



**WICKLAND**

**Corporation**

**RECEIVED**

2:17 pm, Nov 10, 2008

Alameda County  
Environmental Health

November 7, 2008

Mr. Jerry Wickham, P.G.  
Alameda County Health Care Services Agency  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Subject: Submittal of *Third Quarter 2008 Groundwater Monitoring Report*  
Former Regal Station #120, LOP Case No. RO0002875  
3875 Telegraph Avenue, Oakland, California

Dear Mr. Wickham:

Pursuant to your request, please find attached the *Third Quarter 2008 Groundwater Monitoring Report* ("Quarterly Report"), prepared by West Environmental Services & Technology, Inc. (WEST) on behalf of Wickland Corporation (Wickland) for the former Regal Station #120 (Local Oversight Program Case No. RO0002875), located at 3875 Telegraph Avenue in Oakland, California.

In accordance with the Alameda County Health Care Services Agency, Environmental Health Services requirements, I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Please contact me at 916/978-2460, if you have any questions or wish to discuss this further.

Sincerely,

Daniel E. Hall  
President

Attachment

cc: Lori J. Gualco, Attorney-at-Law

**THIRD QUARTER 2008  
GROUNDWATER MONITORING  
REPORT**

**Former Regal Station #120  
LOP Case No. RO0002875  
3875 Telegraph Avenue  
Oakland, California**

**November 2008**

*Prepared for*

Wickland Corporation  
P.O. Box 13648  
Sacramento, California 95853

*Prepared by*

**WEST**

Environmental Services & Technology

711 Grand Avenue, Suite 220  
San Rafael, California 94901  
415/460-6770 Fax 415/460-6771  
main@westenvironmental.com

## TABLE OF CONTENTS

SECTION	PAGE
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND.....	1
<b>2.0 GROUNDWATER MONITORING.....</b>	<b>4</b>
2.1 PREVIOUS GROUNDWATER INVESTIGATIONS .....	4
2.2 THIRD QUARTER 2008 ACTIVITIES .....	4
2.2.1 <i>Depth to Groundwater Measurement</i> .....	4
2.2.2 <i>Groundwater Sampling</i> .....	5
2.2.3 <i>Analytical Results</i> .....	6
2.2.4 <i>Waste Management</i> .....	7
<b>3.0 CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>8</b>
<b>4.0 ANTICIPATED ACTIVITIES FOR THE FOURTH QUARTER 2008.....</b>	<b>9</b>
<b>5.0 REFERENCES.....</b>	<b>10</b>
<b>6.0 DISTRIBUTION LIST.....</b>	<b>12</b>
<b>TABLES</b>	
<b>FIGURES</b>	
<b>APPENDICES</b>	

### **LIST OF TABLES**

Table 1-1	Summary of Soil Sample Analytical Results
Table 1-2	Summary of Groundwater Sample Analytical Results
Table 1-3	Summary of Soil Gas Sample Analytical Results
Table 2-1	Summary of Well Construction Details
Table 2-2	Summary of Groundwater Elevation Data
Table 2-3	Summary of Groundwater Monitoring Well Analytical Results

### **LIST OF FIGURES**

Figure 1-1	Site Location
Figure 2-1	Site Plan and Monitoring Well Locations
Figure 2-2	Groundwater Elevations – October 2008
Figure 2-3	Summary of Groundwater Monitoring Well Analytical Results – October 2008
Figure 2-4	Benzene Iso-Contour

### **LIST OF APPENDICES**

Appendix A	Groundwater Monitoring Well Sampling Field Sheets
Appendix B	Laboratory Data Certificates and Chain-of-Custody Forms

**SIGNATURE PAGE**

All engineering information, conclusions and recommendations contained in this report have been prepared by a California Professional Engineer. All hydrogeologic and geologic information, conclusions and recommendations contained in this report have been prepared by a California Professional Geologist.



Peter M. Krasnoff  
California Registered Civil Engineer (44031)



4/7/08  
Date



Peter E. Morris  
California Professional Geologist (7084)



11/2/08  
Date

## **1.0 INTRODUCTION**

This *Third Quarter 2008 Groundwater Monitoring Report* (“*Quarterly Report*”) has been prepared by West Environmental Services & Technology, Inc., (WEST) for the former Regal Station #120, located at 3875 Telegraph Avenue in Oakland, California (“the Site;” Figure 1-1). This *Quarterly Report* presents the results of groundwater monitoring activities performed at the Site during the Third Quarter 2008.

Groundwater monitoring activities were conducted during the Third Quarter 2008 in accordance with the procedures outlined in the *Preliminary Site Assessment/Soil, Soil Gas and Groundwater Investigation Work Plan* (WEST, 2007a) and *Addendum* (WEST, 2007b; “*Work Plan*”), as requested by the Alameda County Health Care Services Agency (ACEH, 2008). This *Quarterly Report* also presents a summary of the work to be performed during the Fourth Quarter 2008.

### **1.1 BACKGROUND**

The approximately 0.9-acre Site is located at 3875 Telegraph Avenue in Oakland, California to the east of the Bay Area Rapid Transit District (BART) MacArthur Station parking lot. Between 1928 and 1935, Associated Oil Company was a tenant on the Site (Fidelity, 2007). In the 1930s, the Site was used for: an automobile parking lot; and two gasoline stations near the southwest corner (3855 Telegraph Avenue) and the northern portion (3881 Telegraph Avenue) of the Site (Figure 2-1; HLA, 1992). By the 1940s, the two gasoline stations had been removed.

In the 1950s, the southern portion of the Site was occupied by a tamale factory and restaurant; and the northern portion was occupied by another gasoline service station. Features of the gasoline service station included: a service station building; pump islands; a cashier’s office; and two 200-gallon underground storage tanks (USTs) and one 400-gallon UST. Between 1961 and 1971, Regal Petroleum Corporation leased the northern portion of the Site and operated the gasoline service station. Between approximately 1971 and 1984, Wickland operated the gasoline

service station on the northern portion of the Site. In the mid-1970s, permits were issued for: one 8,000-gallon UST; one 5,000-gallon UST; one 2,500-gallon UST; and one 10,000-gallon UST, at the Site.

In June 1984, as part of pre-construction evaluations, Harding Lawson Associates (HLA) drilled four borings for collection of soil samples for geotechnical testing. HLA noted the soil cores collected from approximately 15 feet below ground surface contained "gasoline odor." In December 1984, the four USTs, associated service station buildings and pump islands were removed (HLA, 1992). Prior to their removal, the four USTs were reportedly pressure tested (HLA, 1992). The findings of the pressure testing indicated that the USTs were integral, i.e., capable of handling the applied pressure without indication of leakage. Following removal of the USTs, the excavation was backfilled with imported material.

In early 1985, the Site was purchased by East Bay Outpatient Surgery for development as a surgery center. In May 1985, as part of the surgery center construction, the UST excavation backfill material was removed. The former UST excavation was subsequently over-excavated to a depth of approximately 15 feet below ground surface with approximately 1,070 cubic yards of soil removed for offsite disposal.

Investigations have been conducted at and near the Site since 2001. The investigations revealed indications of separate releases of petroleum hydrocarbons downgradient and upgradient of the Site (WEST, 2008). Soil investigations reported the presence of total petroleum hydrocarbons (TPH) up to 90 milligrams per kilogram (mg/kg) onsite (boring B-4) and up to 2,700 mg/kg in samples collected offsite in the BART parking lot (boring B-16; Table 1-1). Groundwater samples collected from temporary wells have revealed the presence of TPH as gasoline (TPHg) up to 140,000 micrograms per liter ( $\mu\text{g}/\text{l}$ ) onsite (boring B-4) and offsite up to 280,000  $\mu\text{g}/\text{l}$  in samples collected from the BART parking lot (boring B-16; Table 1-2). The investigations also revealed the presence of TPH as diesel (TPHd) up to 530,000  $\mu\text{g}/\text{l}$  in the sample collected upgradient of the Site within 39<sup>th</sup> Street.

In March and April of 2008, WEST conducted a soil, soil gas and groundwater investigation. The investigations revealed: the presence of benzene and methyl tertiary butyl ether (MTBE) in groundwater downgradient of the former USTs excavation; contributions of TPH to groundwater attributable to upgradient and offsite sources; and contributions of chlorinated volatile organic compounds (CVOCs) attributed to upgradient offsite sources (Tables 1-1 to 1-3).

Pursuant to a request from the ACEH, quarterly groundwater monitoring activities were conducted during the Third Quarter 2008 in accordance with the *Work Plan* and will be conducted in the Fourth Quarter 2008 (ACEH, 2008).



## **2.0 GROUNDWATER MONITORING**

### **2.1 PREVIOUS GROUNDWATER INVESTIGATIONS**

Groundwater investigations were conducted at the Site in March and April 2008. Four permanent groundwater monitoring wells, MW-1, MW-2, MW-3 and MW-4, were installed at the Site in March 2008 (Figure 2-1). A summary of the groundwater monitoring well construction details and the groundwater elevations are presented in Tables 2-1 and 2-2. Sampling of the four groundwater monitoring wells was conducted at the Site on April 24, 2008 in accordance with the *Work Plan*. A summary of the groundwater analytical results is presented in Table 2-3.

### **2.2 THIRD QUARTER 2008 ACTIVITIES**

Groundwater monitoring activities were conducted during the Third Quarter 2008 in accordance with the procedures outlined in the *Work Plan*. The Third Quarter 2008 activities included:

- Measurement of depth to groundwater in monitoring wells MW-1, MW-2, MW-3 and MW-4; and
- Collection of groundwater samples from monitoring wells MW-1, MW-2, MW-3 and MW-4.

#### **2.2.1 Depth to Groundwater Measurement**

Prior to groundwater sampling, depth to groundwater measurements were collected from monitoring wells MW-1, MW-2, MW-3 and MW-4. The depth to groundwater was measured in the monitoring wells in accordance with the procedures outlined in the *Work Plan*.

The depths to groundwater measurements are summarized in Table 2-2. During the Third Quarter 2008, the depth to groundwater measurements in the monitoring wells ranged from 14.66 feet below ground surface (MW-3) to 15.79 feet below ground surface (MW-2). Groundwater elevations in the monitoring wells ranged from 63.43 feet above Mean Sea Level (MW-2) to 65.77 feet above Mean Sea Level (MW-1). Based on the Third Quarter 2008 groundwater elevations, the groundwater flow direction was estimated to the southwest with a hydraulic gradient of approximately 0.011 feet per foot (Figure 2-2).

### **2.2.2 Groundwater Sampling**

Groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3 and MW-4 on October 2, 2008 using low-flow sampling techniques (USEPA, 1996). Prior to sampling, water within the well casings was purged for a minimum of 15 minutes. Groundwater parameter data including: temperature; pH; electrical conductivity; turbidity; and dissolved oxygen (DO) were measured during well purging to monitor stability of parameters and recorded on groundwater sampling field data sheets. Copies of the groundwater sampling field data sheets are included in Appendix A.

Groundwater samples were collected once the indicator parameters collected during purging had stabilized for three consecutive readings, as follows: plus/minus 0.1 Standard Units (S.U.) for pH; plus/minus three percent for specific conductance; and plus/minus 10 percent for turbidity and DO (USEPA, 1996).

