green	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.8	390	19.5	-160	Clear, none	SP	8	±7	no	±3
	29 Sep 2003	GB	2.1	6.6	470	25.5	180	Clear, none	SP	10	±5	no	±3
	15 Dec 2008	GB	2.0	6.6	440	18.9	140	Translucent, brown	SP	6	±6	no	±3
	14 Apr 2009	GB	2.3	7.1	450	16.8	130	Clear, none	SP	14	±6	no	±3
MW7	1 Feb 2001	GB	3.0	6.8	430	16.1	-200	Cloudy, brown	SP	25	±17	no	±11
	30 May 2001	GB	3.1	6.8	500	23.6	60	Clear, none	SP	5	±5	no	±3
	22 Aug 2001	GB	4.6	6.9	420	19.3	20	Turbid, gray	SP	5	±5	no	±3
	29 Nov 2001	GB	NM	6.7	400	19.2	0	Clear, none	SP	6	±6	no	±3
	29 Sep 2003	GB	2.4	6.3	410	19.0	180	Clear, none	SP	10	±4	no	±3

General Notes

(a) ORP = oxidation/reduction potential.

(b) NM = not measured.

(c) Entries in this table correspond to the end of purging (time of sampling).

(d) SP = submersible purge pump.

(e) GB = grab sample collected using a Teflon bailer fitted with a bottom-emptying device.

Table 5 (Page 1 of 2)

Groundwater Analytical Data from Monitoring Wells

4401 Market Street, Oakland CA

Location	Sample Date	Sampled By	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Methyl Tert-Butyl Ether (µg/L)	Tert-Butyl-Alcohol (µg/L)	Other Fuel Oxygenates (µg/L)
MW1	8 Nov 1994	W.A. Craig	54	<0.5	<0.5	<0.5	1.2	NA	NA	NA
	14 Feb 1995	W.A. Craig	71	<0.5	<0.5	<0.5	0.97	NA	NA	NA
	7 Jun 1995	W.A. Craig	540	0.6	<0.5	1.7	1.3	NA	NA	NA
	29 Aug 1995	W.A. Craig	440	<0.5	<0.5	1.3	1.1	NA	NA	NA
	8 Dec 1995	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	7 Mar 1996	W.A. Craig	77	<0.5	<0.5	<0.5	<0.5	44	NA	NA
	19 Jun 1996	W.A. Craig	500	<0.5	<0.5	0.85	0.36	84	NA	NA
	20 Dec 1996	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	28	NA	NA
	12 Jun 1997	W.A. Craig	190	<0.5	<0.5	<0.5	<0.5	12	NA	NA
	1 Feb 2001	Streamborn	<50	<0.5	<0.5	<0.5	1.1	<5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0
	22 Aug 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	100	<5.0 to <10
	29 Nov 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5	<0.5 to <250
MW2	8 Nov 1994	W.A. Craig	20,000	1,400	960	980	4,600	NA	NA	NA
	14 Feb 1995	W.A. Craig	8,600	380	210	410	2,000	NA	NA	NA
	7 Jun 1995	W.A. Craig	6,200	500	78	270	1,200	NA	NA	NA
	29 Aug 1995	W.A. Craig	4,100	330	61	210	980	NA	NA	NA
	8 Dec 1995	W.A. Craig	9,400	360	190	440	2,000	NA	NA	NA
	7 Mar 1996	W.A. Craig	12,000	790	170	440	2,000	18	NA	NA
	19 Jun 1996	W.A. Craig	9,000	520	82	350	1,500	<5.0	NA	NA
	20 Dec 1996	W.A. Craig	13,000	830	180	410	2,200	<16	NA	NA
	12 Jun 1997	W.A. Craig	5,100	320	32	190	880	<36	NA	NA
	29 Sep 2003	Streamborn	220	5.5	<0.5	2.1	9.1	<0.5	24	DIPE = 1.3 Others = <0.5
	15 Dec 2008	Streamborn	1,600	43	<0.5	53	150	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	1,400	37	<0.5	30	120	<0.5	10	<0.5 to <250
MW3	8 Nov 1994	W.A. Craig	<50	0.71	0.84	1.2	5.8	NA	NA	NA
	14 Feb 1995	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	7 Jun 1995	W.A. Craig	<50	<0.5	<0.5	<0.5	1.6	NA	NA	NA
	29 Aug 1995	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	8 Dec 1995	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	7 Mar 1996	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	19 Jun 1996	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	20 Dec 1996	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	12 Jun 1997	W.A. Craig	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	1 Feb 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	14	<5.0 to <10
	29 Nov 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <250
MW4	1 Feb 2001	Streamborn	1,500	58	1.3	83	320	<5.0	16	<5.0 to <10
	30 May 2001	Streamborn	1,000	19	<0.5	50	3.4	<5.0	23	<5.0 to <10
	22 Aug 2001	Streamborn	220	<0.5	<0.5	3.2	2.7	<5.0	8.8	<5.0 to <10
	29 Nov 2001	Streamborn	3,100	110	<5.0	120	410	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	140	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	70	1.1	<0.5	2.8	4.4	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	110	2.5	<0.5	3.2	8.1	<0.5	<5.0	<0.5 to <250

Table 5 (Page 2 of 2)

Groundwater Analytical Data from Monitoring Wells

4401 Market Street, Oakland CA

Location	Sample Date	Sampled By	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Methyl Tert-Butyl Ether (µg/L)	Tert-Butyl-Alcohol (µg/L)	Other Fuel Oxygenates (µg/L)
MW5	1 Feb 2001	Streamborn	1,200	57	1.8	45	160	<5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	570	20	<0.5	26	22	<5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	380	19	0.67	31	17	<5.0	<5.0	<5.0 to <10
	29 Nov 2001	Streamborn	1,600	73	2.1	78	180	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	460	2.6	<0.5	0.69	<1.0	<0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	3,300	53	1.1	58	110	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	1,100	32	<0.5	24	23	<0.5	<5.0	<0.5 to <250
MW6	1 Feb 2001	Streamborn	260	8.0	<0.5	22	23	<5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	53	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	29 Nov 2001	Streamborn	130	5.7	<0.5	1.6	5.0	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <1.0
	15 Dec 2008	Streamborn	78	<0.5	<0.5	<0.5	<1.0	<0.5	<20	<0.5 to <100
	14 Apr 2009	Streamborn	380	1.8	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <250
MW7	1 Feb 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	30 May 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	22 Aug 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	29 Nov 2001	Streamborn	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<5.0 to <10
	29 Sep 2003	Streamborn	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5 to <1.0
California Maximum Contaminant Level (Environmental Screening Level for groundwater that is a current or potential future drinking water resource)				1.0	150	300	1,750	13		
California Department of Health Services Notification Level (Environmental Screening Level for groundwater that is a current or potential future drinking water resource)									12	
Taste and Odor Threshold (Environmental Screening Level for groundwater that is a current or potential future drinking water resource)			100	170	40	30	20	5		

General Notes

(a) TPH = total petroleum hydrocarbons. MtBE = methyl tert-butyl ether. DIPE = di-isopropyl ether.

(b) NA = not analyzed.

