

June 24, 2010

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11:03 am, Jul 06, 2010

Alameda County
Environmental Health

Mr. David Blain
BPS Reprographic Services
945 Bryant Street
San Francisco, CA 94103

RE: Semi-Annual Ground Water Monitoring Report, March 2010
1700 Jefferson Street, Oakland, California
Fuel Leak Case No. RO 151
ERS Project No. 1015-01.00

Dear Mr. Blain:

Environmental Risk Specialties Corporation (ERS) has enclosed one hard copy of the Semi-Annual Ground Water Monitoring Report, March 2010 for 1700 Jefferson Street, Oakland, California. ERS will also upload the Report along with monitor well sampling and analytical data to the Regional Water Quality Control Board's GeoTracker database.

If you have any questions regarding this report or the findings of the work, please contact me at (925) 938-1600, extension 102 or email me at smichelson@erscorp.us.

Sincerely,



Steven Michelson, PG
Principal Geologist

cc: Ms. Barbara Jakub, Alameda County Health Care Services Agency

Enclosure

**SEMI-ANNUAL GROUND WATER
MONITORING REPORT
MARCH 2010**

**BPS REPROGRAPHICS
1700 Jefferson Street
Oakland, California**

June 2010



ers

**Environmental Risk Specialties
Corporation**

**SEMI-ANNUAL
GROUND WATER MONITORING REPORT
MARCH 2010**

**1700 Jefferson Street
Oakland, California**

Prepared for:

Mr. David Blain
BPS Reprographic Services
945 Bryant Street
San Francisco, CA 94103

Prepared by:

Environmental Risk Specialties Corporation
Walnut Creek, California

June 24, 2010

Reviewed By: _____



Steven Michelson, PG
Principal Geologist



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1.0 INTRODUCTION

This March 2010 Ground Water Monitoring Report was prepared by Environmental Risk Specialties Corporation (ERS) on behalf of BPS Reprographic Services. This Report describes ground water monitoring work performed at 1700 Jefferson Street, Oakland, California (Site). The project objectives were to purge and sample four existing ground water monitor wells, measure the depth to ground water in all existing wells in order to calculate ground water gradient and flow direction, evaluate analytical results, and report the findings.

2.0 BACKGROUND

The Site is located on the northeast corner of the intersection of Jefferson Street and 17th Street in Oakland, California. The Site is a former gas station that had two 1,000 gallon gasoline underground storage tanks (USTs) and one 550 gallon waste oil UST. On February 20, 1987, three borings (Borings 1 through 3) were advanced for a geotechnical investigation. Two additional borings (Borings 4 and 5) were advanced near the former USTs. Contamination was found in soil down to the water table. On June 16, 1987, three gasoline USTs were removed from the Site and a suspected unauthorized release was confirmed. The product lines and dispensers were removed, overexcavated, and backfilled without confirmation sampling. Soil was excavated to approximately 9.5 feet, which was the maximum reach of the excavation equipment. The soil was stockpiled and then spread out for aeration. The excavation was subsequently backfilled on August 5 and 6, 1987 with the aerated soil.

Three ground water monitor wells were installed in June 1987 (MW-1 to MW-3) and well MW-1 initially contained 30 inches of free-phase floating product (free product). Well MW-2 was subsequently destroyed on November 9, 1987 when the current building was constructed. On August 12, 1987, Boring 6 was advanced in order to investigate soil permeability. In January 1988, ground water extraction wells MW-1A and MW-4 were installed to specifically remove free product. In August 1988, offsite well MW-5 was installed.

Free product was removed from well MW-1 on a daily basis yielding an estimated 2,300 gallons of free product from September 1987 to March 1991. Harding Lawson Associates (HLA) constructed a ground water extraction and treatment system in June 1992 and by July 1999 removed an additional 867 gallons of free product. In April 1996, HLA installed well MW-6, and in March 1998, HLA advanced five Cone Penetrometer Test (CPT) borings both south of the Site and north of well MW-5. In April 1998, HLA

determined that free product was comprised of leaded gasoline. Measurable thickness free product has not been observed in the wells since 1999.

In 1999, MACTEC installed oxygen release compound (ORC®) socks in wells MW-1A, MW-3, MW-4, and MW-5. The ORC® socks were removed at the request of ACHCSA in 2002.

Quarterly ground water monitoring of wells MW-1, MW-3, MW-5, and MW-6 has been conducted since January 1994. Ground water extraction wells MW-1A and MW-4 were periodically sampled from August 1991 to June 1999.

All monitor wells were previously surveyed on the City of Oakland datum, which has been found to have a discrepancy of -5.7 feet from NAVD88, the standard national datum. On April 15, 2010, all monitor wells were resurveyed by Muir Consulting of Oakdale, California to Geotracker specifications on the NAVD88 datum. Extraction well water sample analytical results are summarized in Table 1. Ground water elevation data are summarized in Table 2, gradient data are summarized in Table 3, and analytical data are summarized in Table 4.

2.1 Subsurface Conditions

Boring logs indicate that silty sand and clayey sand are present from the surface to a depth of approximately 27.0 to 30.5 feet below ground surface (bgs). Sand was reported in well MW-4 from approximately 27.0 to 30.5 feet bgs. These soils are underlain by stiff to very stiff, saturated silty clays to the maximum explored depth of 33.0 feet bgs. Ground water was encountered at approximately 25.0 feet bgs.

3.0 GROUND WATER MONITORING AND SAMPLING

Ground water monitoring and sampling of the Site was performed on March 3, 2010 by ERS personnel. Work at the Site included measuring depth to water, subjectively evaluating the possible presence of petroleum in ground water in the wells, purging and sampling the wells using EPA approved low-flow techniques, and submitting the samples to a state-certified laboratory for analysis of constituents of concern.

3.1 Ground water Monitoring

Before ground water purging and sampling, the depth to the water table was measured from the top of each well casing using an electronic water level meter. The water level

measurements were recorded to the nearest 0.01 foot with respect to mean sea level (MSL). Field sheets of recently recorded ground water monitoring data are included in Appendix A. Information regarding well elevations and depth to ground water at the Site is summarized in Table 2.

3.2 Ground Water Gradient

Ground water elevation contours based on ground water elevations measured on March 3, 2010, are illustrated on Figure 3 and reveal a ground water flow direction to the southwest at an average gradient of 0.002 foot per foot. Historical ground water gradients and flow directions are summarized in Table 3.

3.3 Ground Water Sampling

Before ground water sampling, each well was purged using EPA approved low-flow techniques summarized in the "Low-Flow (Minimal Drawdown) Ground Water Sampling Procedures" (EPA, 1996). Dedicated tubing, attached to a peristaltic pump, was lowered to the mid-point of the reported screen zone. The pump was set to a rate of less than 1 liter per minute and pH, dissolved oxygen (DO), specific conductance (SC), oxidation reduction potential (ORP), depth to water (DTW) and temperature were measured in three to five minute intervals within a flow-through cell. When depth to water remained constant and parameters were stabilized to within $\pm 10\%$ in consecutive readings, the pump rate was reduced, the tube was disconnected from the flow-through cell and samples were collected directly from the dedicated tubing. Ground water conditions monitored during purging and sampling were recorded on field sheets, included in Appendix A.

From each monitor well, four laboratory-supplied 40-milliliter sample vials were filled with ground water to overflowing and sealed to eliminate trapped air. Once filled, sample vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self adhesive tags. The samples were stored in a pre-chilled, insulated container and returned to ERS's Walnut Creek office. The samples were transported to AccuTest, a state-certified analytical laboratory, following standard COC protocols for the requested analyses.

Water purged during the development and sampling of the monitor wells is being temporarily stored onsite in a 55-gallon drum pending laboratory analysis and proper disposal.

4.0 RESULTS OF GROUND WATER SAMPLING

Ground water samples collected from wells MW-1, MW-3, MW-5, and MW-6 were analyzed for gasoline-range petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260B. Copies of the chain of custody record and laboratory analytical reports are included as Appendix B. TPHg, BTEX, and MTBE analytical results are summarized in Table 4.

5.0 DISCUSSION

The available data collected at 1700 Jefferson Street indicates that ground water has been affected by the activities that occurred there historically. Ground water use as a potential drinking source in this area is highly unlikely due to site location and the high quality public drinking water supplied by EBMUD. In Table 4, the concentrations of petroleum hydrocarbons in the ground water are compared with the Environmental Screening Levels (ESLs) for ground water that is not a potential drinking water source published in 2008 by the San Francisco Bay Regional Water Quality Control Board (RWQCB-SF).

Chart 1 depicts the trend of TPHg in the monitor wells MW-1, MW-3, and MW-5 over time. Recent sampling reveals that concentrations of TPHg in the monitor wells MW-1 and MW-3 have increased since the previous sampling event while the concentration of TPHg in MW-5 has decreased since the previous sampling event. Chart 2 depicts the trend of benzene in the monitor wells MW-1, MW-3, and MW-5 over time. Concentrations of benzene have increased in MW-1 and MW-3 in the most recent sampling event while concentrations of benzene have decreased in MW-5 with the most recent sampling event. The most downgradient well, MW-6, did not contain TPHg, BTEX, or MTBE above the reporting limit; this is consistent with prior results. Figures 4 and 5 depict the distribution of TPHg and benzene in ground water.

Based on the data, it appears that a source may still be present on the site in the former UST excavation area that causes the fluctuations in TPHg concentrations in inside monitor wells. However, since 1996, MW-6 has consistently had concentrations far below screening criteria. This is an indication that although concentrations have increased recently, the plume is stable.

6.0 CONCLUSIONS

Based on the results of ground water monitoring performed at 1700 Jefferson Street:

- Ground water flow direction is to the southwest at an average gradient of 0.002 foot per foot and continues to be consistent with historical trends and regional topography;
- Silty sand and clayey sand are present from the surface to a depth of approximately 27.0 to 30.5 feet below ground surface;
- Concentrations of TPHg and benzene increased in wells MW-1 and MW-3 and have decreased in MW-5;
- Consistent with recent trends, no detectable TPHg and BTEX concentrations were reported in downgradient well MW-6.
- Although concentrations have increased recently, the plume appears stable.

7.0 RECOMMENDATIONS

Based on current ground water monitoring results and observations made during Site investigations, ERS recommends the following:

- Continue future ground water sampling in monitor wells MW1, MW-3, MW-5, and MW-6 on a semi-annual basis.

The next tentatively scheduled ground water monitoring event is September 3, 2010.