Following purging, the groundwater samples were collected into laboratory supplied zero headspace 40-milliliter glass volatile organic analysis (VOA) vials preserved with hydrochloric acid and an unpreserved one-liter amber glass bottle. Following sample collection, the samples were labeled, placed in a chilled cooler and transported to K Prime, Inc, a California Department of Public Health (CDPH), Environmental Laboratory Accreditation Program (ELAP) certified laboratory pursuant to ASTM D4840 chain-of-custody protocols. The groundwater samples and

a laboratory-prepared travel blank were submitted to K Prime, Inc. of Santa Rosa, California. The groundwater samples were analyzed for: TPHg and TPHd by United States Environmental Protection Agency (USEPA) Method 8015M; petroleum related VOCs, including MTBE and CVOCs by USEPA Method 8260B. The analytical results for the groundwater samples are summarized in Table 2-3 and depicted on Figure 2-3. Copies of laboratory data certificates and chain-of-custody forms are included in Appendix B.

### **2.2.3 Analytical Results**

Laboratory analysis of groundwater samples collected from monitoring wells MW-1, MW-2, MW-3 and MW-4 did not reveal the presence of MTBE above the laboratory-reporting limit ranging from 0.500 µg/l to 5.00 µg/l. Laboratory analysis of the groundwater samples revealed the highest concentrations in the sample collected from monitoring well MW-4 with: TPHg at 5,800 µg/l; TPHd at 958 µg/l; and ethyl benzene at 106 µg/l. Laboratory analysis of groundwater samples collected from the upgradient monitoring well, MW-1, revealed: TPHd at 65 µg/l, tetrachloroethene (PCE) at 14.9 µg/l; trichloroethene (TCE) at 6.44 µg/l; cis-1,2-dichloroethene (DCE) at 20.4 µg/l; and carbon tetrachloride (CT) at 0.540 µg/l.

Laboratory analysis of groundwater samples collected from the downgradient monitoring well, MW-2, revealed: TPHg at 4,210 µg/l; TPHd at 573 µg/l; benzene at 423 µg/l; toluene at 16.0 µg/l; ethyl benzene at 137 µg/l; and xylenes at 91.70 µg/l. Laboratory analysis of groundwater samples collected from the cross-gradient monitoring well, MW-3, revealed: TPHg at 627 µg/l; TPHd at 620 µg/l; benzene at 1.68 µg/l; ethyl benzene at 67.8 µg/l; PCE at 0.510 µg/l; TCE at 0.600 µg/l; and DCE at 2.14 µg/l. A summary of the groundwater sample analytical results is presented in Table 2-3 and depicted on Figure 2-3. An iso-concentration plot of benzene in groundwater is depicted on Figure 2-4.

#### **2.2.4 Waste Management**

Purge water generated during the groundwater monitoring activities was containerized in a United States Department of Transportation-approved, United Nations-tested 1A2 open-top steel drum and stored in a secure area at the Site. The purge water will be transported offsite under a bill-of-lading for disposal pending waste profile acceptance from an appropriate disposal facility.

### **3.0 CONCLUSIONS AND RECOMMENDATIONS**

The Third Quarter 2008 groundwater monitoring results revealed the presence of petroleum hydrocarbons in groundwater downgradient of the former USTs and fuel islands. Based on the findings from the Third Quarter 2008 groundwater monitoring event, it appears that the downgradient extent of petroleum hydrocarbons in groundwater has not been delineated. Therefore, the offsite delineation activities proposed in the *Work Plan* should be conducted to complete the downgradient delineation of petroleum hydrocarbons in groundwater.

#### **4.0 ANTICIPATED ACTIVITIES FOR THE FOURTH QUARTER 2008**

Activities for the Fourth Quarter 2008 will include sampling of the four existing groundwater monitoring wells, MW-1, MW-2, MW-3 and MW-4. The groundwater monitoring well sampling will include: depth to groundwater measurements; and collection of groundwater samples from monitoring wells MW-1, MW-2, MW-3 and MW-4. The Fourth Quarter 2008 Groundwater Monitoring Report will be submitted to the ACEH by January 30, 2009 (ACEH, 2008). WEST also anticipates completion of the offsite soil and groundwater investigation within BART MacArthur Station parking lot, as outlined in the *Work Plan*, during the Fourth Quarter 2008; pending approval of the access permit from BART.

## 5.0 REFERENCES

- Alameda County Health Care Services Agency (ACEH), *Fuel Leak Case No. RO0002875 and Geotracker Global ID T06019716388, Regal #120/East Bay Surgery Center, 3875 Telegraph Avenue, Oakland, CA 94609*, July 12, 2008 (ACEH, 2008).
- ASTM, *Standard Guide for Sample Chain-of-Custody Procedures D 4840-99* (ASTM D 4840).
- Cambria Environmental Technology, Inc., *Site Conceptual Model, Former Shell Service Station, 500 40<sup>th</sup> Street, Oakland, California*, November 21, 2005 (Cambria, 2005).
- Fidelity Title Company, Title Search for 3875 Telegraph Avenue, Oakland, California, 2007 (Fidelity, 2007).
- Gribi Associates, *Report of Phase II Environmental Site Assessment, The Surgery Center, 3875 Telegraph Avenue, Oakland, California*, February 7, 2005 (Gribi, 2005).
- Harding Lawson Associates (HLA), *Soil Investigation, Outpatient Medical Clinic, Oakland, California*, June 28, 1984 (HLA, 1984).
- HLA, *Phase I Preliminary Hazardous Materials Site Assessment, The Surgery Center, 3875 Telegraph Avenue, Oakland, California*, January 22, 1992 (HLA, 1992).
- Ninyo & Moore (N&M), *Limited Phase II Environmental Site Assessment, MacArthur BART Transit Station, Oakland, California*, July 20, 2005 (N&M, 2005).
- San Francisco Bay Area Rapid Transit District, Letter to Ms. Kathy Kuhlman, City of Oakland, *Request for Additional Investigation at MacArthur BART Station*, February 2, 2006 (BART, 2006a).
- San Francisco Bay Area Rapid Transit District, Letter to Mr. Don Hwang, Alameda County Environmental Health, *Surgery Center Site at 3875 Telegraph Avenue, Oakland, California*, October 4, 2006 (BART, 2006b).
- Terracon, *Contamination Investigation, East Bay Surgery Center, 3875 Telegraph Avenue, Oakland, California*, September 19, 2001 (Terracon, 2001).
- USEPA, *Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures*, Office of Research and Development, Washington D.C., EPA/540/S-95/504, April 1996 (USEPA, 1996).

West Environmental Services & Technology, Inc. (WEST), *Preliminary Site Assessment/Soil, Soil Gas and Groundwater Investigation Work Plan, Former Regal Station #120, 3875 Telegraph Avenue, Oakland, California, August 2007* (WEST, 2007a).

WEST, *Addendum to Preliminary Site Assessment/Soil, Soil Gas and Groundwater Investigation Work Plan, Former Regal Station #120, 3875 Telegraph Avenue, Oakland, California, October 2007* (WEST, 2007b).

WEST, *Preliminary Investigation and Evaluation Report, Former Regal Station #120, 3875 Telegraph Avenue, Oakland, California, May 2008* (WEST, 2008).



## **6.0 DISTRIBUTION LIST**

Mr. Jerry Wickham, P.G. (Electronic submittal only)  
Alameda County Health Care Services Agency,  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Mr. Daniel E. Hall  
Wickland Corporation  
P.O. Box 13648  
Sacramento, California 95853

Ms. Lori J. Gualco, Esq.  
Attorney-at-Law  
455 Capitol Mall, Suite 210  
Sacramento, California 95814

Mr. James E. Gribi, P.G.  
Gribi Associates  
1090 Adams Street, Suite K  
Benicia, California

Ms. Julie M. Rose, Esq.  
Randick O'Dea & Tooliatos, LLP  
5000 Hopyard Road, Suite 400  
Pleasanton, California 94588-3348

Mr. Larry Fusch  
The Surgery Center  
3875 Telegraph Avenue  
Oakland, California 94609

Mr. Robert Petrina  
East Bay Surgery Center, LP  
c/o Alta Bates Summit Medical Center  
350 Hawthorne, Avenue, Suite G100  
Oakland, California 94609-3108

TABLE 1-1  
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Location	Sample ID	Date	Depth (ft)	Petroleum Hydrocarbons			Volatile Organic Compounds																
				TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	1,2,4-TMB	1,3,5-TMB	n-Butyl benzene	sec-Butyl benzene	tert-Butyl benzene	Isopropyl benzene	p-Isopropyl toluene	Naphthalene	n-Propyl benzene	1,2,3-TCB	1,2,4-TCB	
				(mg/kg)	(mg/kg)	(mg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
<i>Terracon</i>																							
Onsite	B-1	8/28/01	15	--	--	--	420	86	4,700	16,500	--	10,000	3,500	1,400	350	ND	630	160	1,700	2,300	ND	ND	
	B-2		19.5	--	--	--	ND	ND	9,600	2,000	--	22,000	12,000	6,800	2,000	ND	3,800	1,000	4,200	14,000	ND	ND	
	B-3		15.5	--	--	--	ND	ND	ND	ND	--	ND	ND	23	10	ND	8.2	ND	ND	32	6.6	7.3	
	B-4		14.5	--	--	--	ND	ND	45	320	--	ND	ND	370	870	61	1,500	41	ND	5,400	ND	ND	
	B-5		21.5	--	--	--	ND	ND	ND	ND	--	ND	ND	22	19	ND	ND	ND	ND	15	ND	ND	
	B-6		11.5	--	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<i>Gribi</i>																							
BART Parking Lot	B-1	1/8/05	7.5	<0.5	--	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--	--	--	
			11.5	<0.5	--	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--	--	--	
			13	18.0	--	--	<5.0	14	120	27	120	--	--	--	--	--	--	--	--	--	--	--	
			15	0.77	--	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--	--	--	
			16	4.4	--	--	<5.0	13	26	<10	30	--	--	--	--	--	--	--	--	--	--	--	
	B-2		7	190	--	--	<5.0	710	4,100	7,800	200	--	--	--	--	--	--	--	--	--	--	--	
			14	670	190	--	440	<5.0	140	410	200	--	--	--	--	--	--	--	--	--	--	--	
			7.5	65	--	--	75	52	500	212	220	--	--	--	--	--	--	--	--	--	--		
	B-3		11.5	170	--	--	<5.0	1,800	2,800	14,800	370	--	--	--	--	--	--	--	--	--	--	--	
			15	5	--	--	130	8.4	20	78	<20	--	--	--	--	--	--	--	--	--	--		
Onsite	B-4	7.5	<0.5	--	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--	--			
		11.5	<0.5	<10	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--				
		15	39.0	--	--	630	<5.0	1,500	3,600	58	--	--	--	--	--	--	--	--	--				
		19.5	90.0	--	--	1,400	1,100	2,000	9,300	180	--	--	--	--	--	--	--	--	--				
	B-5	7.5	1.4	<10	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--				
		11.5	<0.5	--	--	<5.0	<5.0	<5.0	<10	<20	--	--	--	--	--	--	--	--	--				
		15.5	16.0	--	--	<5.0	<5.0	54	<10	<20	--	--	--	--	--	--	--	--					
		19.5	1.1	--	--	<5.0	<5.0	13	20	<20	--	--	--	--	--	--	--	--					
<i>BART</i>																							
3901 Telegraph	B-4	2/05	5	<1.1	9.3	55	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9		
			10	<1.1	1.0	<5.0	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8			
Apgar Street	B-5	2/05	5	<1.1	33	210	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9			
			10	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0				
			17	<1.0	51	5.3	--	--	--	--	--	--	--	--	--	--	--	--	--				
3801 Telegraph	B-6	2/05	5	<0.99	1.8	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--				
			10	<1.0	1.1	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--				
BART Central Parking	B-16	2/05	2	<1.0	19	140	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7			
			5	2,700	240	<25	5,700	26,000	49,000	150,000	<1,000	--	--	--	--	--	--	--	--				
	B-20		2	--	10	110	--	--	--	--	--	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9				
	B-21		2	<1.1	3.9	5.7	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8			
			5	300	63	6.9	<25	<25	630	260	<100	--	--	--	--	--	--	--	--				
	B-22		2	<1.0	11	12	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5			
			5	<1.0	26	180	<5.1	<5.1	<5.1	<5.1	<20	--	--	--	--	--	--	--	--				
	B-25		2	<1.1	160	470	<5.5	<5.5	<5.5	<5.5	<22	--	--	--	--	--	--	--	--				
5		6	130	71	<5.2	<5.2	<5.2	50	<21	--	--	--	--	--	--	--							