(c) Environmental Screening Levels from: *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - November 2007, Revised May 2008).* Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA. 27 May 2008. http://www.waterboards.ca.gov/sanfranciscobay/esl.shtml

Table 6

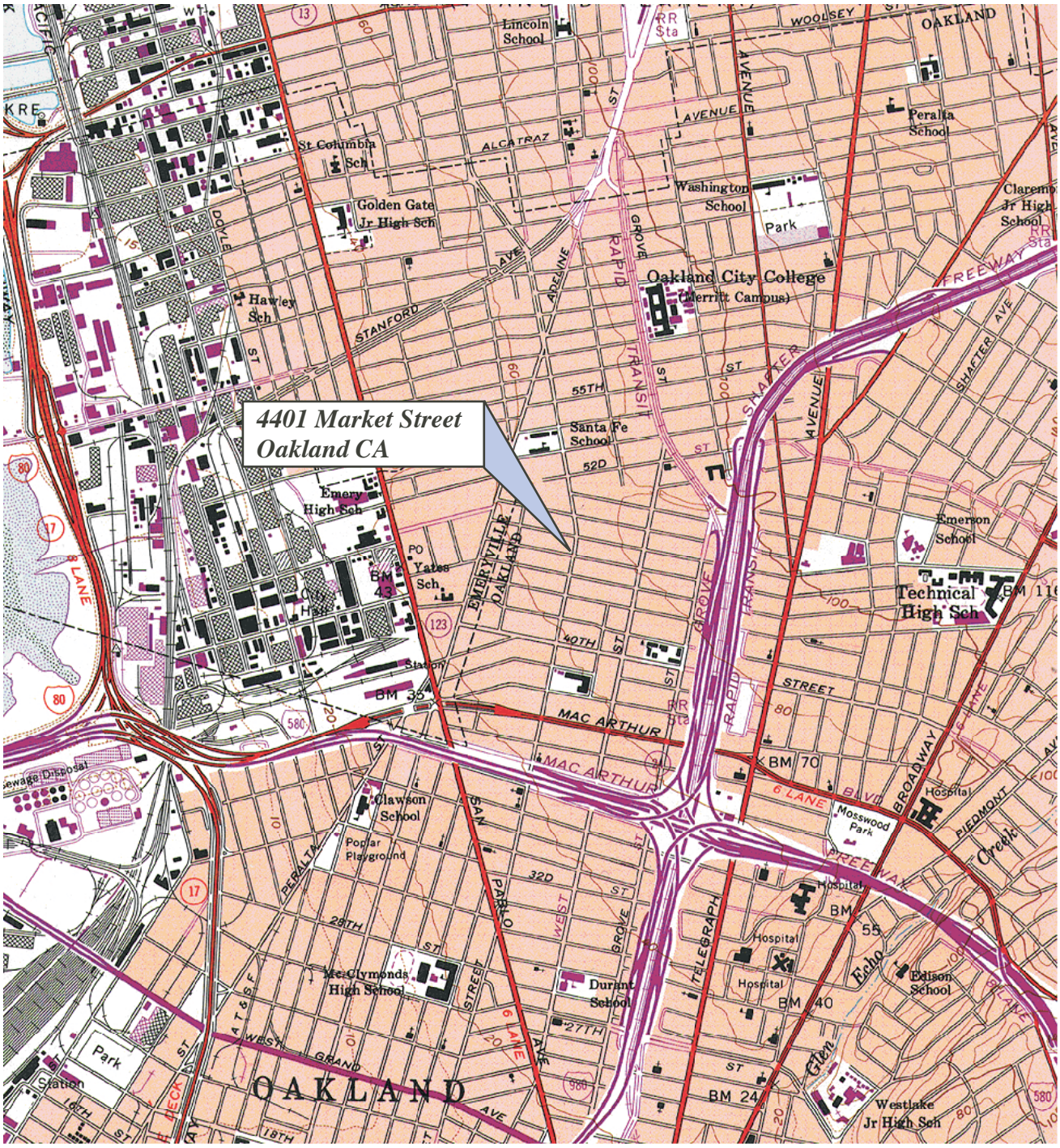
Free Product Thickness in Monitoring Wells MW4, MW5, and MW6

4401 Market Street, Oakland CA

Date	MW4 (feet)	MW5 (feet)	MW6 (feet)
1 February 2001	<0.005	<0.005	<0.005
9 March 2001	<0.005	<0.005	<0.005
23 April 2001	<0.005	<0.005	<0.005
30 May 2001	<0.005	<0.005	<0.005
19 June 2001	<0.005	<0.005	<0.005
19 July 2001	<0.005	<0.005	<0.005
22 August 2001	<0.005	<0.005	<0.005
29 November 2001	<0.005	<0.005	<0.005

General Note

(a) Free product monitoring was performed using a Water Mark Interface meter: Model H.OIL.



Basemap: U.S. Geological Survey, 7.5 Minute Quadrangle, Oakland West CA, 1959 (Photorevised 1980).

0 1

Approximate Scale in Miles

0 2,000 4,000

Approximate Scale in Feet

N

Figure 1

Location Map

4401 Market Street
Oakland CA

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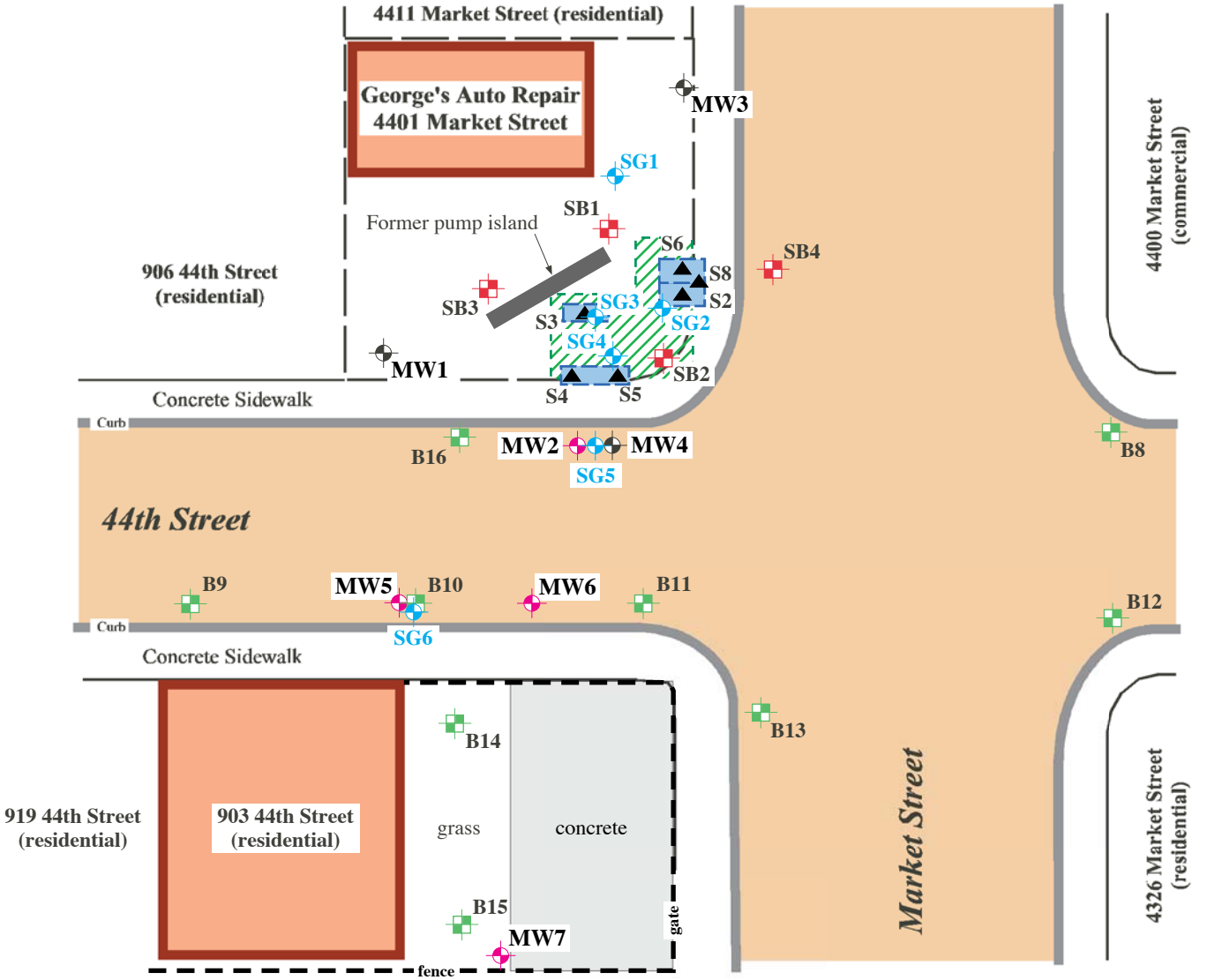