TABLES

Table 1
EXTRACTION WELL SAMPLE ANALYTICAL RESULTS
1700 Jefferson Street, Oakland, California

Well ID	Date Sampled	TPH _g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Free Product
MW-1A	9/12/1988	--	--	--	--	--	--	28.2
	7/12/1989	220,000	1,200	9,210	3,100	24,000	NA	18.6
	8/1/1991	350,000	17,000	31,000	3,000	FP	NA	FP
	7/2/1992	FP	FP	FP	FP	FP	NA	18
	9/30/1992	FP	FP	FP	FP	FP	NA	10 - 13
	2/12/1993	FP	FP	FP	FP	FP	NA	13
	3/30/1993	FP	FP	FP	FP	FP	NA	10.2-14.8
	1/6/1994	FP	FP	FP	FP	14,000	NA	16.2
	4/13/1994	170,000	17,000	31,000	2,100	22,000	NA	12
	6/29/1994	95,000	16,000	21,000	1,500	12,000	NA	4.5+/-
	12/8/1994	190,000	13,000	21,000	1,400	11,000	NA	--
	4/3/1995	67,000	11,000	13,000	910	9,800	NA	--
	6/27/1995	53,000	11,000	9,900	500	6,300	NA	--
	9/19/1995	52,000	8,900	11,000	790	5,300	NA	--
	12/13/1995	62,000	9,900	9,200	710	6,800	NA	--
	3/6/1996	200,000	14,000	22,000	2,700	22,000	NA	--
	6/11/1996	140,000	18,000	28,000	2,800	19,000	NA	--
	9/19/1996	100,000	16,000	22,000	2,100	14,000	NA	--
	12/23/1996	FP	FP	FP	FP	FP	NA	--
	3/27/1997	66,000	12,000	15,000	1,400	100	1,800	--
	6/4/1997	54,000	11,000	12,000	1,000	7,200	<500	--
9/26/1997	73,000	10,000	16,000	1,400	8,500	<500	--	
12/23/1997	66,000	10,000	16,000	1,400	12,000	1,900	--	
3/31/1998	51,000	9,100	11,000	1,100	6,800	300	--	
6/18/1998	50,000	11,000	15,000	870	5,800	<50	--	
8/28/1998	15,000	1,100	830	31	3,000	<50	--	
12/2/1998	41,000	8,500	11,000	720	6,700	<50	--	
3/10/1999	10,000	2,300	1,900	1,600	2,300	<50	--	
6/30/1999	18,000	6,400	7,800	660	4,100	<25	--	
MW-4	9/12/1988	--	--	--	--	--	--	5.9
	7/12/1989	93,000	460	4,200	1,200	9,700	NA	25.2
	8/1/1991	86,000	1,500	6,200	1,000	FP	NA	18
	9/30/1992	FP	FP	FP	FP	FP	NA	FP
	2/12/1993	FP	FP	FP	FP	FP	NA	8.8
	1/6/1994	FP	FP	FP	FP	3,200	NA	6.2
	4/13/1994	58,000	1,500	2,500	520	7,300	NA	--
	6/29/1994	16,000	1,300	790	51	3,400	NA	--
	12/8/1994	92,000	1,700	4,100	310	5,400	NA	--
	4/3/1995	35,000	1,200	3,400	280	5,800	NA	--
	6/27/1995	13,000	1,300	1,600	77	1,800	NA	--
	9/19/1995	14,000	630	470	14	1,800	NA	--
	12/13/1995	11,000	2,200	2,100	110	2,100	NA	--
	3/6/1996	110,000	2,600	3,600	780	10,000	NA	--
6/11/1996	260,000	6,600	19,000	3,700	28,000	NA	--	
9/19/1996	95,000	9,900	19,000	2,000	13,000	NA	--	
MW-4	12/23/1996	FP	FP	FP	FP	FP	NA	FP
	3/27/1997	37,000	2,600	6,900	540	5,500	1,400	--
	6/4/1997	24,000	2,600	3,200	140	3,500	<300	--
	9/26/1997	41,000	2,900	5,000	350	4,800	<500	--
	12/23/1997	48,000	6,000	11,000	580	8,200	270	--
	6/18/1998	25,000	2,000	460	<15	6,400	<50	--
	8/28/1998	48,000	9,700	11,000	890	5,000	<50	--
	12/2/1998	10,000	1,700	610	<15	2,300	<50	--
3/10/1999	11,000	2,300	2,100	88	1,600	<25	--	
6/30/1999	88,000	1,800	3,000	150	2,700	<25	--	

Notes:
µg/L: micrograms per liter (approximately equivalent to ppb)
<: Concentration is below the reporting limit of the lab
J: Estimated value
--: not applicable or none
FP: Free product measured (amount unknown)

Table 2
GROUND WATER ELEVATIONS
1700 Jefferson Street, Oakland, California

Well ID	Date Measured	Well Elevation* (feet above MSL)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet bgs)
MW-1	7/8/1987	31.44	25.75	5.69
	7/12/1989	31.44	26	5.44
	Ground Water Data not available from 1990 to 1995			
	3/6/1996	32.36	NS	---
	6/11/1996	32.36	FP	---
	9/19/1996	32.36	FP	---
	12/23/1996	32.36	FP	---
	3/27/1997	32.36	FP	---
	6/4/1997	32.36	26.41	5.95
	9/26/1997	32.36	26.8	5.56
	12/22/1997	32.36	26	6.36
	3/31/1998	32.36	26.06	6.3
	6/18/1998	32.36	25.6	6.76
	8/28/1998	32.36	25.45	6.91
	12/2/1998	32.36	24.92	7.44
	3/10/1999	32.36	24.9	7.46
	6/30/1999	32.36	25.53	6.83
	9/29/1999	32.36	24.23	8.13
	11/22/1999	32.36	24.33	8.03
	2/11/2000	32.36	24.38	7.98
	5/30/2000	32.36	23.57	8.79
	9/15/2000	32.36	23.85	8.51
	11/16/2000	32.36	24.14	8.22
	4/2/2001	32.36	23.4	8.96
	6/28/2001	32.36	23.58	8.78
	8/30/2001	32.36	24	8.36
	12/26/2001	32.36	24.18	8.18
	4/23/2002	32.36	NA	---
	6/14/2002	32.36	23.41	8.95
	8/20/2002	32.36	23.85	8.51
	12/27/2002	32.36	24.1	8.26
	4/1/2003	32.36	23.75	8.61
	7/1/2003	32.36	23.5	8.86
	9/24/2003	32.36	23.82	8.54
	12/29/2003	32.36	24.07	8.29
	5/18/2004	32.36	23.64	8.72
	6/30/2004	32.36	23.64	8.72
9/23/2004	32.36	23.98	8.38	
12/28/2004	32.36	24.07	8.29	
3/16/2005	32.36	23.8	8.56	
6/23/2005	32.36	22.9	9.46	
9/9/2005	32.36	23.27	9.09	
12/2/2005	32.36	23.75	8.61	
3/24/2006	32.36	23.05	9.31	
6/29/2006	32.36	22.56	9.8	
9/13/2006	32.36	23	9.36	
12/27/2006	32.36	23.47	8.89	
3/30/2007	32.36	23.51	8.85	
7/2/2007	32.36	23.39	8.97	
10/2/2007	32.36	23.87	8.49	
12/13/2007	32.36	24.05	8.31	
3/26/2008	32.36	23.56	8.8	
6/2/2008	32.36	23.7	8.66	
9/10/2008	32.36	24.07	8.29	
3/3/2009	32.36	24.31	8.05	
9/3/2009	32.36	24.16	8.2	
3/3/2010	36.81	23.99	12.82	
MW-1A	3/3/2010	35.25	22.42	12.83
MW-3	7/8/1987	31.77	25.5	6.27
	7/12/1989	31.77	24.44	7.33
	Ground Water Data not available from 1990 to 1995			
	3/6/1996	31.77	24.79	6.98
	6/11/1996	31.77	25.6	6.17
	9/19/1996	31.77	26.09	5.68
	12/23/1996	31.77	FP	---
	3/27/1997	31.77	FP	---
	6/4/1997	31.77	25.11	6.66
	9/26/1997	31.77	25.41	6.36
	12/22/1997	31.77	24.91	6.86
	3/31/1998	31.77	24.05	7.72
	6/18/1998	31.77	23.71	8.06
	8/28/1998	31.77	23.7	8.07
	12/2/1998	31.77	23.6	8.17
	3/10/1999	31.77	22.65	9.12
	6/30/1999	31.77	23.07	8.7
	9/29/1999	31.77	23.03	8.74
11/22/1999	31.77	23.68	8.09	
2/11/2000	31.77	23.74	8.03	

Table 2
GROUND WATER ELEVATIONS
1700 Jefferson Street, Oakland, California

Well ID	Date Measured	Well Elevation* (feet above MSL)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet bgs)
MW-3	5/30/2000	31.77	22.97	8.8
	9/15/2000	31.77	23.12	8.65
	11/16/2000	31.77	23.4	8.37
	4/2/2001	31.77	23.4	8.37
	6/28/2001	31.77	23.17	8.6
	8/30/2001	31.77	23.35	7.42
	12/26/2001	31.77	23.54	8.23
	4/23/2002	31.77	22.89	8.88
	6/14/2002	31.77	22.85	8.92
	8/20/2002	31.77	23.11	8.66
	12/27/2002	31.77	23.34	8.43
	4/1/2003	31.77	22.9	8.87
	7/1/2003	31.77	22.8	8.97
	9/24/2003	31.77	23.15	8.62
	12/29/2003	31.77	23.45	8.32
	5/18/2004	31.77	22.98	8.79
	6/30/2004	31.77	23.04	8.73
	9/23/2004	31.77	23.32	8.45
	12/28/2004	31.77	28.71	3.062
	3/16/2005	31.77	23.7	8.07
	6/23/2005	31.77	22.4	9.37
	9/9/2005	31.77	22.63	9.14
	12/2/2005	31.77	23.06	8.74
	3/24/2006	31.77	22.57	9.2
	6/29/2006	31.77	23.91	9.84
	9/13/2006	31.77	22.35	9.42
	12/27/2006	31.77	22.82	8.95
	3/30/2007	31.77	22.91	8.86
	7/2/2007	31.77	22.88	8.89
	10/2/2007	31.77	23.2	8.57
	12/13/2007	31.77	23.4	8.37
	3/26/2008	31.77	23	8.77
6/2/2008	31.77	23.08	8.69	
9/10/2008	31.77	23.55	8.22	
3/3/2009	31.77	23.78	7.99	
9/3/2009	31.77	23.55	8.22	
3/3/2010	36.23	23.45	12.78	
MW-4	3/3/2010	36.77	23.87	12.9
MW-5	7/12/1989	29.22	24.91	4.31
	Ground Water Data not available from 1990 to 1995			
	3/6/1996	30.56	23.53	7.03
	6/11/1996	30.56	23.78	6.78
	9/19/1996	30.56	24.48	6.08
	12/23/1996	30.56	24.83	5.73
	3/27/1997	30.56	23.82	6.74
	6/4/1997	30.56	23.92	6.64
	9/26/1997	30.56	24.29	6.27
	12/22/1997	30.56	24.02	6.54
	3/31/1998	30.56	22.78	7.78
	6/18/1998	30.56	22.51	8.05
	8/28/1998	30.56	22.74	7.82
	12/2/1998	30.56	23.16	7.4
	3/10/1999	30.56	22.82	7.74
	6/30/1999	30.56	22.41	8.15
	9/29/1999	30.56	22.81	7.75
	11/22/1999	30.56	22.88	7.68
	2/11/2000	30.56	22.74	7.82
	5/30/2000	30.56	21.73	8.83
	9/15/2000	30.56	22.14	8.42
	11/16/2000	30.56	22.39	8.17
	4/2/2001	30.56	22.07	8.49
	6/28/2001	30.56	22.15	8.41
	8/30/2001	30.56	22.35	8.21
	12/26/2001	30.56	22.49	8.07
	4/23/2002	30.56	21.07	9.49
	6/14/2002	30.56	21.8	8.76
	8/20/2002	30.56	22.14	8.42
	12/27/2002	30.56	NA ¹	NA ¹
	4/1/2003	30.56	NA ¹	NA ¹
	7/1/2003	30.56	NA ¹	NA ¹
9/24/2003	30.56	22.21	8.35	
12/29/2003	30.56	22.56	8	
5/18/2004	30.56	21.85	8.71	
6/30/2004	30.56	22	8.56	
9/23/2004	30.56	22.36	8.2	
12/28/2004	30.56	22.42	8.14	

