

# **URS**

**2005 FIRST QUARTER  
GROUNDWATER MONITORING REPORT  
FORMER SEARS RETAIL CENTER #1039  
1901-1911 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA  
CASE I.D. # STID 1630  
FOR SEARS, ROEBUCK & CO.**

**URS Job No. 29863493  
June 13, 2005**

June 13, 2005

Mr. Don Hwang  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Number 250  
Alameda, California 94502

**Subject:** **2005 First Quarter Groundwater Monitoring**  
**Former Sears Retail Center #1039**  
**1901- 1911 Telegraph Avenue**  
**Oakland, California**  
**Case I.D. #STID 1630**  
**For Sears, Roebuck & Co.**

Dear Mr. Hwang:

Submitted with this letter is a URS report prepared on behalf of Sears, Roebuck & Co. Presented in the report are results of groundwater monitoring conducted at the above-referenced Site during the first quarter 2005. Please feel free to contact me at (714) 648-2793 if you have questions or comments.

Respectfully Submitted,

**URS CORPORATION**

  
J.S. Rowlands, P.G., C.HG.  
Project Manager

cc: Mr. Bruce Kaye, Sears Roebuck and Co.

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### 1.0 INTRODUCTION

This report has been prepared by URS Corporation on behalf of Sears, Roebuck & Co., (Sears). It presents results of the 2005 first quarter groundwater monitoring conducted at the Sears Auto Center (Site) located at 1901-1911 Telegraph Avenue in Oakland, California (Figure 1). The groundwater monitoring event consisted of "post purge" groundwater sample collection from twelve monitoring wells (MW-1 through MW-9 and W4-1 through W4-3). The purpose of the groundwater monitoring was to assess current groundwater conditions in the vicinity of a former gasoline concession area (Figure 2). The work is being performed under regulatory oversight of the Alameda County Environmental Health Services (ACEHS) pursuant to quarterly monitoring and reporting requirements under Title 23, Division 3, Chapter 16 of the California Code of Regulations.

## 2.0 SITE DESCRIPTION

The Site is located at 1901-1911 Telegraph Avenue, Oakland, California (Figure 1). The Site is bordered by Williams Street to the north, Telegraph Avenue to the east, 19<sup>th</sup> Street to the south, and San Pablo Avenue to the west (Figure 2). A Sears Auto Center, a former Chevron Service Station, a three-story above-ground-parking garage, and a paved parking lot occupy the property.

### 2.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Site is approximately 1.5 miles east of the San Francisco Bay and three miles west of the Diablo Range in Oakland, California. The area is located on the eastern flank of The San Francisco Basin, a broad Franciscan depression. Basement rock of the basin is respectively overlain by the Santa Clara Formation, the Alameda Formation, and the Temescal Formation. These formations consist of unconsolidated sediments varying in total thickness from approximately 300 to 1,000 feet. The Pleistocene Santa Clara Formation consists primarily of alluvial fan deposits that are interspersed with lake, swamp, river channel, and flood plain deposits. The overlying Alameda Formation was deposited in an estuary environment and consists of organic clays and alluvial fan deposits of sands, gravels, and silts. The uppermost Holocene Temescal Formation is an alluvial deposit ranging in thickness from 1 to 50 feet, which primarily consists of silts and clays overlying a basal gravel unit. (California Regional Water Quality Control Board [RWQCB], San Francisco Bay Region, June 1999).

The Site is located within the Oakland sub-area of the East Bay Plain groundwater basin. The East Bay Plain groundwater basin encompasses approximately 115 square miles and is bounded by San Pablo Bay to the north, Alameda County to the south, the Hayward Fault to the east, and San Francisco Bay to the west. Groundwater flow direction in the basin typically follows surface topography. Historical high production wells in the Oakland sub-area were screened at depths greater than 200 feet below ground surface (bgs) beneath the Yerba Buena Mud Member of the Alameda Formation. The Yerba Buena Mud is a black organic clay with an average thickness of 25 to 50 feet that forms an aquitard between upper and lower groundwater bearing units. From the 1860's until water importation programs were initiated in the 1930's, groundwater in the East Bay Plain was utilized as the primary municipal water source. Current beneficial uses of groundwater in the basin are minimal due to "readily available high quality imported surface water" (RWQCB, June 1999). Alameda County Well permit applications indicated 91% of groundwater wells within the basin are used for "backyard" or commercial irrigation, 8.6% of the wells are used for industrial process water, and 0.4% are used for drinking water supply (RWQCB, June 1999).