Legend

- Approximate limits of soil excavation during tank removal
- Former underground storage tank
- Monitoring well completed in October 1994
- Monitoring well completed in January 2001
- Soil sample collected during tank removal in June 1990
- Boring completed in October 1994
- Boring completed in April 1999 or July 1999
- Soilgas sample collected July 2009

0 30 60

Approximate Scale in Feet

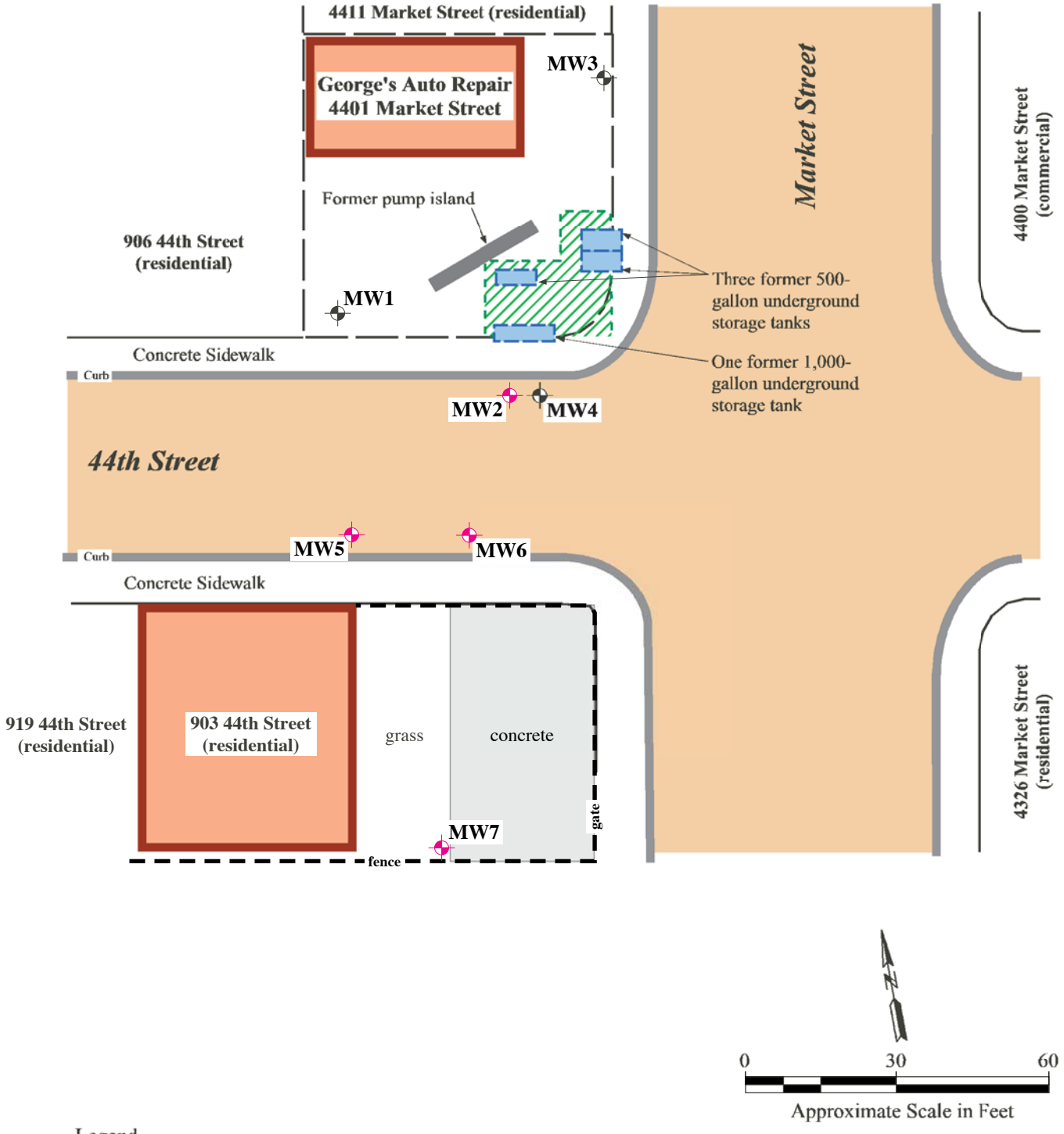
Locations of former underground tanks and pump island from W.A. Craig report dated 1994.

Figure 2a

Exploration Locations

4401 Market Street
Oakland CA

STREAMBORN



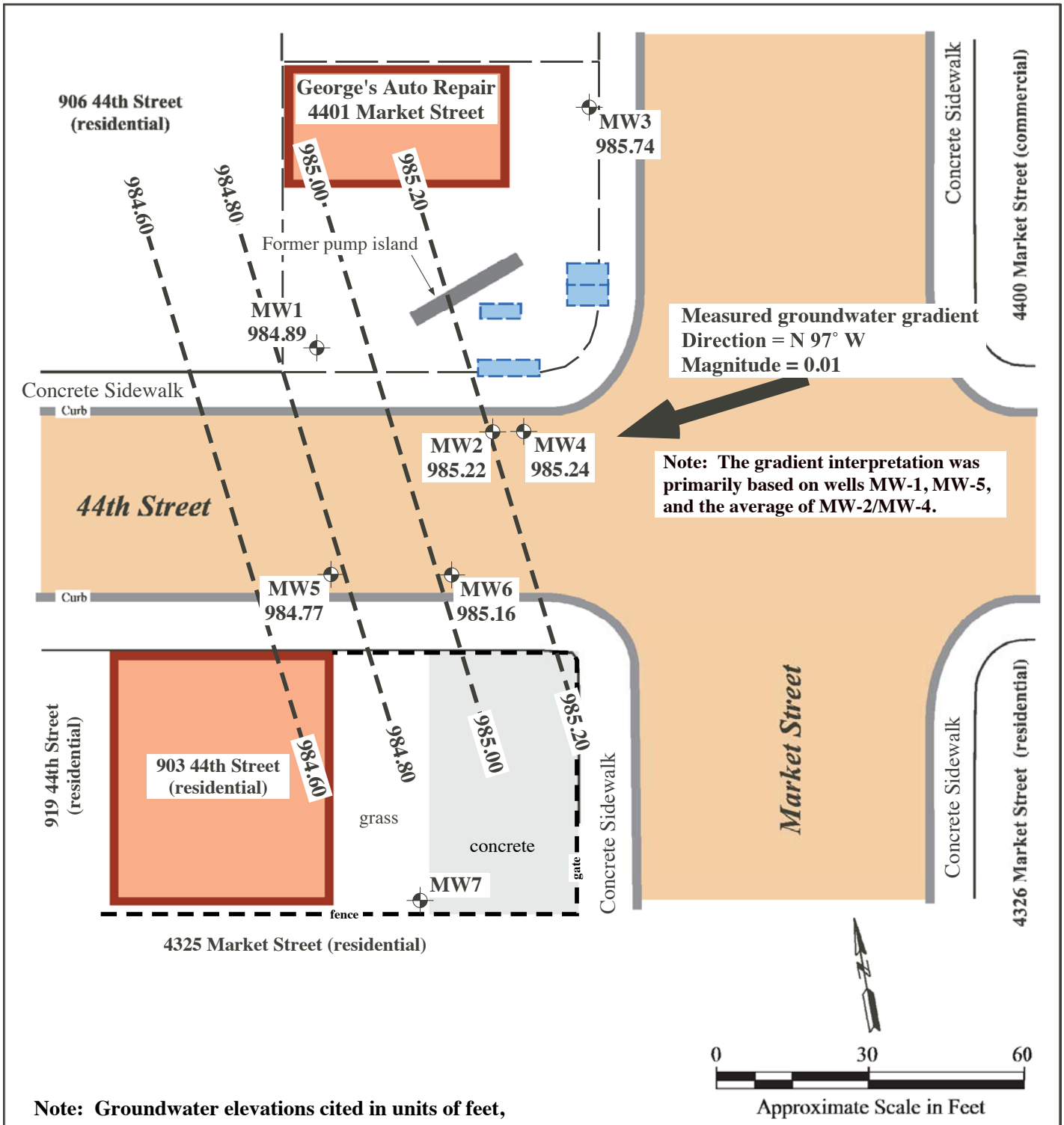
Locations of former underground tanks and pump island from W.A. Craig report dated 1994.