Table 2
GROUND WATER ELEVATIONS
1700 Jefferson Street, Oakland, California

Well ID	Date Measured	Well Elevation* (feet above MSL)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet bgs)
MW-5	3/16/2005	30.56	22.11	8.45
	6/23/2005	30.56	21.2	9.36
	9/9/2005	30.56	21.68	8.88
	12/2/2005	30.56	22.19	8.37
	3/24/2006	30.56	21.01	9.55
	6/29/2006	30.56	20.78	9.78
	9/13/2006	30.56	21.35	9.21
	12/27/2006	30.56	21.82	8.74
	3/30/2007	30.56	21.7	8.86
	7/2/2007	30.56	21.81	8.75
	10/2/2007	30.56	22.22	8.34
	12/13/2007	30.56	22.31	8.25
	3/26/2008	30.56	21.77	8.79
	6/2/2008	30.56	22.04	8.52
	9/10/2008	30.56	22.52	8.04
	3/3/2009	30.56	22.51	8.05
	9/3/2009	30.56	22.36	8.2
3/3/2010	35.21	22.14	13.07	
MW-6	3/6/1996	31.26	NA	---
	6/11/1996	31.26	25.16	6.1
	9/19/1996	31.26	25.76	5.5
	12/23/1996	31.26	25.88	5.38
	3/27/1997	31.26	24.78	6.48
	6/4/1997	31.26	24.6	6.66
	9/26/1997	31.26	24.8	6.46
	12/22/1997	31.26	24.71	6.55
	3/31/1998	31.26	23.75	7.51
	6/18/1998	31.26	23.22	8.04
	8/28/1998	31.26	22.23	9.03
	12/2/1998	31.26	23.72	7.54
	3/10/1999	31.26	23.54	7.72
	6/30/1999	31.26	23.04	8.22
	9/29/1999	31.26	23.42	7.84
	11/22/1999	31.26	23.64	7.62
	2/11/2000	31.26	23.67	7.59
	5/30/2000	31.26	22.82	8.44
	9/15/2000	31.26	23.1	8.16
	11/16/2000	31.26	23.41	7.85
	4/2/2001	31.26	23.33	7.93
	6/28/2001	31.26	23.15	8.11
	8/30/2001	31.26	23.35	7.91
	12/26/2001	31.26	23.27	7.99
	4/23/2002	31.26	22.89	8.37
	6/14/2002	31.26	22.81	8.45
	8/20/2002	31.26	23.15	8.11
	12/27/2002	31.26	23.41	7.85
	4/1/2003	31.26	23.16	8.1
	7/1/2003	31.26	22.75	8.51
	9/24/2003	31.26	23.16	8.1
	12/29/2003	31.26	23.47	7.79
	5/18/2004	31.26	22.87	8.39
	6/30/2004	31.26	22.43	8.83
	9/23/2004	31.26	23.3	7.96
	12/28/2004	31.26	23.42	7.84
	3/16/2005	31.26	23.6	7.66
	6/23/2005	31.26	22.27	8.99
	9/9/2005	31.26	22.55	8.71
	12/2/2005	31.26	23.05	8.21
3/24/2006	31.26	22.5	8.76	
6/29/2006	31.26	21.85	9.41	
9/13/2006	31.26	22.31	8.95	
12/27/2006	31.26	22.85	8.41	
3/30/2007	31.26	22.88	8.38	
7/2/2007	31.26	22.75	8.51	
10/2/2007	31.26	23.17	8.09	
12/13/2007	31.26	23.37	7.89	
3/26/2008	31.26	22.97	8.29	
6/2/2008	31.26	23.07	8.19	
3/3/2009	31.26	22.51	7.51	
9/3/2009	35.91	23.49	12.42	

Notes:

* : Well elevation measured to top of casing
Well elevations prior to 2010 are in City of Oakland Datum; After 2010, all elevations are in NAVD 88 Datum.

NS: Not Sampled

FP: Free Product

NA: Not Available

MSL: Mean sea level

bgs: below ground surface

¹ : Data not available due to ORC socks in well

² : Data not available due to probable equipment malfunction or operator error

Table 3
GROUNDWATER GRADIENT AND FLOW DIRECTION
1700 Jefferson Street, Oakland, California

Date Monitored	Reported Gradient	Reported Direction
6/11/1996	0.003	SW
6/4/1997	0.009	NW
3/31/1998	0.002	W
8/28/1998	0.007	E
12/2/1998	0.006	NW
3/10/1999	0.011	NW
9/29/1999	0.004	NW
2/11/2000	0.001	NW
5/30/2000	0.003	W
11/16/2000	0.044	W
4/2/2001	0.001	SW
6/28/2001	0.005	SW
8/30/2001	0.004	SW
4/23/2002	0.006	W-SW
6/14/2002	0.004	W- SW
8/20/2002	0.005	W- SW
12/27/2002	0.005	W- SW
4/1/2003	0.007	W- SW
7/1/2003	0.006	W-NW
9/24/2003	0.005	W-NW
12/29/2003	0.003	W-NW
5/18/2004	0.006	W
6/30/2004	0.002	N
9/23/2004	0.005	W
12/28/2004	0.0451	SE ¹
3/16/2005	0.01	SW
6/23/2005	0.005	W
9/9/2005	0.005	W
12/2/2005	0.006	NW
3/24/2006	0.006	NW
9/13/2006	0.005	W-NW
12/13/2007	0.004	W-NW
3/26/2008	0.004	W
6/2/2008	0.004	W
9/10/2008	0.005	W
3/3/2009	0.004	W
9/3/2009	0.003	W-NW
3/3/2010	0.002	SW

Notes:

¹ MACTEC reported an error in groundwater measurement

Table 4
GROUND WATER ANALYTICAL RESULTS
1700 Jefferson Street, Oakland, California

Well ID	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Free Product
		(µg/L)						
ESLS		210	46	130	43	100	1800	--
MW-1	7/8/1987	190,000	18,000	26,000	--	3,700	--	30
	9/12/1988	--	--	--	--	--	--	25
	7/12/1989	190,000	1,000	8,900	2,900	19,000	--	21.6
	8/1/1991	--	--	--	--	--	--	12
	6/18/1992	--	--	--	--	--	--	34
	7/2/1992	--	--	--	--	--	--	18
	7/23/1992	--	--	--	--	--	--	10
	8/18/1992	--	--	--	--	--	--	10
	11/11/1992	--	--	--	--	--	--	13
	1/29/1993	--	--	--	--	--	--	25.2
	2/12/1993	--	--	--	--	--	--	10.2
	1/6/1994	--	--	--	--	--	--	14.8
	3/17/1994	--	--	--	--	--	--	23.4
	4/13/1994	--	--	--	--	--	--	12
	6/29/1994	--	--	--	--	--	--	0
	12/8/1994	--	--	--	--	--	--	FP
	4/3/1995	--	--	--	--	--	--	FP
	6/27/1995	--	--	--	--	--	--	FP
	9/19/1995	--	--	--	--	--	--	FP
	12/13/1995	--	--	--	--	--	--	FP
	3/6/1996	--	--	--	--	--	--	FP
	6/11/1996	--	--	--	--	--	--	FP
	9/19/1996	--	--	--	--	--	--	FP
	12/23/1996	--	--	--	--	--	--	FP
	3/27/1997	--	--	--	--	--	--	FP
	6/4/1997	68,000	2,200	4,500	1,500	11,000	<500	--
	9/26/1997	59,000	6,000	3,000	1,600	8,600	<500	--
	12/23/1997	41,000	6,800	3,000	1,400	6,600	300	--
	3/31/1998	44,000	8,300	3,700	1,100	4,300	420	--
	6/18/1998	32,000	1,100	3,800	550	3,000	<50	--
	8/28/1998	26,000	8,600	2,300	730	2,100	<50	--
	12/2/1998	26,000	9,200	4,300	820	2,800	<50	--
	3/10/1999	26,000	8,200	5,900	870	3,500	<50	--
	6/30/1999	18,000	7,000	5,800	950	2,500	<25	--
	9/29/1999	21,000	9,200	10,000	1,200	5,500	<250	--
	9/29/1999	14,000	6,200	5,900	620	3,500	<250	--
	11/22/1999	24,000	4,900	5,000	730	3,500	<100	--
	2/11/2000	19,000	4,100	4,800	530	2,800	7	--
	5/30/2000	19,000	5,700	8,400	730	3,500	<5.0	--
	9/15/2000	20,000	4,100	5,700	540	2,700	<12	--
	11/16/2000	18,000	3,500	4,300	640	3,200	<40	--
	4/2/2001	19,000	4,700	5,200	570	2,600	50	--
	6/28/2001	39,000	5,200	4,200	660	3,900	9	--
	8/30/2001	31,000	5,600	5,100	560	2,500	<100	--
	12/26/2001	34,000	5,300	5,200	630	2,400	<120	--
	4/24/2002	35,000	4,900	6,000	740	3,100	<120	--
6/14/2002	35,000	5,400	6,800	870	3,500	<250	--	
8/20/2002	26,000	4,100	4,700	620	2,700	<120	--	
12/27/2002	28,000	4,500	5,000	660	3,000	<120	--	
4/1/2003	16,000	4,500	6,000	680	3,100	<120	--	
7/1/2003	61,000	7,700	11,000	1,200	6,700	<250	--	
9/25/2003	59,000	7,600	9,400	1,000	4,800	<1,200	--	
12/29/2003	46,000	6,600	7,900	960	4,000	<250	--	
5/18/2004	23,000	4,100	4,700	450	1,500	<50	--	
6/30/2004	24,000	3,500	3,600	390	1,300	<50	--	
9/23/2004	24,000	3,800	3,900	470	1,400	<25	--	
12/28/2004	22,000	3,400	3,400	380	1,400	<250	--	
3/16/2005	21,000	4,100	4,200	470	1,300	<50	--	
6/23/2005	30,000	5,400	5,500	520	1,900	<1,200	--	
9/9/2005	7,100	840	950	120	410	<120	--	
12/2/2005	19,000	3,600	3,500	410	1,300	<2.5	--	
3/24/2006	29,000	6,200	6,000	620	2,000	<500	--	
6/29/2006	23,000	4,800	4,000	330	1,200	<500	--	
9/13/2006	20,000	4,500	3,900	400	1,400	<250	--	
12/27/2006	31,000	6,000	5,300	710	2,500	<500	--	
3/30/2007	30,000	5,000	4,600	520	1,700	<500	--	
7/2/2007	14,000	2,500	2,000	280	930	<500	--	
10/2/2007	19,000	3,400	2,700	400	1,200	<500	--	
12/13/2007	18,000	3,500	2,700	390	1,100	<500	--	
3/26/2008	28,000	4,900	4,900	530	2,100	<500	--	
6/2/2008	20,000	3,300	3,300	380	1,700	<500	--	
9/10/2008	24,000	4,200	4,200	470	2,200	<500	--	
3/3/2009	33,100	5,380	5,380	603	2,800	<100	--	
9/3/2009	35,900	5,570	5,180	620	3,270	<100	--	
3/3/2010	51,700	10,100	8,050	952	4,560	<200	--	
MW-2	7/8/1987	8,200	1,500	340	--	87	--	--
	11/9/1987	WELL DESTROYED						
MW-3	7/8/1987	6,200	180	500	--	170	--	0