### **3.0 BACKGROUND**

The Site consists of a Sears Auto Center, a multiple level parking structure, a paved parking lot, and a former Chevron Service Station. The Sears Auto Center is currently in operation; it is a converted former Goodyear Tire Center. Three gasoline underground storage tanks (USTs) and a used oil UST were installed at the former Chevron Service Station. On January 29, 1988, prior to Sears' ownership of the Site, one 3,000 gallon gasoline UST, one 5,000 gallon gasoline UST, one 7,000 gallon gasoline UST, and one 500 gallon used oil UST were removed under oversight of the Oakland Fire Department and the ACEHS. Approximately 20 to 30 cubic yards of gasoline impacted soil was removed from the "south area" of the gasoline USTs excavation and subsequently disposed at a Class I landfill in Buttonwillow, California. Following excavation, residual concentrations of total petroleum hydrocarbons as gasoline (TPHg) and benzene in soil were below 100 milligrams per kilogram (mg/kg) and 0.7 mg/kg, respectively. The UST excavations were subsequently backfilled with imported crushed rock and "clean excavated material" (Dames & Moore, 1988).

A total of twelve groundwater monitoring wells (MW-1 through MW-9 and W4-1 through W4-3) have been installed, before and after the property's purchase by Sears, to evaluate the extent of gasoline impacted groundwater emanating from the former Chevron Station's UST area. The prior owners, Broadway/Federated Department Stores, began the initial investigation work, installed wells MW-1 through MW-7, and conducted groundwater monitoring. Subsequent to the property's purchase by Sears during a bankruptcy proceeding, Sears has continued quarterly groundwater monitoring (since June 1996), and has installed additional wells MW-8 and MW-9 to define the down-gradient extent of the gasoline groundwater plume (The IT Group, February 2000). Fugro West, Inc. (Fugro) installed three additional wells W4-1, W4-2, and W4-3 on the Site in June 2004 (Fugro, December 2004).

Groundwater has been monitored since January 1988. Well MW-1 has been monitored on a periodic basis since January 1988 while wells MW-2, MW-3, and MW-4 have been monitored on a periodic basis since June 1993. Wells MW-5, MW-6, and MW-7 have been monitored on a periodic basis since June 1994. Wells MW-8 and MW-9 have been monitored on a periodic basis since November 1999. Wells W4-1, W4-2, and W4-3 have been monitored on a periodic basis since June 2004. Historical monitoring data shows that dissolved phase TPHg have been detected in ten of the twelve wells and dissolved phase benzene has been detected in ten of the twelve wells. Available historical groundwater data (since October 1995); including depth to water, groundwater elevation, hydrocarbon and volatile organic compounds (VOCs) concentrations; are summarized in Appendix B.

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### 4.0 HEALTH AND SAFETY PLAN

Prior to initiating the field activities, URS prepared a site-specific Health & Safety (H&S) Plan to:

- ◆ Identify and describe potentially hazardous substances which may be encountered during field operations;
- ◆ Specify protective equipment and clothing for onsite activities;
- ◆ Outline measures to be implemented in the event of an emergency.

URS field personnel reviewed the H&S Plan prior to commencing the field procedures. Field monitoring activities were recorded in the H&S Plan and were maintained in the project files at URS's Santa Ana office. A copy of the H&S Plan remained onsite during field operations.

## **5.0 QUARTERLY GROUNDWATER MONITORING**

The 2005 first quarter groundwater monitoring was performed on February 10, 2005. The monitoring consisted of groundwater gauging, purging, and sampling of all twelve wells (MW-1 through MW-9 and W4-1 through W4-3). A description of the monitoring procedures is presented in the following section.

### **5.1 GROUNDWATER GAUGING**

Prior to gauging, the groundwater monitoring wells were checked for the presence of separate phase product using a product interface probe. Separate phase product was not observed in any of the wells. Water levels in each well were measured using a Solinst™ water level indicator relative to a defined measuring point on the surveyed top of casing. Water level data was recorded to the nearest 0.01 foot. Before and after each well gauging, the water level indicator sensor and tape was rinsed with a solution of Alconox followed by rinsing with tap water and deionized water. Groundwater depths and elevations for the 2005 first quarter are listed in Table 1 and Appendix B.