Figure 2b

Monitoring Well Locations

4401 Market Street
Oakland CA

STREAMBORN



Note: Groundwater elevations cited in units of feet, referenced to site-specific datum (NOT Mean Sea Level).

Legend

- Monitoring well
- Former underground tank

Locations of former underground tanks and pump island from W.A. Craig report dated 1994.

Figure 3

Groundwater Levels and Gradient (14 April 2009)

4401 Market Street Oakland CA

STREAMBORN

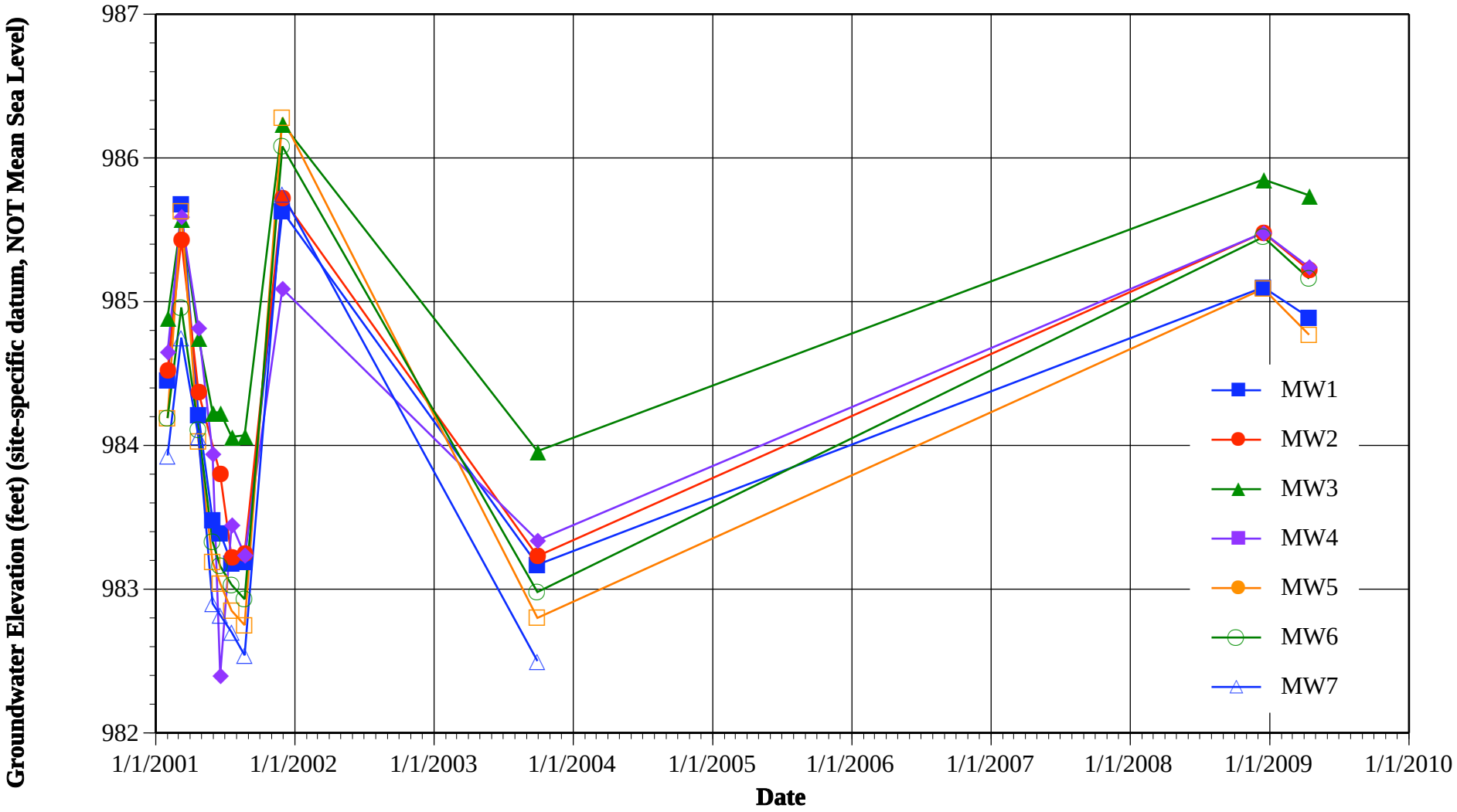


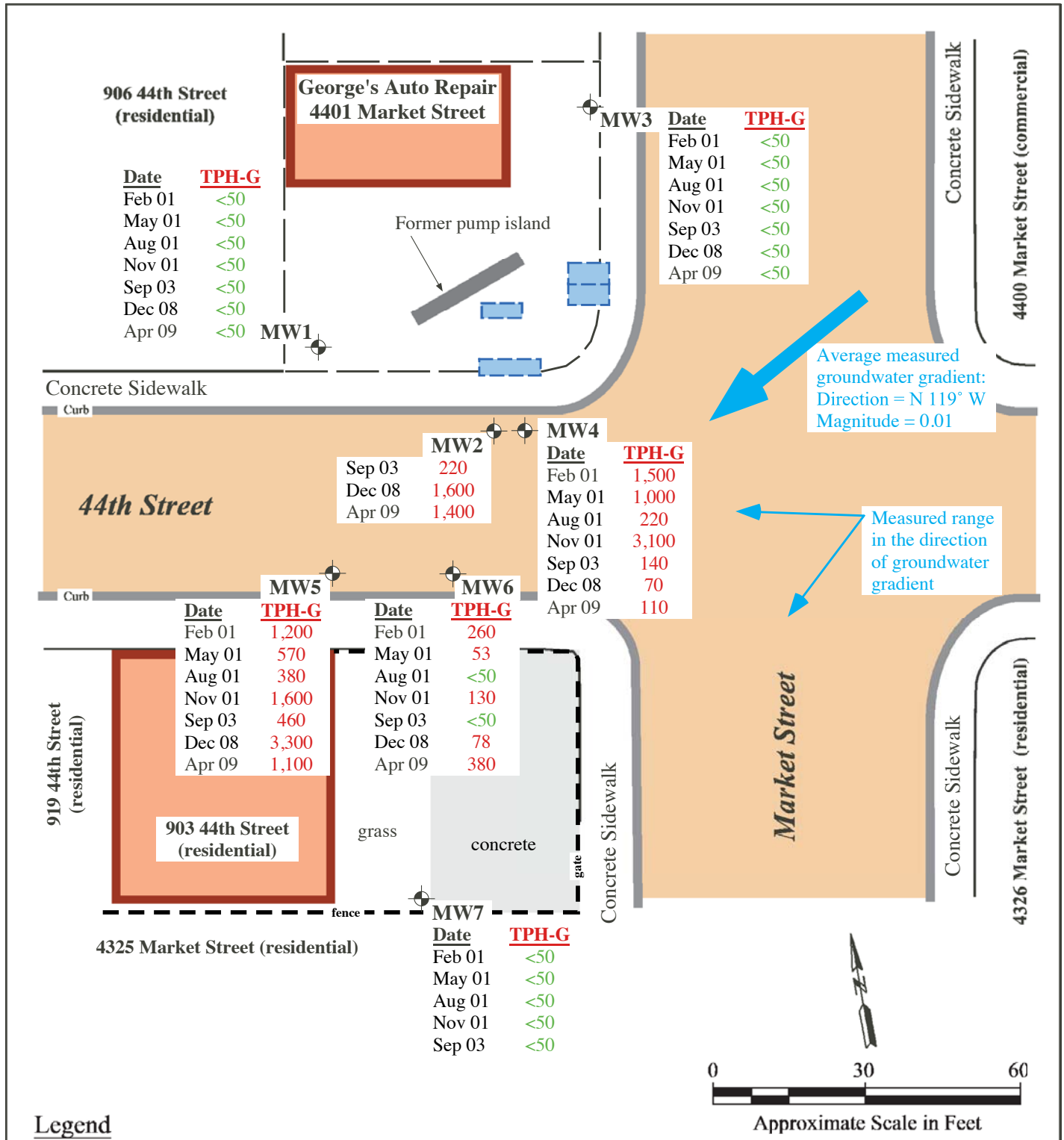
Figure 4

Hydrographs for the Monitoring Wells Since 2001

4401 Market Street Oakland CA