Table 4
GROUND WATER ANALYTICAL RESULTS
1700 Jefferson Street, Oakland, California

Well ID	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Free Product
		(µg/L)						
	ESLS	210	46	130	43	100	1800	--
MW-3	7/12/1989	13000	4	160	210	420	--	0
	8/1/1991	74,000	1,600	4,600	670	4,300	--	4
	9/30/1992	--	--	--	--	--	--	4.1
	11/11/1992	--	--	--	--	--	--	2
	1/29/1993	--	--	--	--	--	--	1.7
	2/12/1993	--	--	--	--	--	--	1.3
	1/6/1994	--	--	--	--	--	--	2.2
	3/17/1994	--	--	--	--	--	--	2.4
	4/13/1994	--	--	--	--	--	--	1.8
	6/29/1994	39000	3200	2900	580	4300	--	0.5
	12/8/1994	4600000	1500	4200	6000	95000	--	--
	4/3/1995	51000	1100	2300	580	4800	--	--
	6/27/1995	20000	270	550	190	1700	--	--
	9/19/1995	6200	70	140	68	500	--	--
	12/13/1995	19000	220	480	140	1700	--	--
	3/6/1996	7000	120	170	49	440	--	--
	6/11/1996	16000	170	270	68	1500	--	--
	9/19/1996	6000	45	30	15	300	--	--
	6/4/1997	85000	8500	13000	2400	16000	<500	--
	9/26/1997	47000	610	6000	930	5900	<100	--
	12/23/1997	32000	640	5300	800	5900	<300	--
	3/31/1998	32000	690	3800	870	5200	350	--
	6/18/1998	16000	180	1500	490	3700	<25	--
	8/28/1998	17000	84	1100	430	3800	<50	--
	12/2/1998	3,200	39	85	25	360	<50	--
	3/10/1999	9,600	86	540	250	2,300	<25	--
	6/30/1999	7,900	31	330	200	1,800	<25	--
	9/29/1999	5,000	120	340	230	1,300	10	--
	9/29/1999	4,100	180	340	130	580	14	--
	11/22/1999	3,100	7	33	27	260	<1.0	--
	2/11/2000	540	8	20	2	28	31	--
	5/30/2000	490	11	6	0	17	<5.0	--
	9/15/2000	1,500	28	14	3	160	<5.0	--
	11/16/2000	1,300	20	34	25	28	<5.0	--
	4/2/2001	170	9	6	1	8	77	--
	6/28/2001	4,900	150	240	38	160	<2	--
	8/30/2001	3,100	42	48	26	210	<1.2	--
	12/26/2001	950	8	5	1	7	<0.5	--
	4/24/2002	300	11	5	1	1	<0.5	--
	6/14/2002	4,600	130	470	91	390	<0.5	--
	8/20/2002	4,900	330	170	40	150	<5.0	--
12/27/2002	4,000	110	280	57	260	19	--	
4/1/2003	5,900	370	150	44	230	<1.0	--	
7/1/2003	12,000	200	460	130	390	<5.0	--	
9/25/2003	10,000	150	300	120	280	<2.5	--	
12/29/2003	7,300	160	250	79	210	<2.5	--	
5/18/2004	1,500	77	72	19	59	<12	--	
6/30/2004	2,000	81	37	34	40	<1.0	--	
9/23/2004	3,400	140	95	36	40	<10	--	
12/28/2004	3,900	340	37	11	60	<5.0	--	
3/16/2005	970	1	2	1	3	<2.5	--	
6/23/2005	850	56	7	<5	12	<25	--	
9/9/2005	3,900	470	100	33	96	<62	--	
12/2/2005	760	14	8	2	17	<0.5	--	
3/24/2006	590	83	41	7	33	<12	--	
6/29/2006	1,100	130	38	16	21	<25	--	
9/13/2006	1,300	260	71	44	28	<25	--	
12/27/2006	3,000	250	160	49	140	<25	--	
3/30/2007	3,100	250	260	46	110	<25	--	
7/2/2007	2,600	250	250	54	130	<25	--	
10/2/2007	1,900	170	140	24	48	<25	--	
12/13/2007	2,900	250	170	66	120	<25	--	
3/26/2008	2,300	340	95	26	64	<25	--	
6/2/2008	2,300	270	250	59	130	<25	--	
9/10/2008	2,900	300	180	88	220	<25	--	
3/3/2009	3,020	37	10	3.8J	12.3J	<10	--	
9/3/2009	538	59	1	13	2	<1.0	--	
3/3/2010	1,570	98	12	20	14	<1.0	--	
MW-5	9/12/1988	--	--	--	--	--	--	0.5
	7/12/1989	14,000	7	190	210	500	--	0.4
	8/1/1991	120,000	20,000	14,000	1,900	4,900	--	0
	9/30/1992	51,000	13,000	5,900	1,400	2,600	--	0
	3/30/1993	74,000	16,000	5,000	1,800	2,700	--	0.06
	1/6/1994	80,000	19,000	8,200	1,400	2,700	--	0
	4/13/1994	63,000	14,000	3,500	1,500	2,100	--	0
	6/29/1994	64,000	29,000	5,400	2,800	4,500	--	0
	12/8/1994	59000	13000	3800	1800	2900	--	--
	4/3/1995	51,000	15,000	2,200	2,800	4,500	--	--
6/27/1995	41000	12000	2100	1400	1600	--	--	

Table 4
GROUND WATER ANALYTICAL RESULTS
1700 Jefferson Street, Oakland, California

Well ID	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Free Product
		(µg/L)						
	ESLS	210	46	130	43	100	1800	--
MW-5	9/19/1995	50000	1600	2700	2000	2100	--	--
	12/13/1995	45000	13000	2100	16000	1900	--	--
	3/6/1996	51000	15000	2800	2000	2400	--	--
	6/11/1996	48000	12000	2900	2000	2700	--	--
	9/19/1996	48000	12000	4500	2300	4000	--	--
	12/23/1996	45000	12000	2200	2700	6500	600	--
	3/27/1997	44000	11000	1100	1900	2800	300	--
	6/4/1997	35000	8900	560	1500	1700	<100	--
	9/26/1997	36000	7900	270	1500	1300	<500	--
	12/23/1997	39000	13000	500	1900	1700	<1,000	--
	3/31/1998	48000	10000	400	2000	2200	350	--
	6/18/1998	17000	9500	310	420	850	<10	--
	8/28/1998	16000	5400	160	1100	900	<50	--
	12/2/1998	15000	8400	120	1500	840	<50	--
	3/10/1999	23000	14000	300	1800	1100	<50	--
	6/30/1999	7700	5200	270	1100	690	<25	--
	9/29/1999	11000	9600	710	1100	1100	<100	--
	9/29/1999	10000	14000	470	1100	600	<100	--
	11/22/1999	30000	11000	3400	1500	2500	<100	--
	2/11/2000	23000	12000	4500	1200	1300	6.6	--
	5/30/2000	19000	9900	6900	1200	2600	<200	--
	9/15/2000	24,000	3,800	3,000	460	1,200	<10	--
	11/16/2000	1,800	470	220	39	100	<5	--
	4/2/2001	15,000	7,400	3,000	1,000	2,200	<50	--
	6/28/2001	3,600	300	11	16	15	4	--
	8/30/2001	34,000	8,300	3,000	1,400	2,600	<50	--
	12/26/2001	1,900	300	110	55	120	<10	--
	4/24/2002	9,400	2,300	130	300	270	<50	--
	6/14/2002	1,700	110	<2.5	7	<2.5	<0.50	--
	8/20/2002	3,200	320	9	22	19	<0.50	--
	12/27/2002	6,200	2,200	140	160	250	<25	--
	9/25/2003	43,000	12,000	2,800	1,500	3,000	<1,200	--
	12/29/2003	26,000	7,700	1,900	910	210	<2.5	--
5/18/2004	15,000	5,000	1,300	380	770	<50	--	
6/30/2004	18,000	5,700	1,600	540	1,200	<50	--	
9/23/2004	42,000	12,000	3,900	1,200	2,400	<120	--	
12/28/2004	41,000	10,000	3,800	1,000	2,300	<250	--	
3/16/2005	37,000	11,000	3,800	1,100	2,400	<120	--	
6/23/2005	27,000	7,700	1,700	680	1,300	<1,200	--	
9/9/2005	46,000	10,000	2,700	1,100	2,100	<1,200	--	
12/2/2005	21,000	5,900	1,500	600	1,200	<500	--	
3/24/2006	<10,000	2,800	450	190	180	<500	--	
6/29/2006	1,200	240	11	13	18	<2.5	--	
9/13/2006	5,800	1,600	210	180	270	<120	--	
12/27/2006	16,000	4,300	610	460	750	<500	--	
3/30/2007	31,000	10,000	1,400	1,100	1,600	<500	--	
7/2/2007	33,000	9,400	1,400	1,000	1,500	<500	--	
10/2/2007	36,000	11,000	2,100	1,100	1,700	<620	--	
12/13/2007	34,000	11,000	2,600	1,200	1,900	<1,200	--	
3/26/2008	28,000	7,700	1,900	860	1,300	<1,200	--	
6/2/2008	43,000	13,000	3,800	1,400	2,400	<1,200	--	
9/10/2008	45,000	13,000	3,700	1,200	2,200	<1,200	--	
3/3/2009	43,400	11,700	3,560	1,290	2,200	<250	--	
9/3/2009	35,900	8,800	1,240	1,720	2,420	<100	--	
3/3/2010	27,200	6,820	279	1,870	2,050	<100	--	
MW-6	6/11/1996	<50	<0.5	<0.5	<0.5	<2	--	--
	9/19/1996	<50	<0.5	<0.5	<0.5	<2	--	--
	12/23/1996	<50	<0.5	<0.5	<0.5	<2	<5	--
	3/27/1997	<50	<0.5	<0.5	<0.5	<2	<5	--
	6/4/1997	<50	<0.5	<0.5	<0.5	<2	<5	--
	9/26/1997	<50	<0.5	<0.5	<0.5	<2	<5	--
	12/23/1997	<50	<0.5	<0.5	<0.5	<2	<5	--
	3/31/1998	<50	<0.5	<0.5	<0.5	<2	<5	--
	6/18/1998	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	8/28/1998	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	12/2/1998	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	3/10/1999	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	6/30/1999	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	9/29/1999	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	9/29/1999	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	11/22/1999	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	2/11/2000	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	5/30/2000	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	9/15/2000	<50	<0.3	<0.3	<0.3	<0.6	<1.0	--
	11/16/2000	<50	<0.3	<0.3	<0.3	<0.3	<1.0	--
4/2/2001	<50	<0.3	<0.3	<0.3	2.7	5	--	
6/28/2001	<50	<0.5	<0.5	<0.3	<0.5	17	--	
8/30/2001	<50	<0.5	<0.5	<0.3	8.7	<2.5	--	
12/26/2001	66	3.6	3.6	3.6	<0.5	<2.5	--	