TABLE 1-1  
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Location	Sample ID	Date	Depth (ft)	Petroleum Hydrocarbons			Volatile Organic Compounds																
				TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	1,2,4-TMB	1,3,5-TMB	n-Butyl benzene	sec-Butyl benzene	tert-Butyl benzene	Isopropyl benzene	p-Isopropyl toluene	Naphthalene	n-Propyl benzene	1,2,3-TCB	1,2,4-TCB	
				(mg/kg)	(mg/kg)	(mg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
<i>WEST</i>																							
Onsite	W-1	3/29/08	6	<1.00	<10.0	--	<1.49	<1.49	<1.49	<1.49	<1.49	--	--	--	--	--	--	--	--	--	--	--	
			10	<1.00	<10.0	--	<1.49	<1.49	<1.49	<1.49	<1.49	--	--	--	--	--	--	--	--	--	--	--	--
			17	40.0	<10.0	--	337	<200	<200	<200	<200	--	--	--	--	--	--	--	--	--	--	--	--
	W-2	3/29/08	8	<1.00	<10.0	--	<1.50	<1.50	<1.50	<1.50	<1.50	--	--	--	--	--	--	--	--	--	--	--	--
			14	286	<10.0	--	<500	<500	<500	<500	<500	--	--	--	--	--	--	--	--	--	--	--	--
	W-3	3/29/08	7	<1.00	<10.0	--	<1.50	<1.50	<1.50	<1.50	<1.50	--	--	--	--	--	--	--	--	--	--	--	--
			15	2.79	<10.0	--	<1.50	<1.50	<1.50	<1.50	<1.50	--	--	--	--	--	--	--	--	--	--	--	--
	W-5	3/29/08	6	<1.00	<10.0	--	<1.49	<1.49	<1.49	<1.49	<1.49	--	--	--	--	--	--	--	--	--	--	--	--
			9.5	<1.00	<10.0	--	<1.51	<1.51	<1.51	<1.51	<1.51	--	--	--	--	--	--	--	--	--	--	--	--
			15	99.6	<10.0	--	<200	<200	<200	<200	<200	--	--	--	--	--	--	--	--	--	--	--	--
	W-9/ MW4	3/29/08	7	<1.00	<10.0	--	<1.50	<1.50	<1.50	<1.50	<1.50	--	--	--	--	--	--	--	--	--	--	--	--
			10	<1.00	<10.0	--	<1.50	<1.50	<1.50	<1.50	<1.50	--	--	--	--	--	--	--	--	--	--	--	--
			13	<1.00	<10.0	--	<200	<200	<200	<200	<200	--	--	--	--	--	--	--	--	--	--	--	--
	W-10	5/1/08	5	<1.00	<10.0	--	<1.49	<1.49	<1.49	<1.49	<1.49	--	--	--	--	--	--	--	--	--	--	--	--
			10	<1.00	<10.0	--	<1.51	<1.51	<1.51	<1.51	<1.51	--	--	--	--	--	--	--	--	--	--	--	--
			15	5.23	<10.0	--	<200	993	1560	<200	<200	--	--	--	--	--	--	--	--	--	--	--	--
	W-11	5/1/08	4	<1.00	<10.0	--	<1.49	<1.49	<1.49	<1.49	<1.49	--	--	--	--	--	--	--	--	--	--	--	--
			10	<1.00	<10.0	--	<1.51	<1.51	<1.51	<1.51	<1.51	--	--	--	--	--	--	--	--	--	--	--	--
			16	<1.00	<10.0	--	<1.51	<1.51	<1.51	<1.51	<1.51	--	--	--	--	--	--	--	--	--	--	--	--
	MW1	3/29/08	14	6.10	41.6	--	<200	<200	<200	<200	<200	--	--	--	--	--	--	--	--	--	--	--	

Notes:

mg/kg: Milligrams per kilogram  
µg/kg: Micrograms per kilogram  
<1.0: Less than the method detection limit  
-- not analyzed  
TPHg: Total Petroleum Hydrocarbons as Gasoline  
TPHd: Total Petroleum Hydrocarbons as Diesel  
TPHmo: Total Petroleum Hydrocarbons as Motor Oil

MTBE: Methly Tertiary Butyl Ether  
PCE: Tetrachloroethene  
TCE: Trichloroethene  
DCE: Dichloroethene

TABLE 1-2  
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Location	Sample ID	Date	Depth (ft)	Petroleum Hydrocarbons			Petroleum-Related VOCs												Chlorinated VOCs				
				TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	1,2,4-TMB	1,3,5-TMB	n-Butyl benzene	sec-Butyl benzene	Isopropyl benzene	4-Isopropyl toluene	Naphthalene	n-Propyl benzene	PCE	TCE	cis-1,2-DCE	1,2-DCA
				(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
<i>Terracon</i>																							
Onsite	B-1	8/28/01	--	--	--	--	11,000	760	2,600	9,300	--	2,300	600	ND	ND	ND	ND	640	560	ND	--	--	--
	B-2	8/28/01	--	--	--	--	30	ND	100	162	--	57	10	ND	ND	ND	21	20	39	ND	--	--	--
	B-3	8/28/01	--	--	--	--	ND	ND	310	74	--	100	120	ND	23	74	ND	90	230	ND	--	--	--
	B-4	8/28/01	--	--	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	6.4	ND	--	--	--
	B-5	8/28/01	--	--	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	6.2	ND	7.3	ND	--	--	--
	B-6	8/28/01	--	--	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
<i>Gribi</i>																							
BART Parking Lot	B-1	1/8/05	--	240	--	--	<1.0	<1.0	9.1	<2.0	<4.0	--	--	--	--	--	--	--	--	--	--	--	--
	B-2	1/8/05	--	14,000	--	--	220	<1.0	380	540	34	--	--	--	--	--	--	--	--	--	--	--	--
	B-3	1/8/05	--	80,000	--	--	3,800	1,700	5,400	21,800	<100	--	--	--	--	--	--	--	--	--	--	--	--
Onsite	B-4	1/8/05	--	140,000	--	--	21,000	1,700	8,500	33,600	<4.0	--	--	--	--	--	--	--	--	--	--	--	--
	B-5	1/8/05	--	130,000	--	--	<1.0	<1.0	8,000	6,680	390	--	--	--	--	--	--	--	--	--	--	--	--
<i>BART</i>																							
3931 Telegraph	B-1	2/05	--	--	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
3915 Telegraph	B-3	2/05	--	--	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
3901 Telegraph	B-4	2/05	--	33,000	--	39,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Apgar Street	B-5	2/05	--	23,000	4,800	<300	340	78	940	2,540	<71	980	320	<71	<71	72	<71	160	250	<71	<71	<71	<71
3801 Telegraph	B-6	2/05	--	2,200	680	<300	11	<5.0	56	129	<5.0	91	21	13	6.7	14	<5.0	24	44	<5.0	<5.0	<5.0	<5.0
	B-8	2/05	--	5,300	2,400	<300	69	<0.5	100	10	<2.0	--	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
MacArthur Blvd	B-9	2/05	--	920	2,500	<300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	B-10	2/05	--	270	260	<300	<5.0	<5.0	<5.0	<5.0	<5.0	9.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	B-11	6/05	--	--	--	<300	--	<5.0	2700	--	<5.0	--	--	--	--	--	--	--	--	<5.0	<5.0	<5.0	<5.0
BART South Parking	B-12	2/05	--	<50	<50	<300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	B-13	2/05	--	--	620	670	20	<5.0	65	42	<5.0	78	22	<5.0	<5.0	11	<5.0	29	30	<5.0	<5.0	<5.0	<5.0
	B-15	2/05	--	--	2,900	12,000	9.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BART Central Parking	B-16	2/05	--	280,000	--	<15,000	47,000	48,000	6,500	34,300	<4,200	6,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200	<4,200
	B-16A	6/05	--	4,300	--	--	19	25	170	400	--	--	--	--	--	--	--	--	--	--	--	--	--
	B-16B	6/05	--	20,000	--	--	560	21	800	1,500	--	--	--	--	--	--	--	--	--	--	--	--	--
	B-17	2/05	--	3,500	900	--	20	<10	150	190	<10	180	61	12	<10	18	<10	24	58	<10	<10	<10	<10
	B-18	2/05	--	54	2,200	20,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	B-20	2/05	--	--	680	<300	290	<20	40	<20	<20	50	<20	<20	<20	<20	<20	<20	36	<20	<20	<20	<20
	B-21	2/05	--	4,600	2,600	<300	<10	<10	40	33	<10	40	21	60	29	28	<10	22	150	<10	<10	<10	<10
	B-22	2/05	--	2,600	970	<300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	B-24	2/05	--	--	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.6	<5.0
B-25	2/05	--	700	2,500	5,300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.2	6.2	<5.0	<5.0	14	<5.0	<5.0	<5.0	<5.0	
3501 MacArthur	B-33	2/05	--	<50	710	<300	<5.0	<5.0	70	266	<5.0	190	56	16	6	11	<5.0	52	40	<5.0	<5.0	<5.0	<5.0

TABLE 1-2  
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Location	Sample ID	Date	Depth (ft)	Petroleum Hydrocarbons			Petroleum-Related VOCs													Chlorinated VOCs			
				TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	1,2,4-TMB	1,3,5-TMB	n-Butyl benzene	sec-Butyl benzene	Isopropyl benzene	4-Isopropyl toluene	Naphthalene	n-Propyl benzene	PCE	TCE	cis-1,2-DCE	1,2-DCA
				(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
<i>WEST</i>																							
Onsite	W-1	3/29/08	20	759	585	--	70.2	<1.00	9.74	<1.00	5.91	<1.00	<1.00	4.70	2.58	9.45	<1.00	<2.00	28.1	<1.00	<1.00	1.05	<1.00
			30	636	109	--	20.2	<1.00	4.28	<1.00	5.72	<1.00	<1.00	4.72	2.43	5.90	<1.00	<2.00	20.2	<1.00	<1.00	1.19	<1.00
	W-2	3/29/08	30	2,430	1,120	--	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	4.51	<2.00
	W-3	3/29/08	29	82	<50	--	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	0.610	1.68	0.720	2.05	<0.500
	W-5	3/29/08	22	36,800	2,780	--	<25.0	<25.0	393	<25.0	<25.0	<25.0	<25.0	30.3	<25.0	73.9	<25.0	116	227	<25.0	<25.0	<25.0	<25.0
	W-9	3/29/08	22	24,000	630	--	<20.0	<20.0	517	62.8	<20.0	960	97.5	294	<20.0	194	29.6	283	776	<20.0	<20.0	<20.0	<20.0
	W-10	5/1/08	25	440	95	--	<1.00	<1.00	49.2	<1.00	<1.00	14.5	3.79	5.50	<1.00	6.63	<1.00	23.0	24.7	1.90	2.26	6.48	<1.00
W-11	5/1/08	25	<50	<50	--	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	0.510	0.550	1.99	1.48	

Notes:

µg/l: micrograms per liter

TPHg: Total Petroleum Hydrocarbons as Gasoline

TPHd: Total Petroleum Hydrocarbons as Diesel

TPHmo: Total Petroleum Hydrocarbons as Motor Oil

MTBE: Methly Tertiary Butyl Ether

TMB: Trimethylbenzene

PCE: Tetrachloroethene

TCE: Trichloroethene

DCE: Dichloroethene

<1.0: Less than the method detection limit

-- not analyzed

TABLE 1-3  
SUMMARY OF SOIL GAS SAMPLE ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Sample ID	Date	Depth (ft)	Volatile Organic Compounds						
			Benzene	Toluene	Ethyl benzene	Xylenes	PCE	TCE	TCM
			( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )
W-1	3/29/08	7	<16.0	<18.8	<21.7	<21.7	<33.9	<26.9	<24.4
W-3	3/29/08	5	<6.39	<7.54	<8.68	<8.68	<13.6	144	179
W-4	3/29/08	5	<16.0	<18.8	<21.7	<21.7	<33.9	<26.9	150
W-5	3/29/08	5	<63.9	<75.4	<86.8	<86.8	<136	<107	<97.7
W-6	3/29/08	5	<16.0	<18.8	24.3	<21.7	<33.9	<26.9	<24.4
W-7	3/29/08	5	<319	<377	<434	<434	<678	<537	<488
W-9	3/29/08	5	<6.39	<7.54	<8.68	<8.68	<13.6	<10.7	<9.77

Notes:

$\mu\text{g}/\text{m}^3$ : micrograms per cubic meter

CHHSLs: California Human Health Screening Levels (January 2005)

ESLs: Environmental Screening Levels (November 2007)

TPHg: Total Petroleum Hydrocarbons as Gasoline

TPHd: Total Petroleum Hydrocarbons as Diesel

TPHmo: Total Petroleum Hydrocarbons as Motor Oil

PCE: Tetrachloroethene

TCE: Trichloroethene

TCM: Trichloromethene

<1.0: Less than the method detection limit

TABLE 2-1  
SUMMARY OF GROUNDWATER MONITORING WELL CONSTRUCTION DETAILS  
3875 Telegraph Avenue  
Oakland, California

Well ID	Date Installed	Monitoring Well Construction Details					
		Well Diameter	Total Depth	Screen Interval	Sand Pack Interval	Bentonite Seal	Grout Seal
		(inches)	(ft bgs)	(ft bgs)	(ft bgs)	(ft bgs)	(ft bgs)
MW-1	3/29/08	1	30	15 to 30	13 to 30	11 to 13	0 to 11
MW-2	3/29/08	1	23	13 to 23	11 to 25	9 to 11	0 to 9
MW-3	3/29/08	1	22	12 to 22	10 to 25	8 to 10	0 to 8
MW-4	3/29/08	0.75	22	12 to 22	10 to 22	2 to 10	0 to 2

Notes:

ft bgs: feet below ground surface

TABLE 2-2  
SUMMARY OF GROUNDWATER ELEVATION DATA  
3875 Telegraph Avenue  
Oakland, California

Well ID	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation
		(ft MSL)	(ft bgs)	(ft MSL)
MW-1	4/24/08	81.22	14.70	66.52
	5/20/08		14.67	66.55
	10/2/08		15.45	65.77
MW-2	4/24/08	79.22	15.00	64.22
	5/20/08		15.21	64.01
	10/2/08		15.79	63.43
MW-3	4/24/08	78.45	13.85	64.60
	5/20/08		14.11	64.34
	10/2/08		14.66	63.79
MW-4	4/24/08	80.54	13.82	66.72
	5/20/08		14.18	66.36
	10/2/08		15.09	65.45

Notes:

ft MSL: feet above Mean Sea Level using North American Vertical Datum of 1988

ft bgs: feet below ground surface



TABLE 2-3  
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS  
3875 Telegraph Avenue  
Oakland, California

Well ID	Date	Depth (ft)	Petroleum Hydrocarbons		Petroleum-Related VOCs														CVOCs			
			TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	tert-Butyl benzene	1,2,4-TMB	1,3,5-TMB	n-Butyl benzene	sec-Butyl benzene	Isopropyl benzene	4-Isopropyl toluene	Naphthalene	n-Propyl benzene	PCE	TCE	cis-1,2-DCE	CT
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-1	4/24/08	15-30	<50	<50	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	8.49	2.55	10.3	<0.500
	10/2/08		<50	65	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	14.9	6.44	20.4	0.540
MW-2	4/24/08	13-23	6,140	1,270	391	31.5	366	334.3	<20.0	<20.0	144	31.2	<20.0	<20.0	118	<20.0	64.0	198	<20.0	<20.0	<20.0	<20.0
	10/2/08		4,210	573	423	16.0	137	91.70	<5.00	<5.00	53.8	14.1	15.9	12.6	77.8	<5.00	37.8	133	<5.00	<5.00	<5.00	<5.00
MW-3	4/24/08	12-22	1,730	506	<4.00	<4.00	229	<4.00	<4.00	<4.00	10.1	7.27	7.59	6.02	31.8	<4.00	75.0	88.7	<4.00	<4.00	<4.00	<4.00
	10/2/08		627	620	1.68	<0.500	67.8	<0.500	<0.500	0.710	2.33	<0.500	2.60	3.54	19.2	<0.500	21.6	36.6	0.510	0.600	2.14	<0.500
MW-4	4/24/08	12-22	7,290	2,390	<10.0	<10.0	656	27.7	<10.0	<10.0	101	<10.0	64.1	30.4	123	<10.0	341	433	<10.0	<10.0	<10.0	<10.0
	10/2/08		5,800	958	<5.00	<5.00	106	<5.00	<5.00	<5.00	15.3	<5.00	58.5	26.0	95.0	<5.00	59.9	306	<5.00	<5.00	<5.00	<5.00

Notes:

- µg/l: micrograms per liter
- CVOCs: Chlorinated Volatile Organic Compounds
- TPHg: Total Petroleum Hydrocarbons as Gasoline
- TPHd: Total Petroleum Hydrocarbons as Diesel
- MTBE: Methly Tertiary Butyl Ether
- TMB: Trimethylbenzene
- PCE: Tetrachloroethene
- TCE: Trichloroethene
- CT: Carbon Tetrachloride
- cis-1,2-DCE: Dichloroethene
- <1.0: Less than the method detection limit

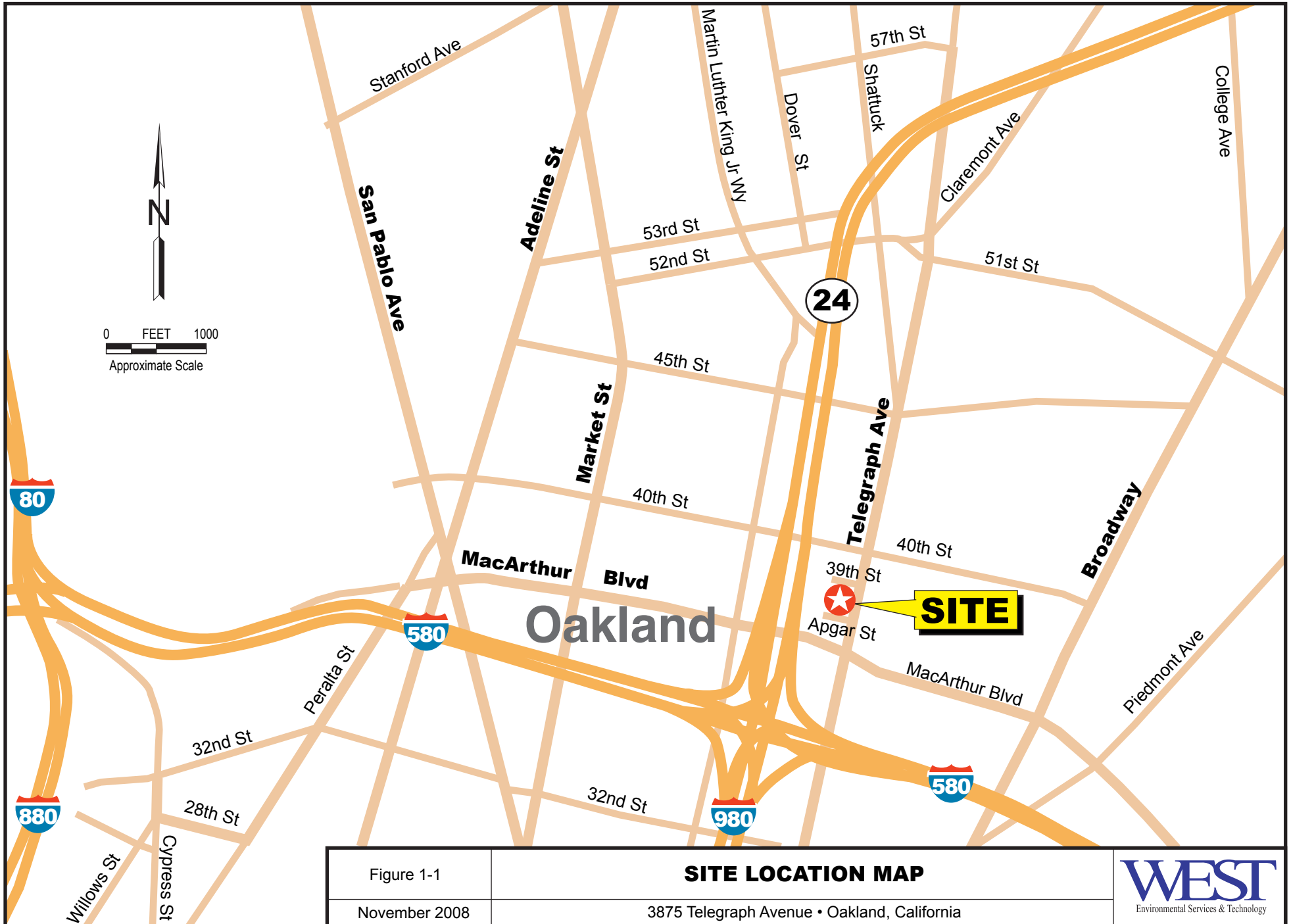
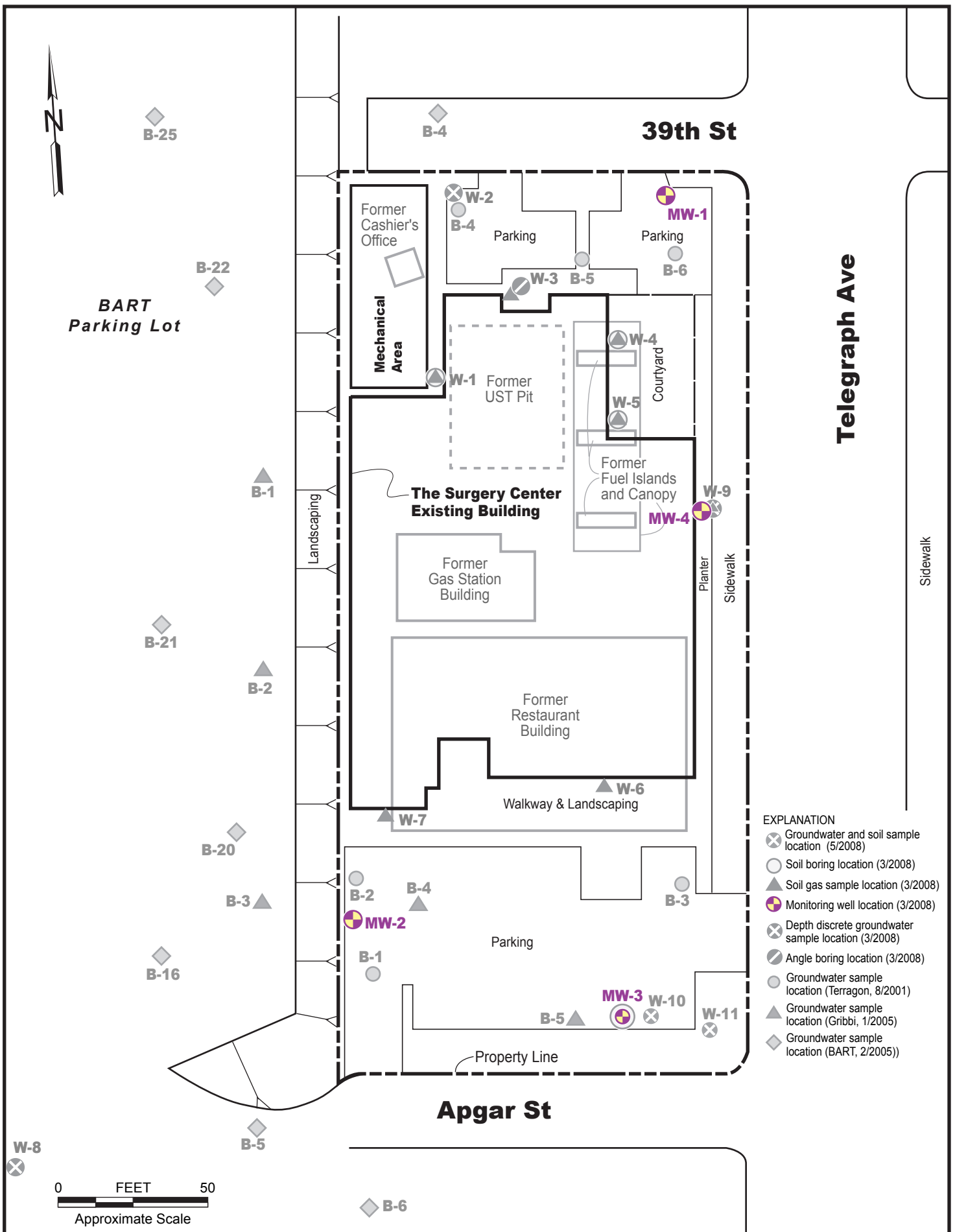