Groundwater elevations cited in units of feet, referenced to a site-specific datum (NOT Mean Sea Level)

STREAMBORN



Legend

Monitoring well

Former underground tank

TPH-G = TPH-Gasoline. Concentrations cited in units of µg/L.

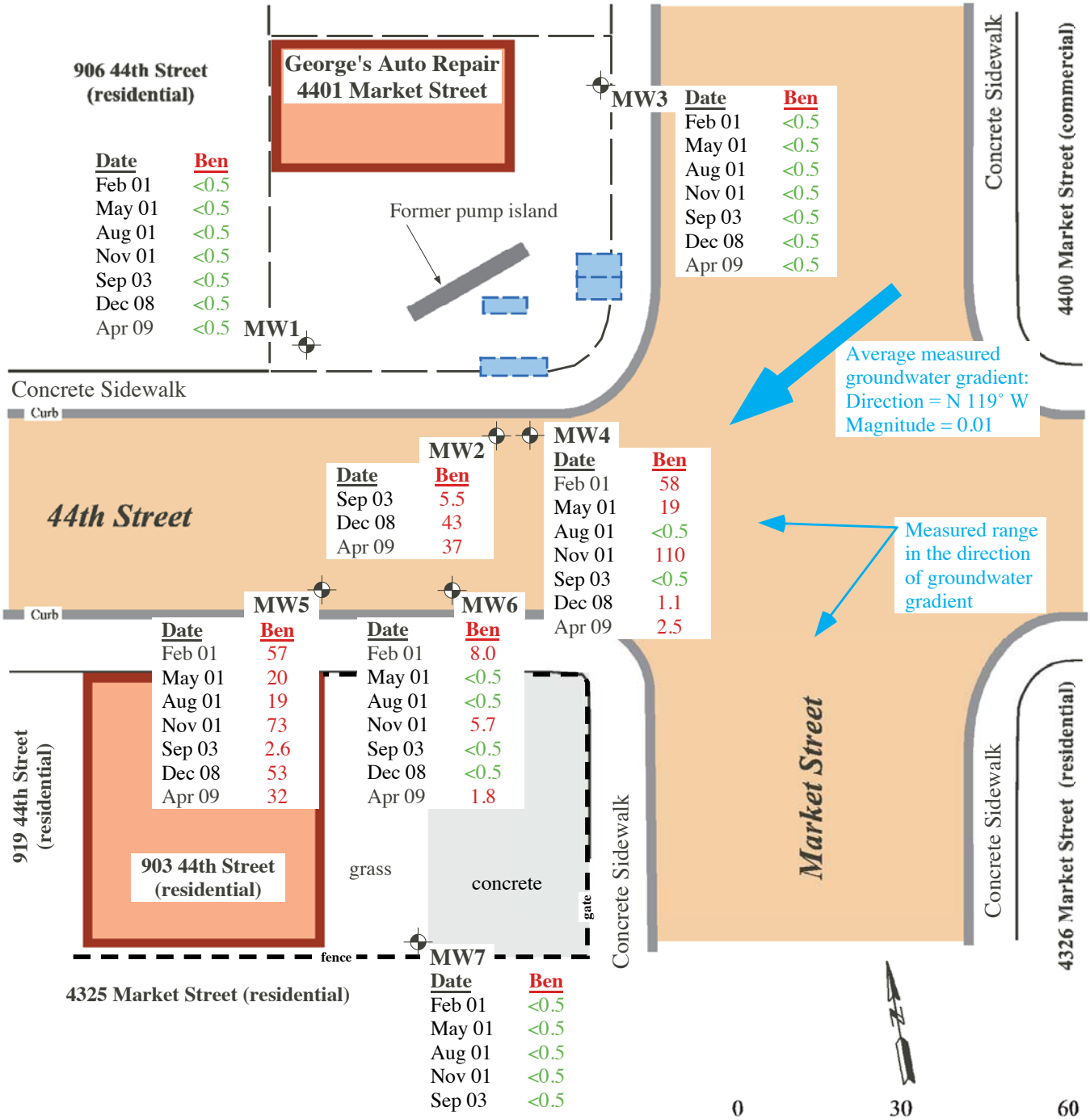
Locations of former underground tanks and pump island from W.A. Craig report dated 1994.

Figure 5

TPH-Gasoline Concentrations in Monitoring Wells Since 2001

4401 Market Street
Oakland CA

STREAMBORN



Legend

Monitoring well

Former underground tank

Ben = Benzene. Concentrations cited in units of µg/L.

Locations of former underground tanks and pump island from W.A. Craig report dated 1994.