Table 4
GROUND WATER ANALYTICAL RESULTS
1700 Jefferson Street, Oakland, California

Well ID	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Free Product
		(µg/L)						
	ESLS	210	46	130	43	100	1800	--
MW-6	4/24/2002	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	6/14/2002	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	8/20/2002	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	12/27/2002	<50	<0.5	<0.05	<0.5	<0.5	<2.5	--
	4/1/2003	<50	<0.5	<0.05	<0.5	<0.5	<2.5	--
	7/1/2003	<50	<0.5	<0.05	<0.5	<2.5	<2.5	--
	9/25/2003	<50	<0.5	<0.05	<0.5	<2.5	<2.5	--
	12/29/2003	<50	<0.5	<0.05	<0.5	<0.5	<2.5	--
	5/18/2004	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	6/30/2004	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	9/23/2004	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	12/28/2004	59	<0.5	<0.5	<0.5	2	<2.5	--
	3/16/2005	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	6/23/2005	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	9/9/2005	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	12/2/2005	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	3/24/2006	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	6/29/2006	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	9/13/2006	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	12/27/2006	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	3/30/2007	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	7/2/2007	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	10/2/2007	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
12/13/2007	<50	<0.5	1	<0.5	<0.5	<2.5	--	
3/26/2008	<50	<0.5	<0.5	<0.5	1	<2.5	--	
6/2/2008	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
9/10/2008	<51	<0.5	<0.5	<0.5	<0.5	<2.6	--	
3/3/2009	<50	<1.0	0.53J	<1.0	<2.0	<1.0	--	
9/3/2009	<50	<1.0	<1.0	<1.0	<2.0	<1.0	--	
3/3/2010	<50	<1.0	<1.0	<1.0	<2.0	<1.0	--	

Notes:

µg/L: micrograms per liter (approximately equivalent to ppb)

<: Concentration is below the reporting limit of the lab

J: Estimated value

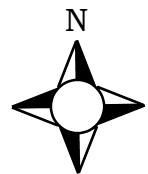
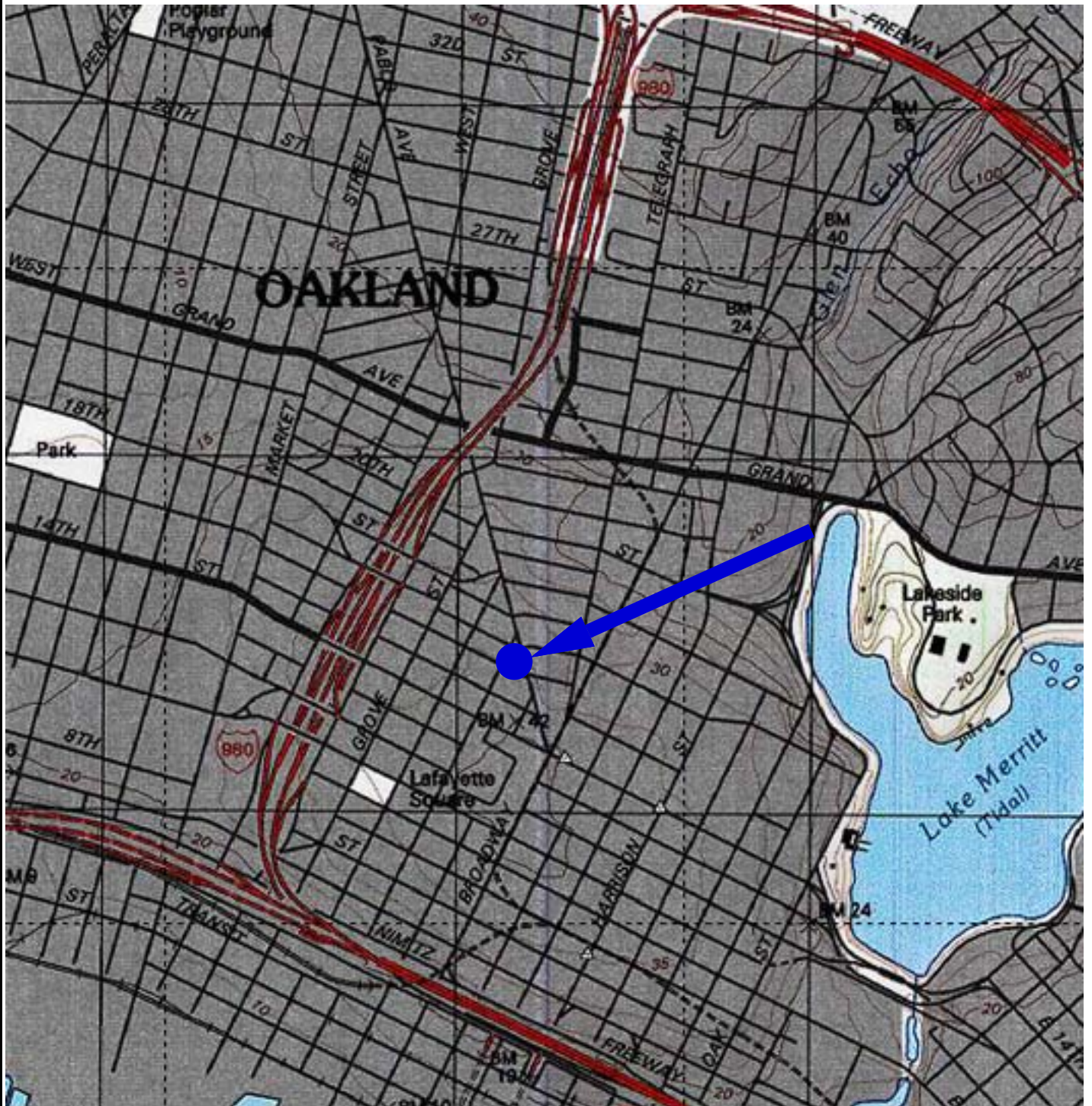
--: not applicable or none

ESLS: Environmental Screening Levels - May 2008

FP: Free product measured (amount unknown)

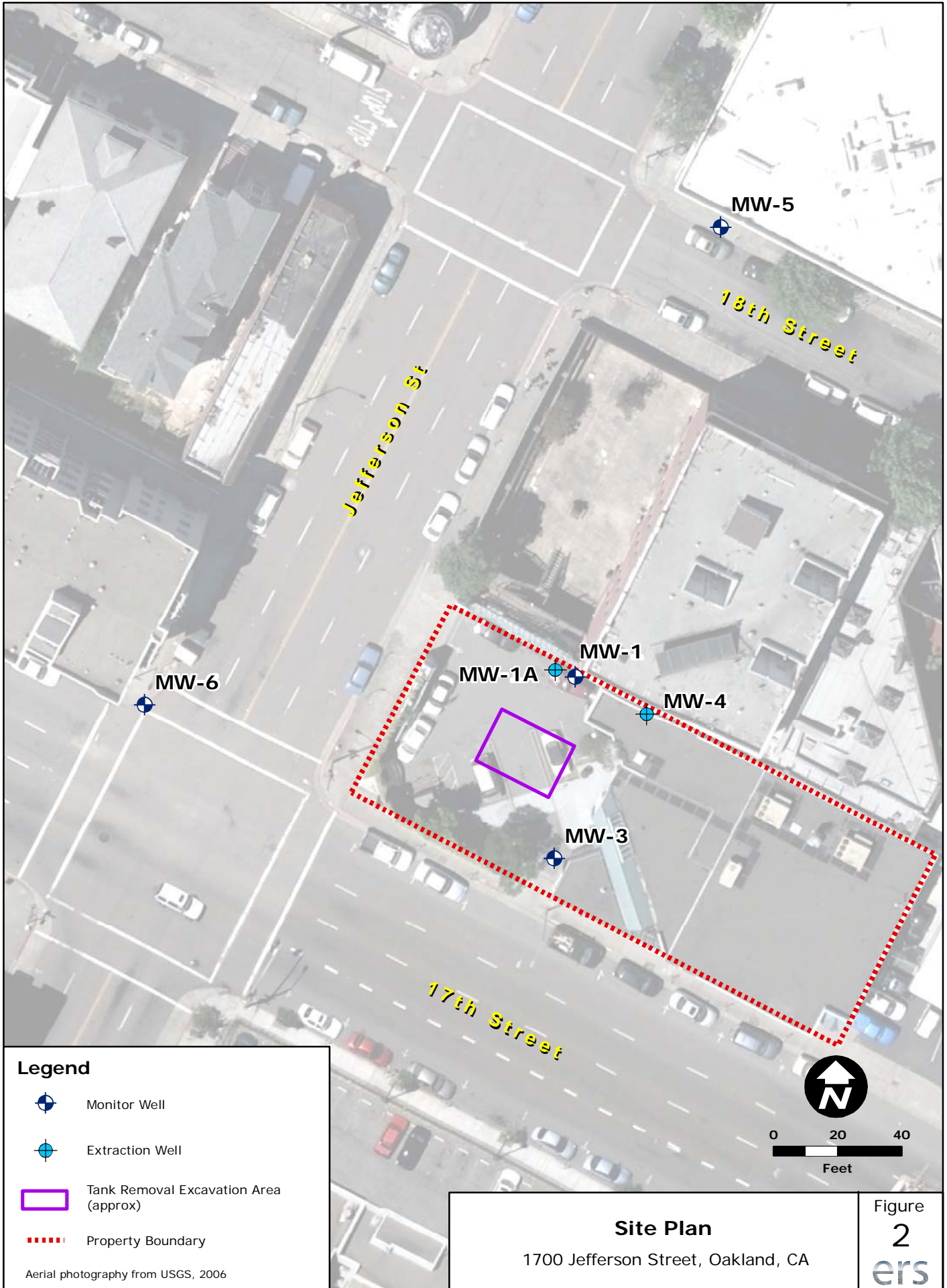
Concentration is above selected screening criteria

FIGURES



Location Map
1700 Jefferson Street
Oakland, California
Source: National Geographic TOPO!