### **5.2 PURGING AND SAMPLING METHODS**

Prior to sample collection, wells were purged of approximately three well casing volumes using a Grundfos™ RediFlo 2 submersible well pump. The wells were purged at rates of approximately 0.3 to 1 gallon per minute (gpm). Water purged from each well was monitored for various field parameters including temperature, pH, turbidity, electrical conductivity, dissolved oxygen (DO), and oxidation reduction potential (ORP) using a YSI™ multi-parameter meter equipped with a flow-through cell. Purging continued until temperature, pH, and conductivity had stabilized. The stabilized field parameters are listed in Table 1.

Groundwater samples were collected from twelve monitoring wells for laboratory analysis during the 2005 first quarter groundwater monitoring event. Groundwater samples were collected from the discharge tubing of the well pump following purging. The Grundfos RediFlo 2™ submersible well pump was cleaned prior to use (and between wells) by washing in a solution of Alconox, rinsing with tap water, final rinsing with deionized water, and air drying. Pre-cleaned, disposable, polyethylene discharge tubing was attached to the pump following each decontamination and was changed between each well purging event. A blind duplicate was collected from well MW-7 and labeled DUP-1. One equipment blank sample, EB-1, was collected by pumping deionized water through the pump and into sample containers following decontamination procedures. Using a ferrous iron test kit each well was sampled for ferrous iron concentration.

Sample containers and handling procedures for groundwater samples conformed to the established protocols for each specific parameter as described in EPA SW-846. The sample bottles, once filled and preserved as required, were properly labeled and logged on a chain of custody form. The label included well identification number, sample number, date and time sampled, job number, site/client name and location, and sampling personnel's initials. The sealed and labeled samples were placed in an ice chest with ice and transported to Southland Technical Services, Inc. (STS), a California Department of Health

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Services (CDHS) accredited laboratory for analysis. The ice chest temperature was recorded at 5 degrees centigrade by the laboratory upon receipt. Chain-of-custody records were maintained throughout the sampling program.

### **5.3 LABORATORY ANALYSIS PROGRAM**

All groundwater samples and duplicates were analyzed by STS for TPHg by modified EPA Method 8015M. Groundwater samples were also analyzed for 72 volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylenes (BTEX), and fuel oxygenates Methyl tert-Butyl Ether (MTBE), Di-isopropyl Ether (DIPE), Ethyl tert-butyl Ether (ETBE), tert-Amyl Methyl Ether (TAME), tert-Butanol (TBA) by EPA Method 8260B.

### **5.4 WELL HEAD MAINTENANCE**

As part of the quarterly monitoring program each well head is inspected to ensure that wells are properly sealed and secured. The routine well maintenance associated with the quarterly groundwater sampling consists of: inspection of water-tight well caps and locks on all monitoring wells and replacement as necessary; replacement of missing or damaged bolts on well box covers; and removal and replacement of damaged well boxes and associated concrete aprons. During this quarterly event, all wells were properly sealed and secured.

### **5.5 WASTE MANAGEMENT**

Well purge water was collected and stored in two 55-gallon DOT-approved drums. The drums were labeled to identify the source of the wastes and individually numbered. The containers were stored onsite and properly disposed of by a licensed waste transporter under contract with Sears, following review of the chemical analysis data.

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## 6.0 FINDINGS

### 6.1 SHALLOW GROUNDWATER CONDITIONS

The measured depth to groundwater beneath the Site during the first quarter monitoring event ranged from 12.75 (MW-5) to 16.85 (MW-8) feet bgs. Calculated groundwater elevations ranged between 3.44 (MW-9) and 6.39 (MW-1) feet above mean sea level (msl). Groundwater elevations in the wells have increased an average of 0.81 feet since the 2004 fourth quarter monitoring event. Groundwater depths and elevations are listed in Table 1 and Appendix B. An interpretive groundwater elevation contour map, based on the 2005 first quarter groundwater level measurements, is provided as Figure 3. Groundwater elevation contours for the Site were generated by a geostatistical gridding method using SURFER™, a graphical, contouring software program. The resultant groundwater contours indicate an easterly groundwater flow direction with a gradient of about 0.010 (Figure 3).

### 6.2 LABORATORY ANALYTICAL RESULTS

The groundwater analytical results for TPHg, BTEX, fuel oxygenates and various VOCs in groundwater samples collected during this event are summarized below. Detected analytes for each sample are listed in Table 2. Copies of the laboratory report and COC documents are provided in Appendix B.