Figure 1-1	<b>SITE LOCATION MAP</b>
November 2008	3875 Telegraph Avenue • Oakland, California



- EXPLANATION**
- ⊗ Groundwater and soil sample location (5/2008)
  - Soil boring location (3/2008)
  - ▲ Soil gas sample location (3/2008)
  - ⊕ Monitoring well location (3/2008)
  - ⊗ Depth discrete groundwater sample location (3/2008)
  - ⊖ Angle boring location (3/2008)
  - Groundwater sample location (Terragon, 8/2001)
  - ▲ Groundwater sample location (Gribbi, 1/2005)
  - ◇ Groundwater sample location (BART, 2/2005)

Figure 2-1

**SITE PLAN AND GROUNDWATER MONITORING WELL LOCATIONS**

November 2008

3875 Telegraph Avenue • Oakland, California



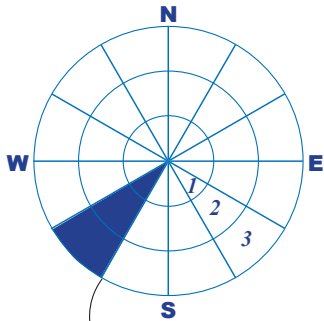
EXPLANATION

Monitoring well location (3/2008)

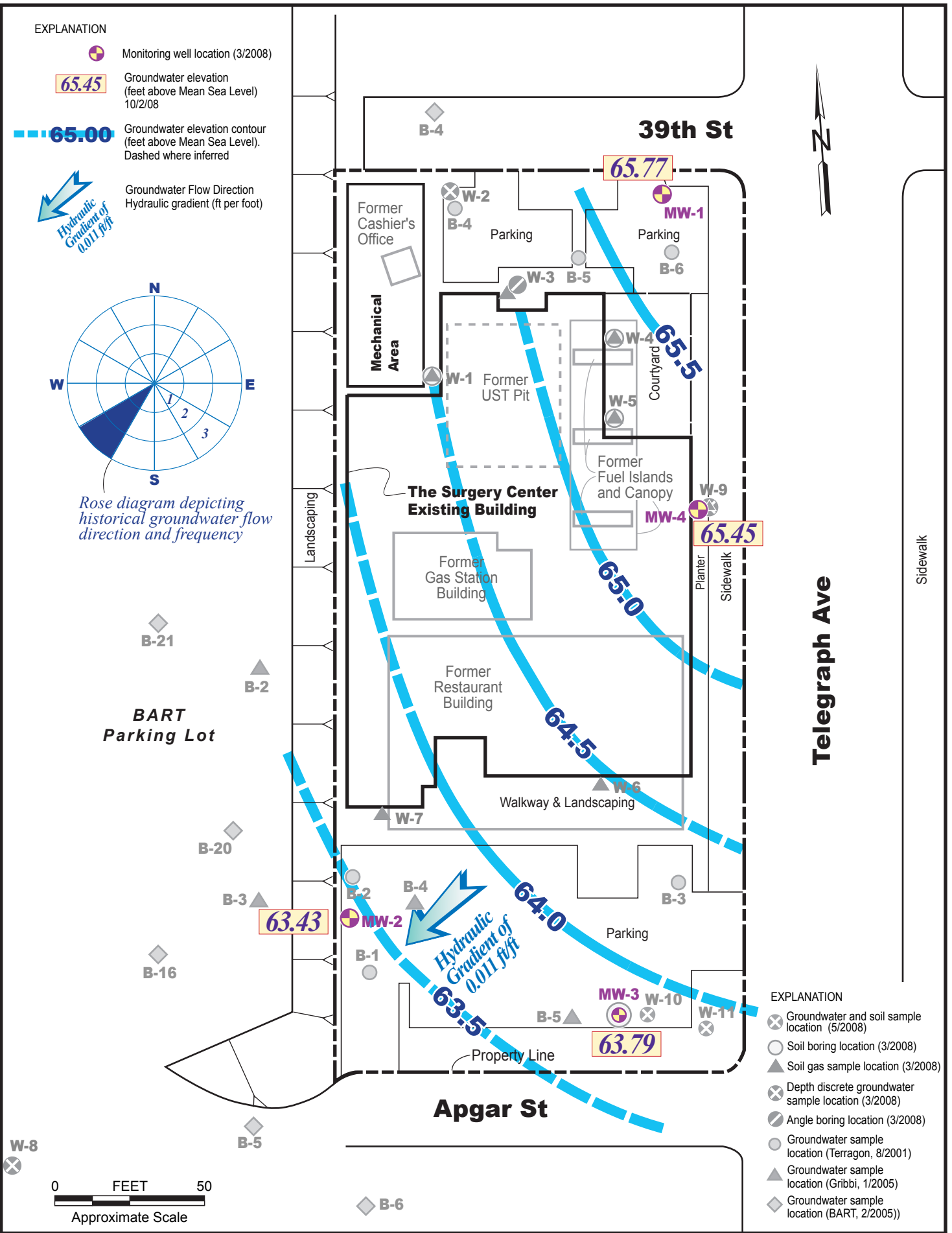
**65.45** Groundwater elevation (feet above Mean Sea Level) 10/2/08

**65.00** Groundwater elevation contour (feet above Mean Sea Level). Dashed where inferred

Hydraulic Gradient of 0.011 ft/ft  
Groundwater Flow Direction  
Hydraulic gradient (ft per foot)



Rose diagram depicting historical groundwater flow direction and frequency



EXPLANATION

- Groundwater and soil sample location (5/2008)
- Soil boring location (3/2008)
- Soil gas sample location (3/2008)
- Depth discrete groundwater sample location (3/2008)
- Angle boring location (3/2008)
- Groundwater sample location (Terragon, 8/2001)
- Groundwater sample location (Gribbi, 1/2005)
- Groundwater sample location (BART, 2/2005)

Sidewalk

Telegraph Ave

Appgar St



Figure 2-2

**GROUNDWATER ELEVATIONS  
October 2008**



November 2008

3875 Telegraph Avenue • Oakland, California

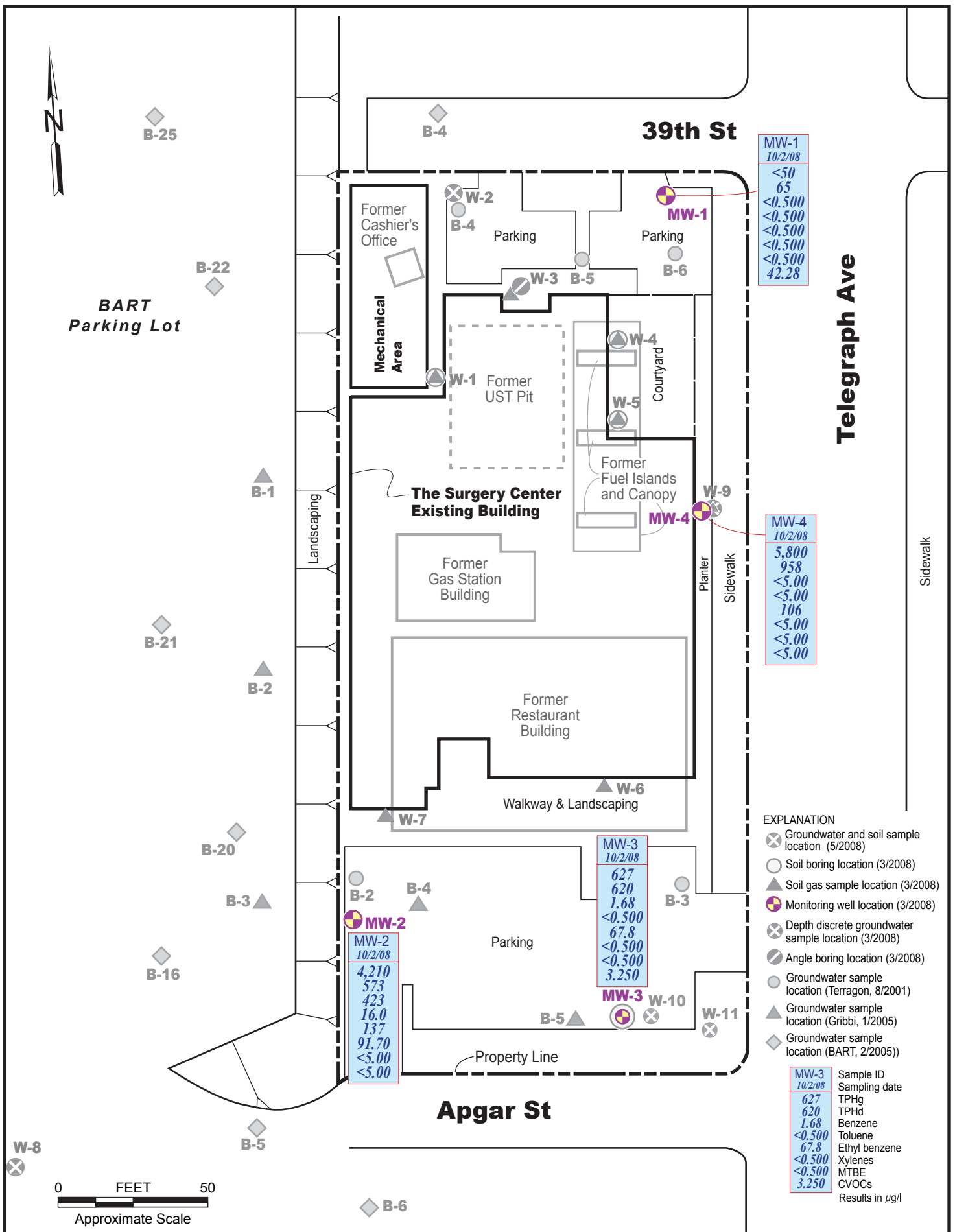


Figure 2-3

**SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS - OCTOBER 2008**



November 2008

3875 Telegraph Avenue • Oakland, California

EXPLANATION

423

Benzene concentration in groundwater (ug/L)