Figure
1
ers



Legend



Monitor Well



Extraction Well

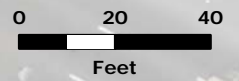


Tank Removal Excavation Area (approx)



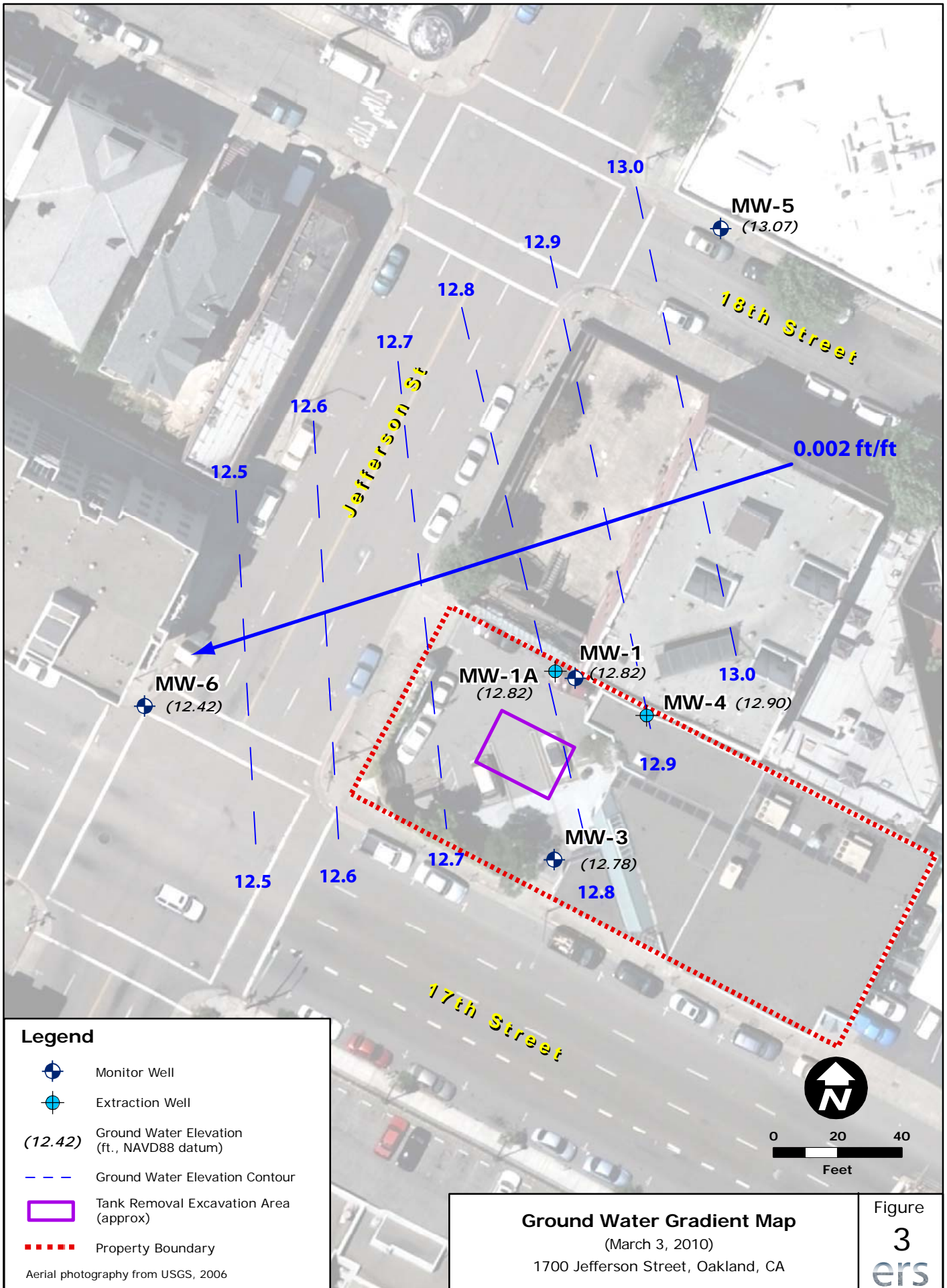
Property Boundary

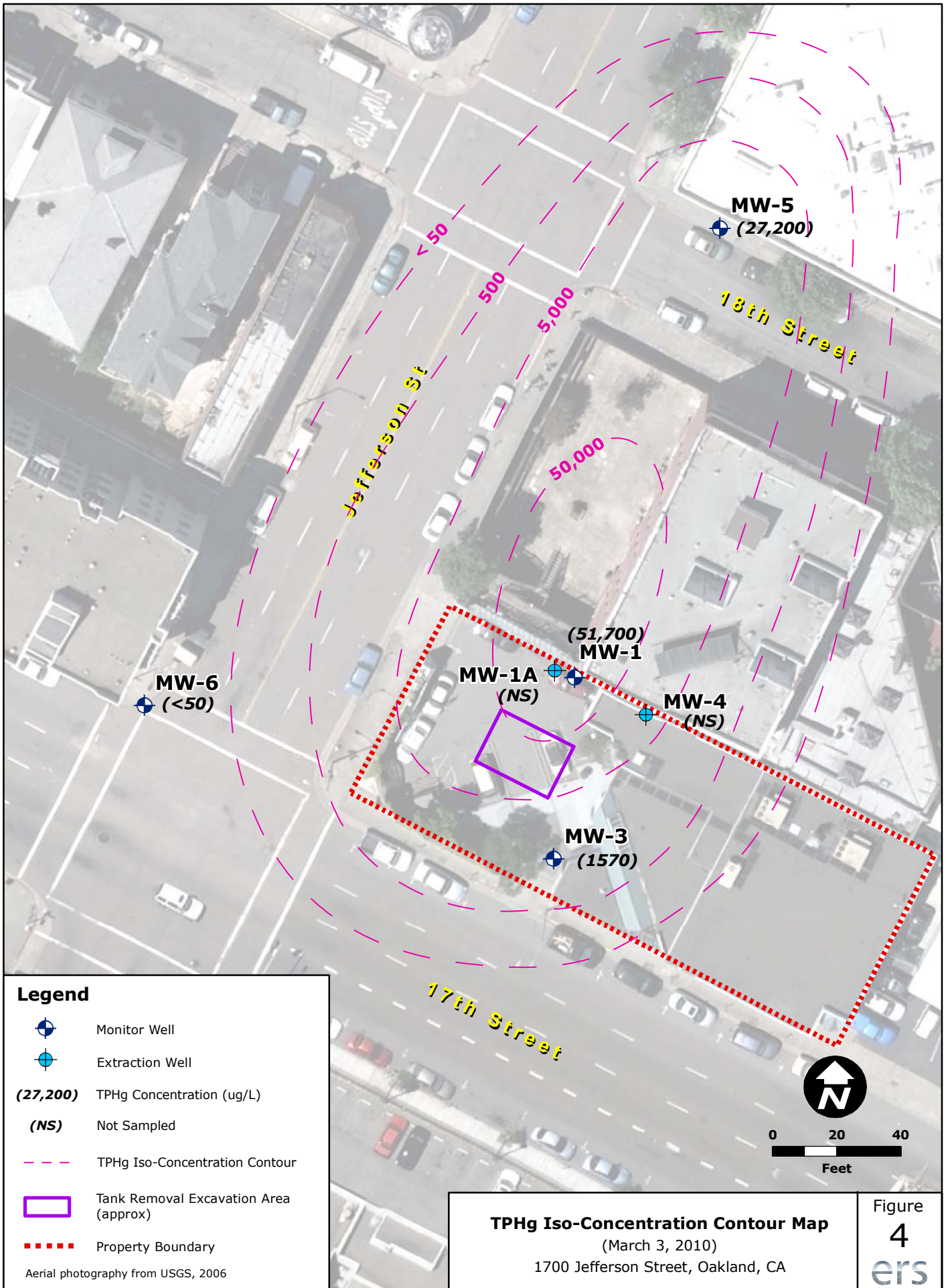
Aerial photography from USGS, 2006

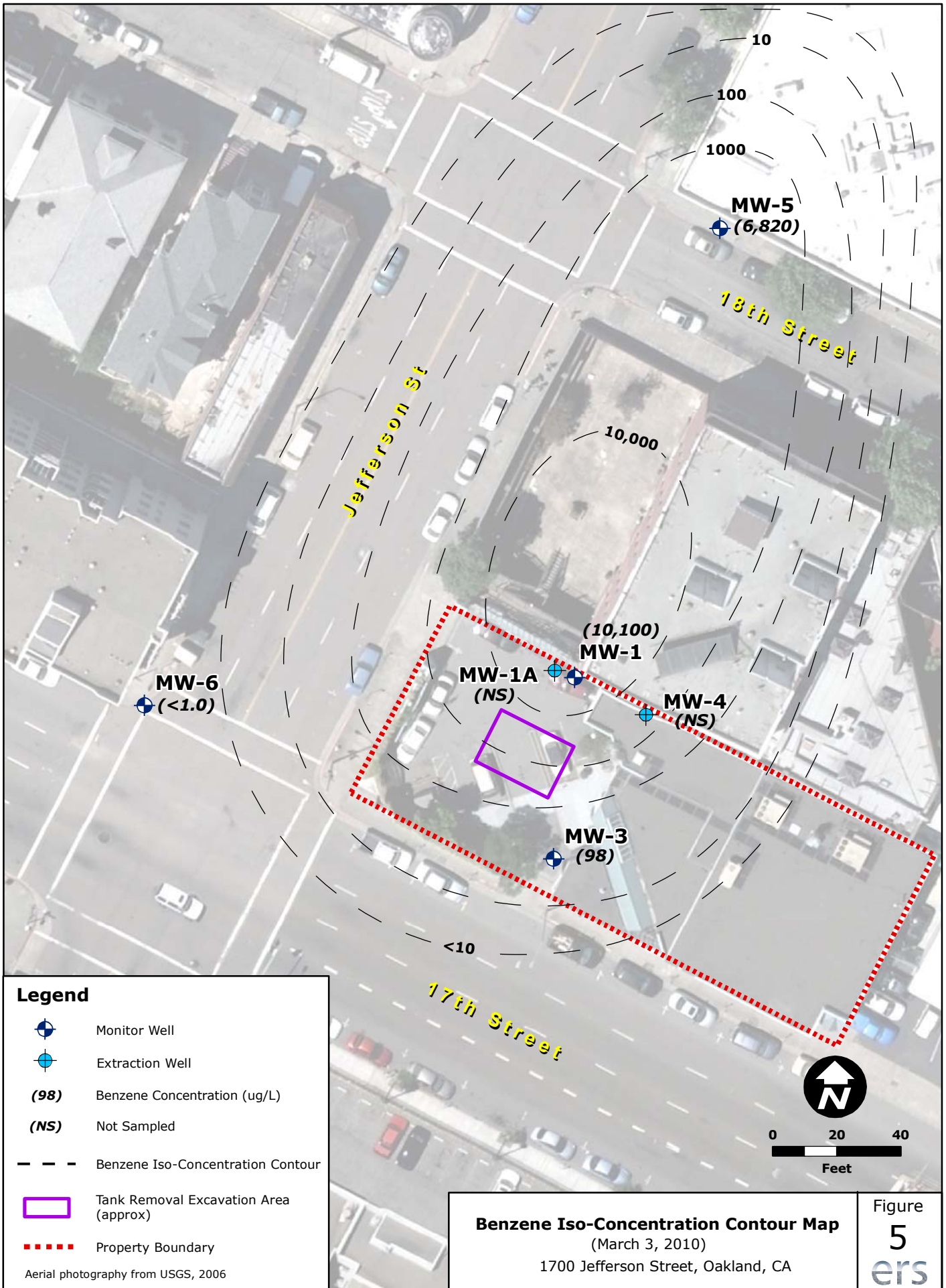


Site Plan

1700 Jefferson Street, Oakland, CA







APPENDIX A

SITE VISIT REPORT

Project Name: 1700 Jefferson	Site ID: BPS	Date: 3/3/19
Location: Oakland	Client: BPS	Day of Week: Wed
Site Personnel: LTL	Weather: post-rain	

Purpose of Site Visit: Semi-Annual monitoring


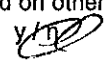
Tailgate Meeting notes:

- Low-flow
- Look for evidence of removed UST near MW-5

Summary of Activities: On-site @ 0930 (departed 0900)
 Gauged 6 wells, sampled 4 wells.
 Off-site @ 1220
 Returned to office @ 1800

Drum Tally	Empty:	Water:	Soil:
Remaining Drum Space:	2/3 (240 gal)		

Equipment and Materials Used: DTW meter, peripump, VSI 556, truck, camera

Signature 	Affiliation ERS	Continued on other side? 
--	--------------------	---

DQM Calibration and Accuracy Checks Data Sheet

Event _____

Project ID 1700 Jefferson

Page ____ of ____

Record 1

Record 2

Record 3

Instrument ID	YSI 556		
Instrument Type (<u>adjustable</u> or non-adjustable)			
Characteristic (Parameter)	pH, SC, DO		
Unit	S.U. μ MHO, %		
Date of Calibration or Accuracy Check	3/3/10		
Time of Calibration or Accuracy Check	1000		
Reason for Calibration or Accuracy Check (Pre-event, Post-event, Routine, new instrument)	pre-event		
Temperature (C) at Calibration or Accuracy Check (not applicable for temperature checks)	11.38°C		
Thermometer ID (not applicable for temperature checks)			
Standard Material (enter Standard ID, or NIST thermometer ID, or 'saturated water', or 'distilled water ice-bath', etc.)			
"True" value of Standard Material [see on the label] or natural point	7, 10, 4, 10,000 μ MHO		
Reading in Standard Material (non-adjustable instruments) or Reading in Standard Material before Calibration (adjustable instruments)	first second third	7.09, 7.87, 9.83 10.549 90%	first second third
Action taken (cal, none, or nap) (adjustable instruments only)	cal		
Reading after calibration (adjustable instruments only)	7.00, 4.00, 9.97 10,000 μ MHO		
Cal/AccurCheck Operator (your name)	ETL		
Comments			

If you calibrate in air and can measure the absolute barometric pressure, write the value and unit here _____; otherwise please indicate your elevation above sea level _____.

Monitor Well Data Sheet

Site Name: 1700 Jefferson	Well/Sample ID: MW-1
Location: Oakland, CA	Initial Depth to Water (DTW): 23.99
Client: BPS	Total Well Depth (TD): —
Sampler: LTL	Well Diameter (Inches): 4"
Date: 3/3/10	Did Well Dewater? No
Purge & Sample Method: Peri w/ tubing	Purge Rate (liters/min): 0.25
Casing Volume (liters): —	Sample Rate (liters/min): 0.2

2" well x 1 foot = 0.6L					4" well x 1 foot = 2.4L			
Time	pH	SC	DO	Temp	ORP	DTW	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	mg/l	°C	mV	feet bgs	liters	
1110	6.57	1383	0.97	17.66	25.7	24.15	1	
1114	6.60	1388	0.92	17.76	15.5	24.15	2	
1118	6.62	1389	0.83	17.77	7.2	24.15	3	
1121	6.63	1388	0.80	17.83	2.1	24.15	3.75	
1124	6.63	1388	0.79	17.85	0.1	24.15	4.5	

Total Liters Purged: 4.5	Start Purge Time: 1106	DTW prior to sample (ft): 24.15
Total Sample Volume: 160mL	Stop Purge Time: 1124	Start Sample Time: 1124
Turbidity: very low	Color: none	Odor: yes
Length of Tubing (ft)	Sheen: no	Product: no
Instrument ID: YSI 556	Last Calibrated: 3/3/10 @ 1000	

Notes:

Monitor Well Data Sheet

Site Name: <u>1700 Jefferson</u>	Well/Sample ID: <u>MW-3</u>
Location: <u>Oakland, CA</u>	Initial Depth to Water (DTW): <u>23.45</u>
Client: <u>BPS</u>	Total Well Depth (TD): <u> </u>
Sampler: <u>LTL</u>	Well Diameter (Inches): <u>4"</u>
Date: <u>3/3/10</u>	Did Well Dewater? <u>No</u>