Figure 6

Benzene Concentrations in Monitoring Wells Since 2001

4401 Market Street
Oakland CA

STREAMBORN

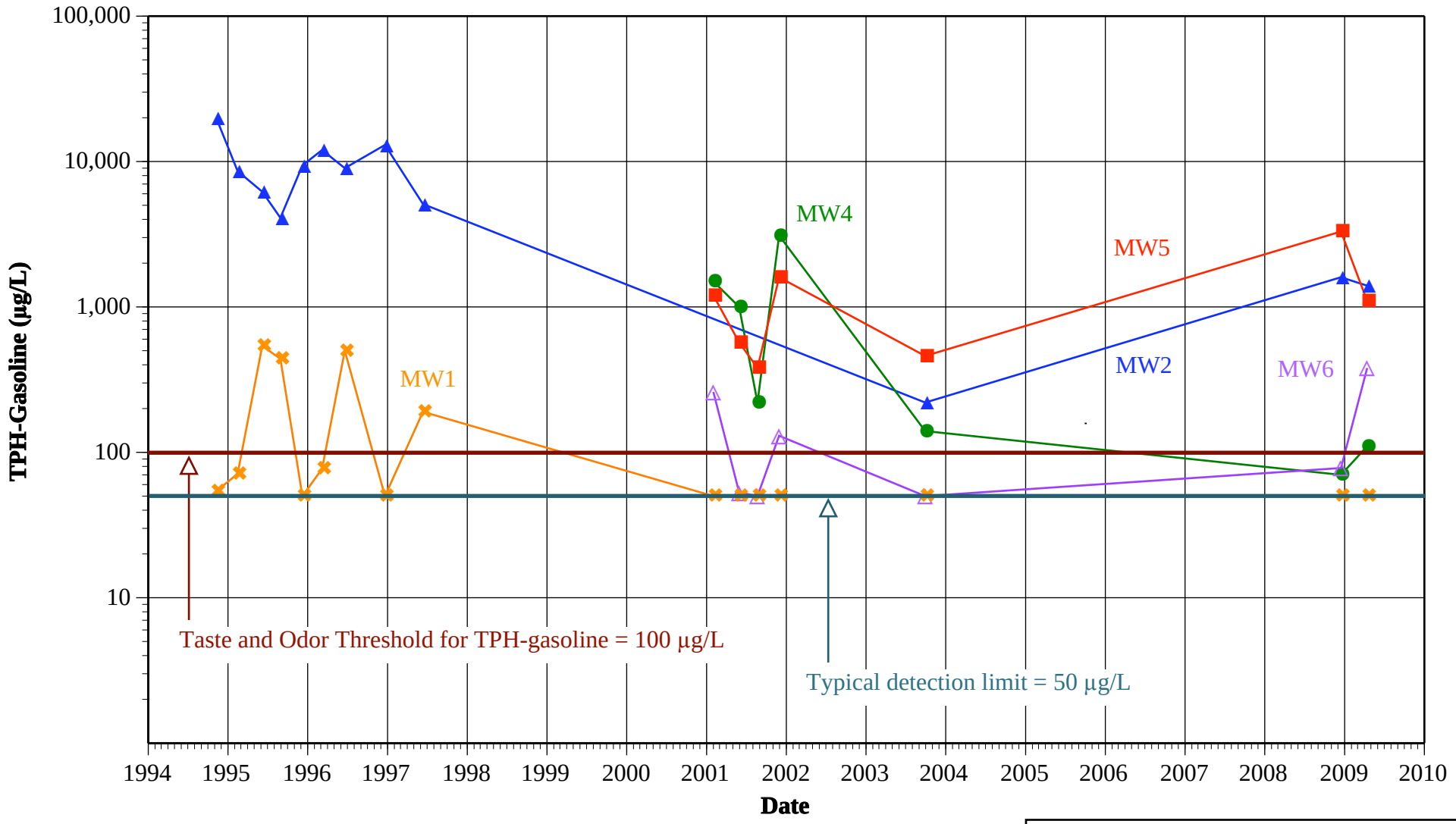


Figure 7

TPH-Gasoline Versus Time in Wells MW1, MW2, MW4, MW5, and MW6

4401 Market Street
Oakland CA

Nondetectable concentrations have been plotted at the detection limit of 50 µg/L. Wells MW3 and MW7 are not shown as they have histroically had nondetectable TPH-gasoline concentrations.

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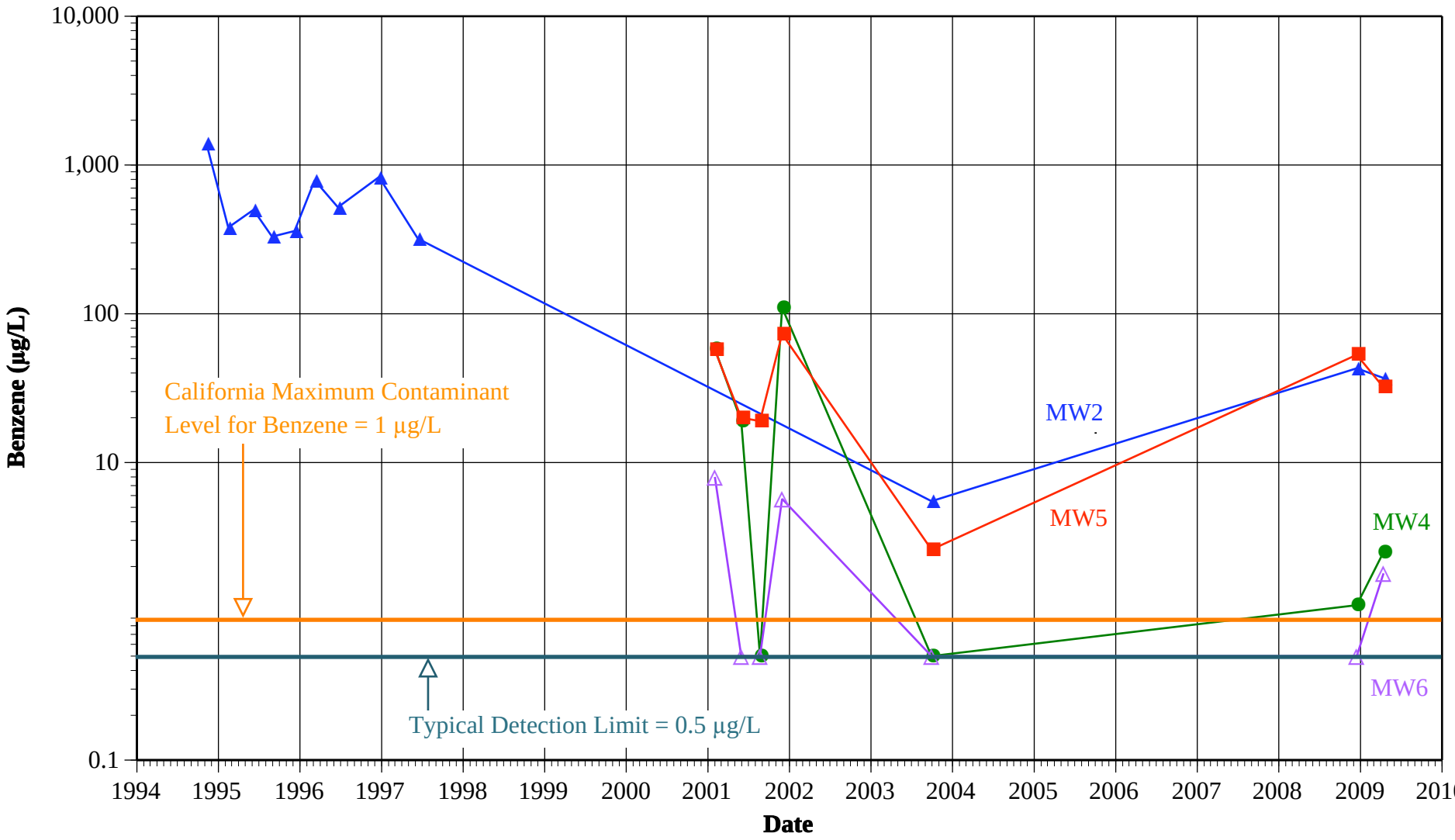

Figure 8

Benzene Versus Time in Wells MW2, MW4, MW5, and MW6

4401 Market Street
Oakland CA

Nondetectable concentrations have been plotted at the detection limit of 0.5 µg/L. Wells MW1, MW3, and MW7 are not shown as they have histroically had nondetectable benzene concentrations.