10

Benzene Iso-contour (ug/L)

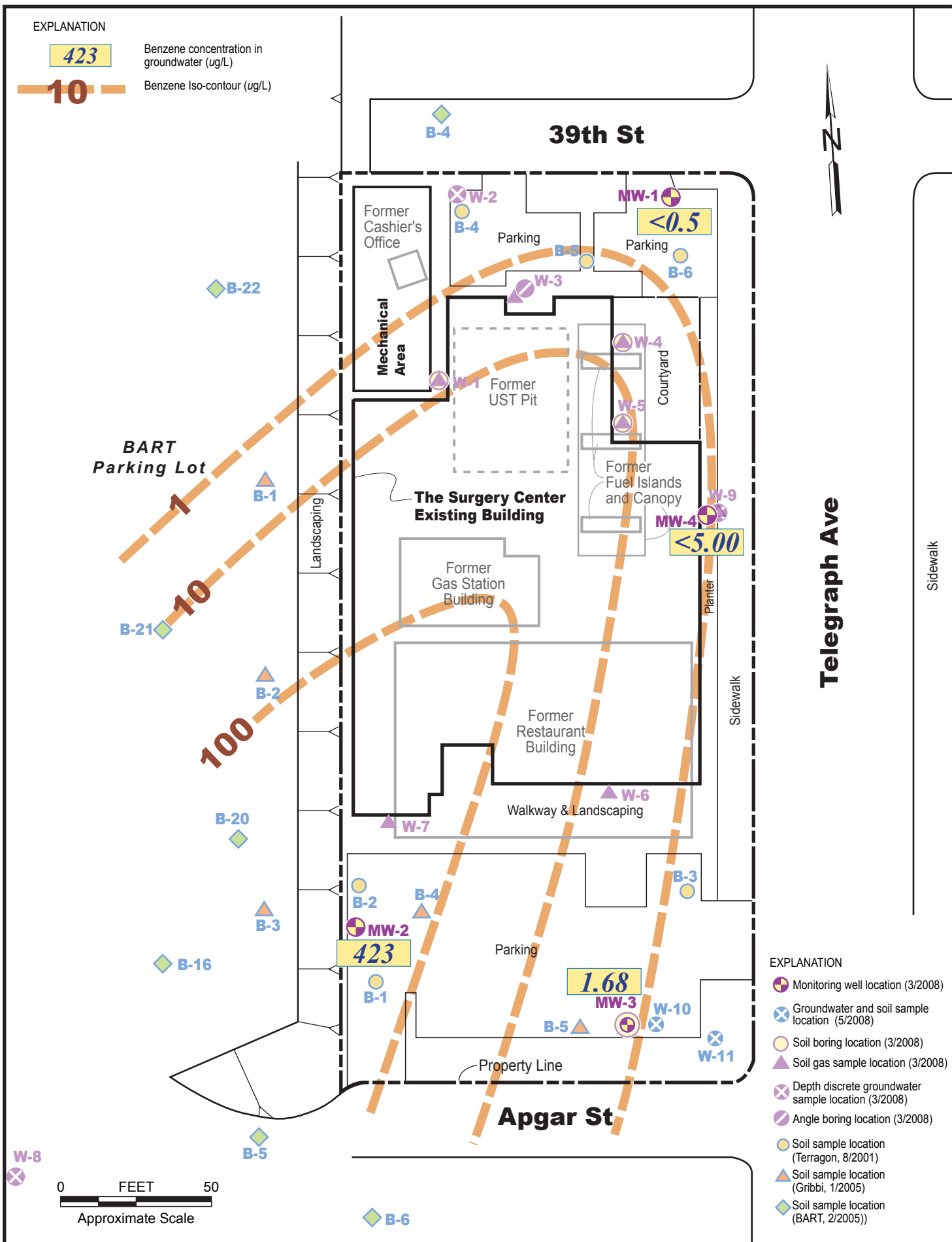


Figure 2-4

**BENZENE ISO-CONTOUR**



November 2008

3875 Telegraph Avenue • Oakland, California

THIRD QUARTER 2008  
GROUNDWATER MONITORING REPORT  
FORMER REGAL STATION #120, LOP NO. RO0002875  
3875 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA



## **APPENDIX A**

# **GROUNDWATER MONITORING WELL SAMPLING FIELD SHEETS**

took dup called 10200  
said sample time 12:45

## GROUND WATER QUALITY SAMPLE COLLECTION FIELD DATA SHEET

Location ID: MW-1

Date: 10/2/08

Sampled By: JZ

Sampling Time: 12:38

Project/Site Name: Wickland .Oakland Project No: \_\_\_\_\_

Location type: monitoring well, supply well, soil boring, other \_\_\_\_\_

Sampling Method: low flow

Weather (Skies, temperature, wind): \_\_\_\_\_

Well Diameter (in) 1"

Well Elevation (ft) \_\_\_\_\_

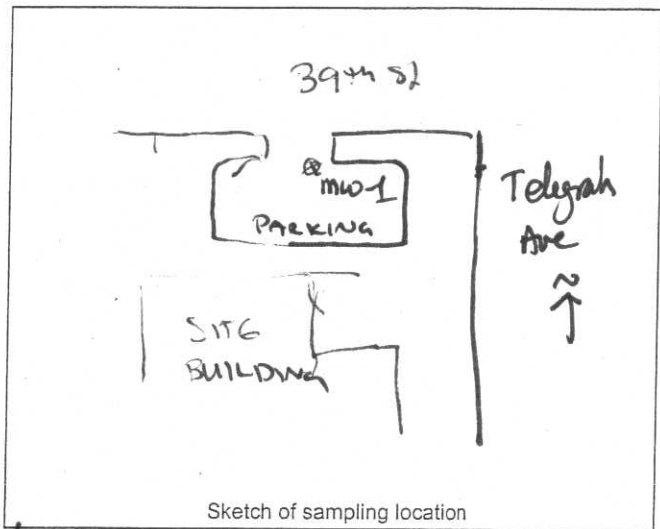
Well Casing Depth (ft) 29.4

Depth to Water (ft) 15.45

Standing Water Volume (gal) \_\_\_\_\_

Purge Rate: (gal/min) \_\_\_\_\_

Purge Method: \_\_\_\_\_



Sketch of sampling location

Observations/Comments:  tubing at 25'.

Measurements of Water Levels and Field Parameters: 4 VOAS + 1 Amber.

Time (24 hr)	Depth to Water (ft)	Purge Volume (gal)	Temp (°C)	PH (S.U.)	E. Cond. (µS/cm)	Turbidity (NTUs)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Remarks
12:19	16.80	0.01	21.7	5.85	913	65.4*	51.2	4.77	* vial Dirty
12:22	18.50	0.1	19.4	6.20	888	57.8*	38.8	3.71	turn pump down
12:25	19.15	0.2	19.3	6.21	864	6.95	34.6	3.17	* Clean NTU vial <i>alt</i>
12:28	19.45	0.3	19.4	6.26	838		30.7	3.33	pump can't solve
12:31	19.65	0.4	19.4	6.26	828	2.10	32.5	2.79	
12:34	20.05	0.5	19.3	6.19	820	1.30	28.1	2.60	
12:37	21.10	0.6	19.2	6.23	816	0.87	25.3	2.32	

2-inch casing = 0.16 gallons/foot  
7.48 gallons per cubic foot

4-inch casing = 0.65 gallons/foot

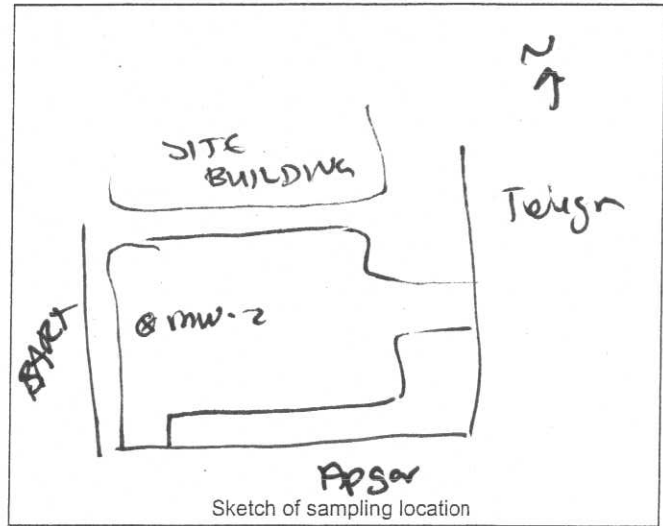
6 inch casing = 1.47 gallons/foot  
GW-Field Data Sht-1\_revised.doc



## GROUND WATER QUALITY SAMPLE COLLECTION FIELD DATA SHEET

Location ID: MW-2 Date: 10/2/07  
 Sampled By: JZ Sampling Time: 15:30  
 Project/Site Name: Wickland Outload Project No: \_\_\_\_\_  
 Location type: monitoring well, supply well, soil boring, other \_\_\_\_\_  
 Sampling Method: low flow  
 Weather (Skies, temperature, wind): \_\_\_\_\_

Well Diameter (in) 1"  
 Well Elevation (ft) \_\_\_\_\_  
 Well Casing Depth (ft) 22.8  
 Depth to Water (ft) \_\_\_\_\_  
 Standing Water Volume (gal) \_\_\_\_\_  
 Purge Rate: (gal/min) \_\_\_\_\_  
 Purge Method: \_\_\_\_\_



Observations/Comments: \_\_\_\_\_

### Measurements of Water Levels and Field Parameters:

Time (24 hr)	Depth to Water (ft)	Purge Volume (gal)	Temp (°C)	PH (S.U.)	E. Cond. (µS/cm)	Turbidity (NTUs)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Remarks
15:13	16.02	0.01	21.3	6.65	935		26.2	2.33	
15:16	16.07	0.1	20.9	6.64	949		25.3	2.10	
15:19	16.11	0.2	20.5	6.64	948	7.27	21.9	1.96	
15:22	16.13	0.3	20.5	6.64	945	5.42	21.3	1.90	
15:25	16.15	0.4	20.4	6.64	944	4.66	20.7	1.86	
15:28	16.17	0.5	20.3	6.65	944	3.57	20.6	1.86	

## GROUND WATER QUALITY SAMPLE COLLECTION FIELD DATA SHEET

Location ID: MW-3

Date: 10/2/03

Sampled By: JZ

Sampling Time: 13:31

Project/Site Name: Wickland. Oakden 2 Project No: \_\_\_\_\_

Location type: monitoring well supply well, soil boring, other \_\_\_\_\_

Sampling Method: low flow

Weather (Skies, temperature, wind): \_\_\_\_\_

Well Diameter (in) \_\_\_\_\_

Well Elevation (ft) \_\_\_\_\_

Well Casing Depth (ft) 21.5

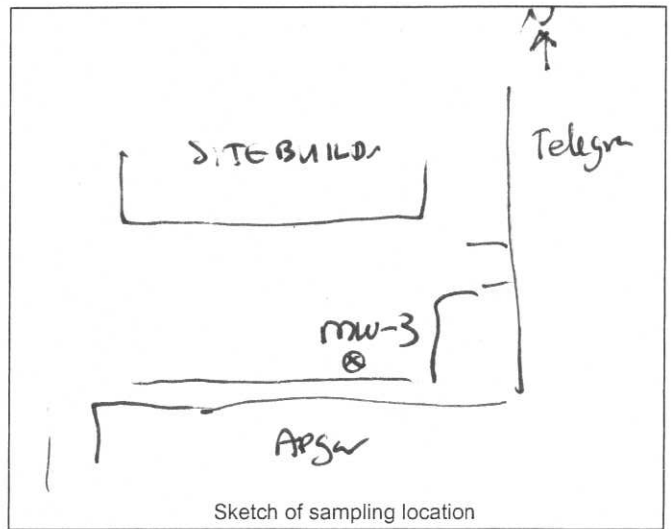
Depth to Water (ft) ~~15.79~~

14.66'