Purge & Sample Method: <u>Peri w/ ded tubing</u>	Purge Rate (liters/min): <u>0.25</u>
Casing Volume (liters): <u> </u>	Sample Rate (liters/min): <u>0.2</u>

2" well x 1 foot = 0.6L

4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	mg/l	°C	mV	feet bgs	liters	
1048	6.53	764	0.89	18.82	90.2	23.70	1	
1052	6.53	765	0.83	18.89	72.2	23.78	2	
1056	6.53	766	0.80	19.01	58.5	23.80	3	
1059	6.53	766	0.79	19.01	51.1	23.80	3.75	

Total Liters Purged: <u>3.75</u>	Start Purge Time: <u>1044</u>	DTW prior to sample (ft): <u>23.80</u>
Total Sample Volume: <u>160 mL</u>	Stop Purge Time: <u>1059</u>	Start Sample Time: <u>1059</u>
Turbidity: <u>very low</u>	Color: <u>none</u>	Odor: <u>slight</u>
Length of Tubing (ft)	Sheen: <u>none</u>	Product: <u>none</u>
Instrument ID: <u>YSI 556</u>	Last Calibrated: <u>3/3/10 @ 1000</u>	

Notes:

Monitor Well Data Sheet

Site Name: 1700 Jefferson	Well/Sample ID: MW-5
Location: Oakland, CA	Initial Depth to Water (DTW): 22.14
Client: BPS	Total Well Depth (TD): —
Sampler: LTL	Well Diameter (Inches): 2"
Date: 3/3/10	Did Well Dewater? No
Purge & Sample Method: Peri w/ tubing	Purge Rate (liters/min): 0.25
Casing Volume (liters): —	Sample Rate (liters/min): 0.2

2" well x 1 foot = 0.6L

4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Cumulative Volume	Notes
hh:mm	SU	µmhos/cm	mg/l	°C	mV	feet bgs	liters	
1144	6.80	1090	0.75	18.94	-10.7	22.25	1	
1148	6.79	1088	0.71	18.87	-15.1	22.25	2	
1152	6.78	1084	0.73	18.81	-17.8	22.25	3	
1155	6.76	1081	0.73	18.81	-18.4	22.25	3.75	

Total Liters Purged: 3.75	Start Purge Time: 1140	DTW prior to sample (ft): 22.25
Total Sample Volume: 160mL	Stop Purge Time: 1155	Start Sample Time: 1155
Turbidity: v. clear	Color: none	Odor: yes, strong
Length of Tubing (ft)	Sheen:	Product: none
Instrument ID: YSI 556	Last Calibrated: 3/3/10 @ 1000	

Notes:



CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information		Project Information		Requested Analysis												Matrix Codes								
Company Name: EKS		Project Name: BPS														DW- Drinking Water								
Address: 1600 Riviera Ave #310		Street: 1700 Jefferson														GW- Ground Water								
City: Walnut Creek CA 94596		City: Oakland CA														WW- Water								
Project Contact: Yola Bayram ybayram@erscorp.us		Project #														SW- Surface Water								
Phone #: (925) 938-1600		Fax #: (925) 938-1610														SO- Soil								
Samplers Name: Logan Linderman		Client Purchase Order #														SL- Sludge								
Accutest Sample #		SUMMA #														OI- Oil								
Field ID / Point of Collection		MEOH Vial #		Collection														LIQ- Other Liquid						
		Date		Time		Sampled by		Matrix		# of bottles														AIR- Air
																								SOL- Other Solid
																								WP- Wipe
																								LAB USE ONLY

8260
 8264
 8021
 602
 BTEX
 MTBE
 TBAO
 NAP
 8260
 624
 TCL
 PPL
 STARS
 MTBE
 TBA
 NAP
 +10
 +15
 8270
 626
 TCL
 PPL
 STARS
 ABND
 AEO
 BND
 PAH
 +TICs
TPHg (8260)

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
<input checked="" type="checkbox"/> Std. 15 Business Days <input type="checkbox"/> 10 Day RUSH <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> Other	Approved By/ Date: _____ _____ _____ _____ _____	<input checked="" type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> NJ Reduced <input type="checkbox"/> NJ Full <input type="checkbox"/> Other _____	<input type="checkbox"/> FULL CLP <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format _____	Please provide GeoTracker EDF Global ID =	
Emergency T/A data available VIA Lablink					

Sample Custody must be documented below each time samples change possession, including courier delivery.						
1	Relinquished by: <i>[Signature]</i>	Date Time:	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable <input type="checkbox"/>	On Ice <input type="checkbox"/> Cooler Temp.