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ATTACHMENT 1

Groundwater Sampling Forms

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	14 April 2009
Well Number:	MW1	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.34
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.8
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	———	Odor:	No
Comments:	ORP higher than previous readings	Sample Number:	MW1

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.8	-	12.34	x	0.16	=	2.0	x 3	6

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1532	2.28	6.3	391	17.3	212.0	Clear	none	no	Start purge
2	1537	0.98	6.3	396	17.5	201.7	Clear	none	no	
4	1542	1.03	6.3	394	17.4	186.2	Clear	none	no	
6	1547	0.92	6.4	395	17.5	173.6	Clear	none	no	
7	1550	1.10	6.5	395	17.5	178.5	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	~~4/3~~ April 2009
Well Number:	MW2	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.51
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.6
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	[redacted]	Odor:	No
Comments:	pH lower than previous readings	Sample Number:	MW2

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.6	-	12.51	x	0.16	=	1.9	x 3	5.7

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	12:37	1.37	5.9	595	20.4	-125.7	Clear	none	no	Start purge
2	12:45	1.33	5.9	563	19.9	-99.0	Clear	none	no	
4	12:52	1.65	6.0	549	19.5	-89.9	Clear	none	no	
6	12:59	1.12	6.1	604	19.4	-85.5	Clear	none	no	
7	13:04	1.09	6.1	607	19.5	-82.7	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	14 April 2009
Well Number:	MW3	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	13.16
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.6
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	———	Odor:	No
Comments:	High dissolved oxygen, low pH.	Sample Number:	MW3

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.6	-	13.16	x	0.16	=	1.8	x 3	5.4

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	1430	6.66	6.5	409	21.2	159.0	Clear	none	No	Start purge
2	1437	4.74	6.1	399	20.2	190.1	Clear	none	NO	
4	1447	4.18	6.2	398	20.1	209.6	Clear	none	no	
6	14:53	4.49	6.1	399	19.6	219.6	Clear	none	no	
7	14:58	4.57	6.1	399	19.4	221.1	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	14 April 2009
Well Number:	MW4	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.63
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.5
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	———	Odor:	No
Comments:	Low pH	Sample Number:	MW4

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.5	-	12.63	x	0.16	=	1.9	x 3	5.7

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	10:02	1.20	5.55	447	19.4	34.6	Clear	none	no	Start purge
2	10:08	1.06	5.90	531	20.3	3.4	clear	none	no	
4	10:16	0.97	5.90	541	20.5	-7.9	Clear	none	no	
6	10:24	0.91	6.0	513	20.7	-15.2	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	14 April 2009
Well Number:	MW5	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	12.56
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.9
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	—	Odor:	No
Comments:		Sample Number:	MW5

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.9	-	12.56	x	0.16	=	2.0	x 3	6

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	10:57	1.47	6.5	513	17.2	78.1	Clear	none	no	Start purge
2	11:05	1.05	6.2	676	17.4	67.2	Clear	none	~~no~~	
4	11:15	0.90	6.4	678	17.4	25.1	Clear	none	no	
6	11:20	0.94	6.5	677	17.8	10.1	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

MONITORING WELL PURGE AND SAMPLE

Project Name/Number:	4401 Market Street/P257	Logged By:	~~Darcy Hinkley~~ Alex Bowerman
Property Location:	4401 Market Street, Oakland CA	Date:	14/3 April 2009
Well Number:	MW6	Sample Type:	Grab
Purging Equipment:	Submersible Pump	Depth to Water (ft):	~~12.~~ 12.34
Sampling Equipment:	Bailer with Bottom-Emptying Device	Total Depth (ft):	24.8
Measuring Point:	Top of casing, north side	Casing Diameter (in):	2
Free Product:	———	Odor:	No
Comments:	High pH	Sample Number:	MW6

Note obstructions, well damage, or other compromising features under comments.

Total Depth (feet)	-	Depth to Water (feet)	x	0.04 gallons/foot for 1-inch well 0.16 gallons/foot for 2-inch well 0.65 gallons/foot for 4-inch well 1.47 gallons/foot for 6-inch well	=	Single Standing Water Casing Volume (gallons)		Three Casing Volumes (gallons)
24.8	-	12.34	x	0.16	=	2.0	x 3	6

.46
4.15 = 1/3

20.65 = Pump depth.

Purge Volume (gallons)	Time	Dissolved Oxygen (mg/L)	pH	Specific Conductivity (µS/cm)	Temp (°C)	ORP (mV)	Turbidity	Color	Purged Dry?	Comments
0	9:13	1.40	7.21	665	15.2	140.9	Trans.	Brown	no	Start purge
2	9:15	2.00	7.15	497	16.6	152.2	Clear	none	no	
4	9:22	2.20	7.13	458	16.7	152.8	Clear	none	no	
6	9:27	2.26	7.10	447	16.8	131.7	Clear	none	no	Stable
										Collect Sample

Note observations of odor, sheen, and other signs of contamination under comments. Record turbidity as clear, translucent, or opaque.

ATTACHMENT 2

Laboratory Report and Chain-of-Custody Form

ANALYTICAL REPORT

Job Number: 720-19172-1

SDG Number: P257

Job Description: 4401 Market Street Oakland, CA

For:
Streamborn
900 Santa Fe Avenue
Albany, CA 94706

Attention: Mr. Douglas W Lovell

Approved for release.
Tim Costello
Project Manager I
5/15/2009 4:17 PM

Tim Costello
Project Manager I
tim.costello@testamericainc.com
05/15/2009

EXECUTIVE SUMMARY - Detections

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-19172-3	**MW6**				
Benzene		1.8	0.50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		380	50	ug/L	8260B/CA_LUFTMS
720-19172-4	**MW4**				
Benzene		2.5	0.50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		110	50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		8.1	1.0	ug/L	8260B/CA_LUFTMS
Ethylbenzene		3.2	0.50	ug/L	8260B/CA_LUFTMS
720-19172-5	**MW5**				
Benzene		32	0.50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		1100	50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		23	1.0	ug/L	8260B/CA_LUFTMS
Ethylbenzene		24	0.50	ug/L	8260B/CA_LUFTMS
720-19172-6	**MW2**				
TBA		10	5.0	ug/L	8260B/CA_LUFTMS
Benzene		37	0.50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		1400	50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		120	1.0	ug/L	8260B/CA_LUFTMS
Ethylbenzene		30	0.50	ug/L	8260B/CA_LUFTMS