Standing Water Volume (gal) \_\_\_\_\_

Purge Rate: (gal/min) \_\_\_\_\_

Purge Method: \_\_\_\_\_



Observations/Comments: \_\_\_\_\_

Measurements of Water Levels and Field Parameters: 4 VDAAS + 1 AmL

Time (24 hr)	Depth to Water (ft)	Purge Volume (gal)	Temp (°C)	PH (S.U.)	E. Cond. (µS/cm)	Turbidity (NTUs)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Remarks
13:15	15.20	0.01	21.2	6.52	983		35.2	5.90	
13:18	16.35	0.10	20.1	6.46	972	3.95	29.6	2.66	turn pump down
13:21	17.40	0.2	20.1	6.50	987	2.45	28.1	2.40	
13:24	18.05	0.3	20.0	6.50	988		26.1	2.36	
13:27	18.70	0.4	19.9	6.52	<del>987</del>		24.7	2.24	
13:30	19.0	0.5	20.0	6.52	999	2.15	28.2	4.60	

2-inch casing = 0.16 gallons/foot  
7.48 gallons per cubic foot

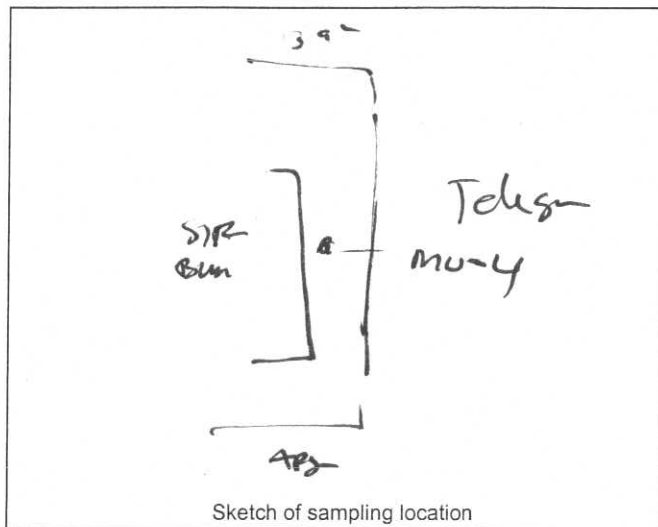
4-inch casing = 0.65 gallons/foot

6 inch casing = 1.47 gallons/foot  
GW-Field Data Sht-1\_revised.doc

## GROUND WATER QUALITY SAMPLE COLLECTION FIELD DATA SHEET

Location ID: MW-4 Date: 10/2/08  
 Sampled By: JZ Sampling Time: 14:40  
 Project/Site Name: Wickland. Oakland Project No: \_\_\_\_\_  
 Location type: monitoring well, supply well, soil boring, other \_\_\_\_\_  
 Sampling Method: low flow  
 Weather (Skies, temperature, wind): \_\_\_\_\_

Well Diameter (in) 3/4"  
 Well Elevation (ft) \_\_\_\_\_  
 Well Casing Depth (ft) 21.5'  
 Depth to Water (ft) ) #.58  
   15.09'  
 Standing Water Volume (gal) \_\_\_\_\_  
 Purge Rate: (gal/min) \_\_\_\_\_  
 Purge Method: \_\_\_\_\_



Observations/Comments: \_\_\_\_\_

**Measurements of Water Levels and Field Parameters:**

Time (24 hr)	Depth to Water (ft)	Purge Volume (gal)	Temp (°C)	PH (S.U.)	E. Cond. (µS/cm)	Turbidity (NTUs)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	Remarks
14:18	15.77	0.01	20.3	6.75	604		25.3	2.30	faint odor of gas
14:21	15.97	0.1	19.5	6.57	567	192	32.8	3.00	
14:24	15.92	0.2	19.1	6.57	569	258	24.1	2.26	
14:27	15.94	0.3	19.1	6.55	559		22.8	2.09	
14:30	15.90	0.4	19.0	6.57	544	109	21.5	2.00	
14:33	15.89	0.5	19.0	6.62	536		21.2	1.94	
14:36	15.89	0.6	19.0	6.64	530	45.3	20.8	1.92	
14:39	15.89	0.7	19.0	6.63	526		21.0	1.94	

2-inch casing = 0.16 gallons/foot  
7.48 gallons per cubic foot

4-inch casing = 0.65 gallons/foot

6 inch casing = 1.47 gallons/foot  
GW-Field Data Sht-1\_revised.doc

THIRD QUARTER 2008  
GROUNDWATER MONITORING REPORT  
FORMER REGAL STATION #120, LOP NO. RO0002875  
3875 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA



**APPENDIX B**

**LABORATORY DATA CERTIFICATES**

**AND CHAIN-OF-CUSTODY FORMS**

# K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.  
Santa Rosa CA 95403  
Phone: 707 527 7574  
FAX: 707 527 7879

## TRANSMITTAL

**DATE:** 10/16/08

**TO:** MR. PETER MORRIS  
WEST ENVIRONMENTAL S&T  
711 GRAND AVENUE, SUITE 220  
SAN RAFAEL, CA 94901

Phone: 415-460-6770  
Fax: 415-460-6771  
Email: main@w-e-s-t.com

**ACCT:** 9946  
**PROJ:** WICKLAND.OAKLAND

**FROM:** Richard A. Kagel, Ph.D.  
Laboratory Director

*RAK/mcw  
10/16/08*

**SUBJECT:** LABORATORY RESULTS FOR YOUR PROJECT WICKLAND.OAKLAND

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
MW-1	WATER	10/02/08	12:38	71615
MW-2	WATER	10/02/08	13:31	71616
MW-3	WATER	10/02/08	15:30	71617
MW-4	WATER	10/02/08	14:40	71618
10208	WATER	10/02/08	12:45	71619

The above listed sample group was received on 10/03/08 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.  
Thank you for this opportunity to be of service.



**K PRIME, INC.**  
**LABORATORY QUALITY CONTROL REPORT**

METHOD BLANK ID: B100308W1  
 SAMPLE TYPE: WATER

METHOD: GRO-GASOLINE RANGE ORGANICS  
 REFERENCE: EPA 8015C

BATCH #: 100308W1  
 DATE EXTRACTED: 10/03/08  
 DATE ANALYZED: 10/03/08

UNITS: mg/L

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
TPH-G	0.050	ND

SAMPLE ID: L100308W1  
 DUPLICATE ID: D100308W1  
 BATCH #: 100308W1  
 SAMPLE TYPE: WATER  
 UNITS: mg/L

DATE EXTRACTED: 10/03/08  
 DATE ANALYZED: 10/03/08

**ACCURACY (MATRIX SPIKE)**

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
TPH-G	0.250	ND	0.238	95	60-140

**PRECISION (SPIKE DUPLICATE)**

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
TPH-G	0.050	0.238	0.245	2.9	±20

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
 NA - NOT APPLICABLE

**K PRIME, INC.**  
**LABORATORY REPORT**

SAMPLE ID: MW-1

LAB NO: 71615

DATE SAMPLED: 10/02/08

TIME SAMPLED: 12:38

K PRIME PROJECT: 9946

BATCH #: 100308W1

CLIENT PROJECT: WICKLAND.OAKLAND

DATE ANALYZED: 10/10/08

METHOD: VOLATILE ORGANIC COMPOUNDS  
 REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER  
 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	20.4
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	0.540
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	6.44
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	14.9
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND



**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9946**  
**CLIENT PROJECT: WICKLAND.OAKLAND**

**SAMPLE ID: MW-1**  
**LAB NO: 71615**  
**DATE SAMPLED: 10/02/08**  
**TIME SAMPLED: 12:38**  
**BATCH #: 100308W1**  
**DATE ANALYZED: 10/10/08**

**METHOD: VOLATILE ORGANIC COMPOUNDS**  
**REFERENCE: EPA 5030/8260**

**SAMPLE TYPE: WATER**  
**UNITS: ug/L**

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	105
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	99

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
 NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY:                     ch                      
 DATE:                     10/16/08

**K PRIME, INC.**  
**LABORATORY REPORT**

**SAMPLE ID:** MW-2  
**LAB NO:** 71616  
**DATE SAMPLED:** 10/02/08  
**TIME SAMPLED:** 13:31  
**BATCH #:** 100308W1  
**DATE ANALYZED:** 10/13/08

**K PRIME PROJECT:** 9946  
**CLIENT PROJECT:** WICKLAND.OAKLAND

**METHOD:** VOLATILE ORGANIC COMPOUNDS  
**REFERENCE:** EPA 5030/8260

**SAMPLE TYPE:** WATER  
**UNITS:** ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	5.00	ND
CHLOROMETHANE	74-87-3	5.00	ND
VINYL CHLORIDE	75-01-4	5.00	ND
BROMOMETHANE	74-83-9	5.00	ND
CHLOROETHANE	75-00-3	5.00	ND
TRICHLOROFLUOROMETHANE	75-69-4	5.00	ND
1,1-DICHLOROETHENE	75-35-4	5.00	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	5.00	ND
METHYLENE CHLORIDE	75-09-2	25.0	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	5.00	ND
1,1-DICHLOROETHANE	75-34-3	5.00	ND
CIS-1,2-DICHLOROETHENE	156-59-2	5.00	ND
2,2-DICHLOROPROPANE	594-20-7	5.00	ND
BROMOCHLOROMETHANE	74-97-5	5.00	ND
CHLOROFORM	67-66-3	5.00	ND
1,1,1-TRICHLOROETHANE	71-55-6	5.00	ND
CARBON TETRACHLORIDE	56-23-5	5.00	ND
1,1-DICHLOROPROPENE	563-58-6	5.00	ND
BENZENE	71-43-2	5.00	423
1,2-DICHLOROETHANE	107-06-2	5.00	ND
TRICHLOROETHENE	79-01-6	5.00	ND
1,2-DICHLOROPROPANE	78-87-5	5.00	ND
DIBROMOMETHANE	74-95-3	5.00	ND
BROMODICHLOROMETHANE	75-27-4	5.00	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	5.00	ND
TOLUENE	108-88-3	5.00	16.0
CIS-1,3-DICHLOROPROPENE	10061-01-5	5.00	ND
1,1,2-TRICHLOROETHANE	79-00-5	5.00	ND
TETRACHLOROETHENE	127-18-4	5.00	ND
1,3-DICHLOROPROPANE	142-28-9	5.00	ND
DIBROMOCHLOROMETHANE	124-48-1	5.00	ND
1,2-DIBROMOETHANE	106-93-4	5.00	ND
CHLOROBENZENE	108-90-7	5.00	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	5.00	ND
ETHYLBENZENE	100-41-4	5.00	137
XYLENE (M+P)	1330-20-7	5.00	82.9
XYLENE (O)	1330-20-7	5.00	8.80
STYRENE	100-42-5	5.00	ND
BROMOFORM	75-25-2	5.00	ND
ISOPROPYLBENZENE	98-82-8	5.00	77.8
1,1,2,2-TETRACHLOROETHANE	79-34-5	5.00	ND
BROMOBENZENE	108-86-1	5.00	ND
1,2,3-TRICHLOROPROPANE	96-18-4	5.00	ND
N-PROPYLBENZENE	103-65-1	5.00	133