APPENDIX B



Technical Report for

ERS Corporation

T0600100196-1700 Jefferson, Oakland, CA

Accutest Job Number: C10104

Sampling Date: 03/03/10

Report to:

ERS Corporation
1600 Riviera Ave Suite 310
Walnut Creek, CA 94596
ddement@erscorp.us; ybayram@erscorp.us

ATTN: David Dement

Total number of pages in report: **20**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.



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Sample Summary

ERS Corporation

Job No: C10104

T0600100196-1700 Jefferson, Oakland, CA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C10104-1	03/03/10	11:24 LL	03/04/10	AQ	Ground Water	MW-1
C10104-2	03/03/10	10:59 LL	03/04/10	AQ	Ground Water	MW-3
C10104-3	03/03/10	11:55 LL	03/04/10	AQ	Ground Water	MW-5
C10104-4	03/03/10	10:28 LL	03/04/10	AQ	Ground Water	MW-6



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1		
Lab Sample ID: C10104-1		Date Sampled: 03/03/10
Matrix: AQ - Ground Water		Date Received: 03/04/10
Method: SW846 8260B		Percent Solids: n/a
Project: T0600100196-1700 Jefferson, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W12056.D	200	03/13/10	BD	n/a	n/a	VW420
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	10100	200	60	ug/l	
108-88-3	Toluene	8050	200	100	ug/l	
100-41-4	Ethylbenzene	952	200	60	ug/l	
1330-20-7	Xylene (total)	4560	400	140	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	200	100	ug/l	
	TPH-GRO (C6-C10)	51700	10000	5000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 03/03/10
Lab Sample ID: C10104-2		Date Received: 03/04/10
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: T0600100196-1700 Jefferson, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W12057.D	1	03/13/10	BD	n/a	n/a	VW420
Run #2	W12087.D	2	03/14/10	BD	n/a	n/a	VW421

Run #	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	97.9	1.0	0.30	ug/l	
108-88-3	Toluene	12.1	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	20.3	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	13.7	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	1570 ^a	100	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%	114%	60-130%
2037-26-5	Toluene-D8	100%	100%	60-130%
460-00-4	4-Bromofluorobenzene	105%	103%	60-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: C10104-3		Date Sampled: 03/03/10
Matrix: AQ - Ground Water		Date Received: 03/04/10
Method: SW846 8260B		Percent Solids: n/a
Project: T0600100196-1700 Jefferson, Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W12058.D	100	03/13/10	BD	n/a	n/a	VW420
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6820	100	30	ug/l	
108-88-3	Toluene	279	100	50	ug/l	
100-41-4	Ethylbenzene	1870	100	30	ug/l	
1330-20-7	Xylene (total)	2050	200	70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	100	50	ug/l	
	TPH-GRO (C6-C10)	27200	5000	2500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6		Date Sampled: 03/03/10
Lab Sample ID: C10104-4		Date Received: 03/04/10
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: T0600100196-1700 Jefferson, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W12059.D	1	03/13/10	BD	n/a	n/a	VW420
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	33.4	50	25	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	102%		60-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

EKSCAWC1795

FED-EX Tracking #		Bottle Order Control #	
Accutest Quote #		Accutest Job # C10104	

Client / Reporting Information		Project Information		Requested Analysis		Matrix Codes																																																																																																																																																																																							
Company Name: ERS		Project Name: BPS				DW- Drinking Water GW- Ground Water WW- Water SW- Surface Water SO- Soil SL- Sludge CI- Oil LIQ- Other Liquid AIR- Air SOL- Other Solid WP- Wipe LAB USE ONLY																																																																																																																																																																																							
Address: 1600 Riviera Ave. #310		Street: 1700 Jefferson																																																																																																																																																																																											
City: Walnut Creek CA 94596		City: Oakland CA																																																																																																																																																																																											
Project Contact: Yola Bayram ybayram@erscorp.us		Project #																																																																																																																																																																																											
Phone # (925) 938-1600		Fax # (925) 938-1610																																																																																																																																																																																											
Sampler's Name: Logan Linderman		Client Purchase Order #																																																																																																																																																																																											
Accutest		SUMMA #																																																																																																																																																																																											
Sample #	Field ID / Point of Collection	MEOH Vial #	Date	Time	Sampled by	Matrix	# of bottles	HT	NOH	SNOS	PERSON	NONE	NAHSON	MECH	ENCLOSURE	8260	8270	8280	8290	8300	8310	8320	8330	8340	8350	8360	8370	8380	8390	8400	8410	8420	8430	8440	8450	8460	8470	8480	8490	8500	8510	8520	8530	8540	8550	8560	8570	8580	8590	8600	8610	8620	8630	8640	8650	8660	8670	8680	8690	8700	8710	8720	8730	8740	8750	8760	8770	8780	8790	8800	8810	8820	8830	8840	8850	8860	8870	8880	8890	8900	8910	8920	8930	8940	8950	8960	8970	8980	8990	9000	9010	9020	9030	9040	9050	9060	9070	9080	9090	9100	9110	9120	9130	9140	9150	9160	9170	9180	9190	9200	9210	9220	9230	9240	9250	9260	9270	9280	9290	9300	9310	9320	9330	9340	9350	9360	9370	9380	9390	9400	9410	9420	9430	9440	9450	9460	9470	9480	9490	9500	9510	9520	9530	9540	9550	9560	9570	9580	9590	9600	9610	9620	9630	9640	9650	9660	9670	9680	9690	9700	9710	9720	9730	9740	9750	9760	9770	9780	9790	9800	9810	9820	9830	9840	9850	9860	9870	9880	9890	9900	9910	9920	9930	9940	9950	9960	9970	9980	9990

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
<input checked="" type="checkbox"/> Std. 15 Business Days	Approved By/ Date:	<input checked="" type="checkbox"/> Commercial "A"	<input type="checkbox"/> FULL CLP	Please provide GeoTracker EDF Global ID = T0600100196 4 vials each (w/HCL) (x4)	
<input type="checkbox"/> 10 Day RUSH		<input checked="" type="checkbox"/> Commercial "B"	<input type="checkbox"/> NYASP Category A		
<input type="checkbox"/> 5 Day RUSH		<input type="checkbox"/> NJ Reduced	<input type="checkbox"/> NYASP Category B		
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> NJ Full	<input type="checkbox"/> State Forms		
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Other	<input type="checkbox"/> EDD Format		
<input type="checkbox"/> 1 Day EMERGENCY		Commercial "A" = Results Only			
<input type="checkbox"/> Other					

Emergency T/A data available VIA Lablink					
Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sample #	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
1 <i>[Signature]</i>	3/4/10 11:45	<i>[Signature]</i>	2 <i>[Signature]</i>	1655 03/04/10	2 <i>[Signature]</i>
3		3	4		4
5		5	Custody Seal #	Preserved where applicable	On Ice Cooler Temp.
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 3.0 + 0.3 = 3.3°C

31
3

C10104: Chain of Custody

Page 1 of 2



GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW420-MB	W12053.D	1	03/13/10	BD	n/a	n/a	VW420

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-1, C10104-2, C10104-3, C10104-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	115% 60-130%
2037-26-5	Toluene-D8	100% 60-130%
460-00-4	4-Bromofluorobenzene	102% 60-130%

Method Blank Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW421-MB	W12084.D	1	03/14/10	BD	n/a	n/a	VW421

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	112% 60-130%
2037-26-5	Toluene-D8	101% 60-130%
460-00-4	4-Bromofluorobenzene	102% 60-130%

4.1.2
4

Blank Spike Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW420-BS	W12050.D	1	03/13/10	BD	n/a	n/a	VW420

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-1, C10104-2, C10104-3, C10104-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.7	104	60-130
100-41-4	Ethylbenzene	20	20.3	102	60-130
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	60-130
108-88-3	Toluene	20	19.4	97	60-130
1330-20-7	Xylene (total)	60	59.1	99	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	121%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	103%	60-130%

4.2.1
4

Blank Spike Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW420-BS	W12052.D	1	03/13/10	BD	n/a	n/a	VW420

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-1, C10104-2, C10104-3, C10104-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	142	114	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	114%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	103%	60-130%

4.2.2
4

Blank Spike Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW421-BS	W12081.D	1	03/14/10	BD	n/a	n/a	VW421

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	122%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

4.2.3
4

Blank Spike Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW421-BS	W12083.D	1	03/14/10	BD	n/a	n/a	VW421

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	145	116	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	111%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	102%	60-130%

4.2.4
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C10095-8MS	W12070.D	1	03/13/10	BD	n/a	n/a	VW420
C10095-8MSD	W12071.D	1	03/13/10	BD	n/a	n/a	VW420
C10095-8	W12067.D	1	03/13/10	BD	n/a	n/a	VW420

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-1, C10104-2, C10104-3, C10104-4

CAS No.	Compound	C10095-8 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	20.2	101	21.1	106	4	60-130/25
100-41-4	Ethylbenzene	ND	20	19.7	99	20.8	104	5	60-130/25
1634-04-4	Methyl Tert Butyl Ether	13.1	20	32.4	97	34.2	106	5	60-130/25
108-88-3	Toluene	ND	20	19.1	96	19.8	99	4	60-130/25
1330-20-7	Xylene (total)	ND	60	57.0	95	60.0	100	5	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C10095-8	Limits
1868-53-7	Dibromofluoromethane	118%	119%	115%	60-130%
2037-26-5	Toluene-D8	98%	98%	100%	60-130%
460-00-4	4-Bromofluorobenzene	103%	104%	104%	60-130%

4.3.1
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C10104
Account: ERSCCAWC ERS Corporation
Project: T0600100196-1700 Jefferson, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C10195-8MS	W12101.D	1	03/14/10	BD	n/a	n/a	VW421
C10195-8MSD	W12102.D	1	03/14/10	BD	n/a	n/a	VW421
C10195-8	W12095.D	1	03/14/10	BD	n/a	n/a	VW421

The QC reported here applies to the following samples:

Method: SW846 8260B

C10104-2

CAS No.	Compound	C10195-8 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
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CAS No.	Surrogate Recoveries	MS	MSD	C10195-8	Limits
1868-53-7	Dibromofluoromethane	120%	119%	111%	60-130%
2037-26-5	Toluene-D8	96%	96%	99%	60-130%
460-00-4	4-Bromofluorobenzene	101%	103%	104%	60-130%

4.3.2
4