METHOD SUMMARY

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

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

SAMPLE SUMMARY

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-19172-1	MW3	Water	04/14/2009 1458	04/15/2009 1150
720-19172-2	MW1	Water	04/14/2009 1550	04/15/2009 1150
720-19172-3	MW6	Water	04/14/2009 0927	04/15/2009 1150
720-19172-4	MW4	Water	04/14/2009 1024	04/15/2009 1150
720-19172-5	MW5	Water	04/14/2009 1120	04/15/2009 1150
720-19172-6	MW2	Water	04/14/2009 1304	04/15/2009 1150

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW3**

Lab Sample ID: 720-19172-1
Client Matrix: Water

Date Sampled: 04/14/2009 1458
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1202
Date Prepared: 04/25/2009 1202

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250908.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1202
Date Prepared: 04/25/2009 1202

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250908.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	ND		5.0
Benzene	ND		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	98	78 - 130
1,2-Dichloroethane-d4 (Surr)	111	67 - 130

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW1**

Lab Sample ID: 720-19172-2
Client Matrix: Water

Date Sampled: 04/14/2009 1550
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1504
Date Prepared: 04/25/2009 1504

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250911.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1504
Date Prepared: 04/25/2009 1504

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250911.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	ND		5.0
Benzene	ND		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	98	78 - 130
1,2-Dichloroethane-d4 (Surr)	110	67 - 130

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW6**

Lab Sample ID: 720-19172-3
Client Matrix: Water

Date Sampled: 04/14/2009 0927
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1535
Date Prepared: 04/25/2009 1535

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250912.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	380		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1535
Date Prepared: 04/25/2009 1535

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250912.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	ND		5.0
Benzene	1.8		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	102	78 - 130
1,2-Dichloroethane-d4 (Surr)	109	67 - 130

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW4**

Lab Sample ID: 720-19172-4
Client Matrix: Water

Date Sampled: 04/14/2009 1024
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1607
Date Prepared: 04/25/2009 1607

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250913.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	110		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1607
Date Prepared: 04/25/2009 1607

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250913.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	ND		5.0
Benzene	2.5		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	8.1		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	3.2		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	99	78 - 130
1,2-Dichloroethane-d4 (Surr)	113	67 - 130

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW5**

Lab Sample ID: 720-19172-5
Client Matrix: Water

Date Sampled: 04/14/2009 1120
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1639
Date Prepared: 04/25/2009 1639

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250914.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	1100		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1639
Date Prepared: 04/25/2009 1639

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250914.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	ND		5.0
Benzene	32		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	23		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	24		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	101	78 - 130
1,2-Dichloroethane-d4 (Surr)	113	67 - 130

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Client Sample ID: **MW2**

Lab Sample ID: 720-19172-6
Client Matrix: Water

Date Sampled: 04/14/2009 1304
Date Received: 04/15/2009 1150

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1711
Date Prepared: 04/25/2009 1711

Analysis Batch: 720-49821

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250915.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	1400		50

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/25/2009 1711
Date Prepared: 04/25/2009 1711

Analysis Batch: 720-49833

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250915.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
TBA	10		5.0
Benzene	37		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	120		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	30		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	99	78 - 130
1,2-Dichloroethane-d4 (Surr)	110	67 - 130

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-49821					
LCS 720-49821/1	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-49821/2	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-49821/3	Method Blank	T	Water	8260B/CA_LUFT	
720-19172-1	MW3	T	Water	8260B/CA_LUFT	
720-19172-2	MW1	T	Water	8260B/CA_LUFT	
720-19172-3	MW6	T	Water	8260B/CA_LUFT	
720-19172-4	MW4	T	Water	8260B/CA_LUFT	
720-19172-5	MW5	T	Water	8260B/CA_LUFT	
720-19172-6	MW2	T	Water	8260B/CA_LUFT	
Analysis Batch:720-49833					
LCS 720-49833/1	Lab Control Sample	T	Water	8260B/CA_LUFT	
MB 720-49833/2	Method Blank	T	Water	8260B/CA_LUFT	
720-19172-1	MW3	T	Water	8260B/CA_LUFT	
720-19172-1MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-19172-1MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-19172-2	MW1	T	Water	8260B/CA_LUFT	
720-19172-3	MW6	T	Water	8260B/CA_LUFT	
720-19172-4	MW4	T	Water	8260B/CA_LUFT	
720-19172-5	MW5	T	Water	8260B/CA_LUFT	
720-19172-6	MW2	T	Water	8260B/CA_LUFT	

Report Basis
T = Total

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Method Blank - Batch: 720-49821

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-49821/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/25/2009 1131
Date Prepared: 04/25/2009 1131

Analysis Batch: 720-49821
Prep Batch: N/A
Units: ug/L

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250907.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Gasoline Range Organics (GRO)-C5-C12	ND		50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-49821

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-49821/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/25/2009 1023
Date Prepared: 04/25/2009 1023

Analysis Batch: 720-49821
Prep Batch: N/A
Units: ug/L

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250905.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-49821/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/25/2009 1055
Date Prepared: 04/25/2009 1055

Analysis Batch: 720-49821
Prep Batch: N/A
Units: ug/L

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250906.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	92	91	42 - 120	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Method Blank - Batch: 720-49833

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-49833/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/25/2009 1131
Date Prepared: 04/25/2009 1131

Analysis Batch: 720-49833
Prep Batch: N/A
Units: ug/L

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250907.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
TBA	ND		5.0
Benzene	ND		0.50
TAME	ND		0.50
Ethyl tert-butyl ether	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethanol	ND		250
MTBE	ND		0.50
EDB	ND		0.50
DIPE	ND		1.0
1,2-Dichloroethane	ND		0.50
Ethylbenzene	ND		0.50

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	99	78 - 130
1,2-Dichloroethane-d4 (Surr)	112	67 - 130

Lab Control Sample - Batch: 720-49833

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: LCS 720-49833/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 04/25/2009 0943
Date Prepared: 04/25/2009 0943

Analysis Batch: 720-49833
Prep Batch: N/A
Units: ug/L

Instrument ID: Chemstation 3.0 on 95PC
Lab File ID: 04250904.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	10.0	9.62	96	74 - 120	
Toluene	10.0	10.1	101	65 - 120	
MTBE	10.0	10.4	104	69 - 120	

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	99	78 - 130
1,2-Dichloroethane-d4 (Surr)	105	67 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Streamborn

Job Number: 720-19172-1
Sdg Number: P257

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-49833

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-19172-1	Analysis Batch: 720-49833	Instrument ID: Chemstation 3.0 on 95PC
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 04250909.D
Dilution:	1.0		Initial Weight/Volume: 10 mL
Date Analyzed:	04/25/2009 1234		Final Weight/Volume: 10 mL
Date Prepared:	04/25/2009 1234		

MSD Lab Sample ID:	720-19172-1	Analysis Batch: 720-49833	Instrument ID: Chemstation 3.0 on 95PC
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 04250910.D
Dilution:	1.0		Initial Weight/Volume: 10 mL
Date Analyzed:	04/25/2009 1306		Final Weight/Volume: 10 mL
Date Prepared:	04/25/2009 1306		

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual MSD Qual
Benzene	99	99	58 - 134	0	20	
Toluene	102	100	72 - 130	2	20	
MTBE	111	106	22 - 185	4	20	

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	99	101	78 - 130
1,2-Dichloroethane-d4 (Surr)	108	108	67 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Login Sample Receipt Check List

Client: Streamborn

Job Number: 720-19172-1
SDG Number: P257

Login Number: 19172
List Source: TestAmerica San Francisco
Creator: Hoang, Julie
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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	
There are no discrepancies between the sample IDs on the containers 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	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	