**K PRIME, INC.**  
**LABORATORY REPORT**

**SAMPLE ID:** MW-3  
**LAB NO:** 71617  
**DATE SAMPLED:** 10/02/08  
**TIME SAMPLED:** 15:30  
**BATCH #:** 100308W1  
**DATE ANALYZED:** 10/15/08

**K PRIME PROJECT:** 9946  
**CLIENT PROJECT:** WICKLAND.OAKLAND

**METHOD:** VOLATILE ORGANIC COMPOUNDS  
**REFERENCE:** EPA 5030/8260

**SAMPLE TYPE:** WATER  
**UNITS:** ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	2.14
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	1.68
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	0.600
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	0.510
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	67.8
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	19.2
1,1,1,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	36.6
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND



**K PRIME, INC.**  
**LABORATORY REPORT**

SAMPLE ID: MW-4

LAB NO: 71618

DATE SAMPLED: 10/02/08

TIME SAMPLED: 14:40

K PRIME PROJECT: 9946

BATCH #: 100308W1

CLIENT PROJECT: WICKLAND.OAKLAND

DATE ANALYZED: 10/15/08

METHOD: VOLATILE ORGANIC COMPOUNDS  
 REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER  
 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	5.00	ND
CHLOROMETHANE	74-87-3	5.00	ND
VINYL CHLORIDE	75-01-4	5.00	ND
BROMOMETHANE	74-83-9	5.00	ND
CHLOROETHANE	75-00-3	5.00	ND
TRICHLOROFLUOROMETHANE	75-69-4	5.00	ND
1,1-DICHLOROETHENE	75-35-4	5.00	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	5.00	ND
METHYLENE CHLORIDE	75-09-2	25.0	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	5.00	ND
1,1-DICHLOROETHANE	75-34-3	5.00	ND
CIS-1,2-DICHLOROETHENE	156-59-2	5.00	ND
2,2-DICHLOROPROPANE	594-20-7	5.00	ND
BROMOCHLOROMETHANE	74-97-5	5.00	ND
CHLOROFORM	67-66-3	5.00	ND
1,1,1-TRICHLOROETHANE	71-55-6	5.00	ND
CARBON TETRACHLORIDE	56-23-5	5.00	ND
1,1-DICHLOROPROPENE	563-58-6	5.00	ND
BENZENE	71-43-2	5.00	ND
1,2-DICHLOROETHANE	107-06-2	5.00	ND
TRICHLOROETHENE	79-01-6	5.00	ND
1,2-DICHLOROPROPANE	78-87-5	5.00	ND
DIBROMOMETHANE	74-95-3	5.00	ND
BROMODICHLOROMETHANE	75-27-4	5.00	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	5.00	ND
TOLUENE	108-88-3	5.00	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	5.00	ND
1,1,2-TRICHLOROETHANE	79-00-5	5.00	ND
TETRACHLOROETHENE	127-18-4	5.00	ND
1,3-DICHLOROPROPANE	142-28-9	5.00	ND
DIBROMOCHLOROMETHANE	124-48-1	5.00	ND
1,2-DIBROMOETHANE	106-93-4	5.00	ND
CHLOROBENZENE	108-90-7	5.00	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	5.00	ND
ETHYLBENZENE	100-41-4	5.00	106
XYLENE (M+P)	1330-20-7	5.00	ND
XYLENE (O)	1330-20-7	5.00	ND
STYRENE	100-42-5	5.00	ND
BROMOFORM	75-25-2	5.00	ND
ISOPROPYLBENZENE	98-82-8	5.00	95.0
1,1,2,2-TETRACHLOROETHANE	79-34-5	5.00	ND
BROMOBENZENE	108-86-1	5.00	ND
1,2,3-TRICHLOROPROPANE	96-18-4	5.00	ND
N-PROPYLBENZENE	103-65-1	5.00	306

**K PRIME, INC.**  
LABORATORY REPORT

SAMPLE ID: MW-4  
LAB NO: 71618  
DATE SAMPLED: 10/02/08  
TIME SAMPLED: 14:40  
BATCH #: 100308W1  
DATE ANALYZED: 10/15/08

K PRIME PROJECT: 9946  
CLIENT PROJECT: WICKLAND.OAKLAND

METHOD: VOLATILE ORGANIC COMPOUNDS  
REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER  
UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
2-CHLOROTOLUENE	95-49-8	5.00	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	5.00	ND
4-CHLOROTOLUENE	106-43-4	5.00	ND
TERT-BUTYLBENZENE	98-06-6	5.00	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	5.00	15.3
SEC-BUTYLBENZENE	135-98-8	5.00	26.0
1,3-DICHLOROBENZENE	541-73-1	5.00	ND
4-ISOPROPYLTOLUENE	99-87-6	5.00	ND
1,4-DICHLOROBENZENE	106-46-7	5.00	ND
N-BUTYLBENZENE	104-51-8	5.00	58.5
1,2-DICHLOROBENZENE	95-50-1	5.00	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	5.00	ND
1,2,4-TRICHLOROBENZENE	120-82-1	10.0	ND
HEXACHLOROBUTADIENE	87-68-3	10.0	ND
NAPHTHALENE	91-20-3	10.0	59.9
1,2,3-TRICHLOROBENZENE	87-61-6	10.0	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	5.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	85
TOLUENE-D8	101
4-BROMOFLUROBENZENE	104

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY:                     *ch*                      
DATE:                     10/16/08

**K PRIME, INC.**

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B100308W1

BATCH #: 100308W1

DATE ANALYZED: 10/4/08

METHOD: VOLATILE ORGANIC COMPOUNDS  
REFERENCE: EPA 5030/8260SAMPLE TYPE: WATER  
UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND



**K PRIME, INC.**

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B100308W1

BATCH #: 100308W1

DATE ANALYZED: 10/4/08

METHOD: VOLATILE ORGANIC COMPOUNDS  
REFERENCE: EPA 5030/8260SAMPLE TYPE: WATER  
UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	101
TOLUENE-D8	98
4-BROMOFLUOROBENZENE	97

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

**K PRIME, INC.**  
**LABORATORY QC REPORT**

**METHOD: VOLATILE ORGANIC COMPOUNDS**  
**REFERENCE: EPA 5030/8260**

**SAMPLE ID: B100308W1**  
**SPIKE ID: L100308W1**  
**DUPLICATE ID: D100308W1**  
**BATCH #: 100308W1**  
**SAMPLE TYPE: WATER**  
**UNITS: µg/L**

**ACCURACY (MATRIX SPIKE)**

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
1,1 DICHLOROETHENE	10.0	ND	10.4	104	60-140
BENZENE	10.0	ND	9.65	97	60-140
TRICHLOROETHENE	10.0	ND	9.71	97	60-140
TOLUENE	10.0	ND	8.81	88	60-140
CHLOROBENZENE	10.0	ND	9.14	91	60-140

**PRECISION (SPIKE DUPLICATE)**

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
1,1 DICHLOROETHENE	0.500	10.4	11.2	7.3	±20
BENZENE	0.500	9.65	10.1	4.3	±20
TRICHLOROETHENE	0.500	9.71	10.4	6.4	±20
TOLUENE	0.500	8.81	9.39	6.4	±20
CHLOROBENZENE	0.500	9.14	9.69	5.8	±20

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
NA - NOT AVAILABLE OR APPLICABLE

**K PRIME, INC.**  
**LABORATORY REPORT**

**K PRIME PROJECT: 9946**  
**CLIENT PROJECT: WICKLAND.OAKLAND**

**METHOD: DRO**  
**REFERENCE: CATPH-D**

**UNITS: mg/L**

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	EXTRACT DATE	DATE ANALYZED	MRL	SAMPLE CONC	TPH D PATTERN*
MW-1	71615	WATER	10/2/08	100808W01	10/13/08	10/14/08	0.050	0.065	
MW-2	71616	WATER	10/2/08	100808W01	10/13/08	10/14/08	0.050	0.573	AK
MW-3	71617	WATER	10/2/08	100808W01	10/13/08	10/14/08	0.050	0.620	AK
MW-4	71618	WATER	10/2/08	100808W01	10/13/08	10/14/08	0.050	0.958	AK

**NOTES:**

- DRO DIESEL RANGE ORGANICS (C12-C34)
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AD Typical pattern for diesel
- AM Hydrocarbon response is in the C12-C22 range
- AC Heavier hydrocarbons contributing to diesel range quantitation
- AJ Heavier hydrocarbon than diesel
- AK Lighter hydrocarbon than diesel
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

**APPROVED BY:**                     *ch*                      
**DATE:**                     10/16/08

**K PRIME, INC.**  
LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B10080801  
SAMPLE TYPE: WATER

METHOD: DRO  
REFERENCE: CATPH-D

BATCH #: 100808W01  
DATE EXTRACTED: 10/08/08  
DATE ANALYZED: 10/09/08

UNITS: mg/L

COMPOUND NAME

REPORTING  
LIMIT

SAMPLE  
CONC

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
DRO	0.050	ND

**NOTES:**

DRO - DIESEL RANGE ORGANICS (C12-C34)

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

**K PRIME, INC.**  
**LABORATORY QC REPORT**

**METHOD: DRO**  
**REFERENCE: CATPH-D**

**SAMPLE ID:** L100808W01  
**DUPLICATE ID:** D100808W01  
**BATCH #:** 100808W01  
**SAMPLE TYPE:** WATER  
**UNITS:** mg/L

**DATE EXTRACTED:** 10/08/08  
**DATE ANALYZED:** 10/09/08

**ACCURACY (MATRIX SPIKE)**

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
TPH-D	2.00	ND	1.65	83	60-140

**PRECISION (SPIKE DUPLICATE)**

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
TPH-D	0.050	1.65	1.80	8.7	±20

**NOTES:**

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT  
NA - NOT AVAILABLE OR APPLICABLE



711 Grand Avenue, Suite 220  
 San Rafael, California 94901  
 415.460.6770 • Fax 415.460.6771  
 main@westenvironmental.com

**SAMPLE ANALYSIS/COMPOSITE REQUEST FORM**  
**CHAIN-OF-CUSTODY**

Invoice to: WEST, Inc.	Date: 10/3/08	Page 1 of 1					
Project: Wickland.Oakland	Location: 3875 Telegraph Ave						
Project Manager: Peter Morris	Phone: 415/460-6770	Fax: 415/460-6771					
Laboratory: KPrime, Inc, Santa Rosa, CA	Turnaround time (days)						
Sampler Signature:	1	2	3	5	7	10	Std.
							X
Analyses Requested							

Sample ID	Date	Time	Type	# Containers	Composite	VOCs (USEPA8260B)	TPHd/TPHg (USEPA 8015M)	BTEx/MTBE (USEPA 8021/8260B)											HOLD	
MW-1	10/02/08	12:38	W	5		X	X	X												
MW-2	"	13:31	W	5		X	X	X												
MW-3	"	15:30	W	5		X	X	X												
MW-4	"	14:40	W	5		X	X	X												
10208	"	12:45	W	5																X

NOTES: \* Please provide EDF's for all data \*

Relinquished by: (Signature) 	Date/Time 10/3/08 11:25	Received by: (Signature) 	Date/Time 10/3/08 11:25
Relinquished by: (Signature) 	Date/Time 10/3/08 12:20	Received by: (Signature) 	Date/Time 10/3/08 12:20