Analytes	Groundwater Monitoring Wells with Detectable Concentrations	Range of Detectable Concentrations ( $\mu\text{g/L}$ )
TPHg	MW-2, MW-3, MW-7, MW-9, W4-1, W4-2, and W4-3	62 (MW-3) to 45,300 (W4-2)
Benzene	MW-2, MW-7, W4-1, W4-2, and W4-3	48.3 (W4-1) to 16,500 (MW-7)
Toluene	W4-1, W4-2, and W4-3	1.1 (W4-3) to 20,500 (W4-2)
Ethylbenzene	MW-7, W4-1, and W4-2	299 (W4-1) to 1,740 (W4-2)
Xylenes	MW-7, W4-1, and W4-2	550 (MW-7) to 5,590 (W4-2)
Fuel Oxygenates: (MTBE, DIPE, ETBE, TAME, TBA)	NO DETECTIONS	
Tetrachloroethane (PCE)	MW-1, MW-3, MW-8, and MW-9	4.8 (MW-8) to 34.2 (MW-3)
Trichloroethene (TCE)	MW-1, MW-2, MW-3, MW-9, and W4-3	3.3 (MW-2) to 12.1 (MW-9)
1,2-Dichloroethane (EDC)	MW-2, MW-9, W4-1, and W4-3	2.7J (W4-3) to 78.0 (W4-1)
n-Propylbenzene	W4-2	559
1,3,5 - Trimethylbenzene	W4-1 and W4-2	122 (W4-1) and 646 (W4-2)
1,2,4 - Trimethylbenzene	MW-7, W4-1, and W4-2	345 (W4-1) to 1,150 (W4-2)
cis-1,2- Dichloroethene	W4-3	2.3J

TPHg = Total Petroleum Hydrocarbons as gasoline

$\mu\text{g/L}$  - Micrograms per liter

MTBE - Methyl tertiary-butyl ether

The J-flag indicates that the analyte was detected at a level less than the

DIPE - Di-isopropyl Ether

reporting limit and greater than the method detection limit and is therefore

TAME - Tertiary Amyl Methyl Ether

an estimated value.

TBA - Tertiary Butyl Alcohol

ETBE - Ethyl Tertiary Butyl Ether

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Chemical analysis results of the 2005 first quarter groundwater monitoring are presented in Table 2. A copy of the laboratory reports and chain of custody records are included in Appendix C. Groundwater isoconcentration maps for TPHg and Benzene for the 2005 first quarter are shown on Figures 4 and 5, respectively. URS conducted a check of data completeness for the analytical laboratory reports. Results indicate that "these data are considered to be useable for meeting project objectives." A copy of URS' Data Validation Report is included in Appendix D.

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### 7.0 DISCUSSION

The 2005 first quarter groundwater monitoring event represents the 38<sup>th</sup> groundwater-sampling event conducted at the Site. Groundwater elevations have increased approximately 0.81 feet since the last sampling event conducted in November 2004. Groundwater flow direction is towards the east with a gradient of 0.010, which is consistent with previous monitoring events.

TPHg was detected in seven of the twelve monitoring wells sampled with concentrations up to 45,300 µg/L. Benzene was detected in five of twelve monitoring wells sampled with concentrations up to 16,500 µg/L. The likely source is the former gasoline USTs and fuel dispensing area of the former Chevron Station located near the central portion of the Site. This quarter, TPHg was detected in down gradient monitoring well MW-9 at a concentration slightly above detection limits. Samples collected from this well have yielded non-detect concentrations of TPHg since March 2003, and the results from this sampling event may be anomalous. This is supported by the fact that benzene was not detected in the sample, and generally dissolved phase benzene is more mobile in groundwater plumes. The detection of dissolved phase TPHg in the groundwater sample collected from this well will be further evaluated following review of the 2005 second quarter monitoring data.

Chlorinated VOCs have been detected in both the upgradient well MW-1 as well as the downgradient well MW-9 during this, and previous, groundwater sampling events. PCE and TCE concentrations have steadily increased in upgradient wells MW-1 and MW-3 during the last several years. Potential onsite sources of chlorinated VOCs have not been identified; however, a widespread groundwater plume containing chlorinated compounds has been identified in the Site vicinity by Harding ESE and is referenced in the Fourth Quarter 2001 Groundwater Monitoring Report for the Site (IT Corp., May 2002). More recently, the chlorinated VOC impacted groundwater plume has been assessed and documented in the Draft Fugro Site Assessment Report (December 2004) prepared for the City of Oakland's Uptown Project Area.

Based on the data collected during this and previous monitoring events, the lateral limits of TPHg and BTEX affected groundwater can be described by an oval shaped plume with the long axis trending southeast with a length of approximately 250 feet, and the short axis trending northeast with a length of approximately 140 feet. The plume is relatively well defined by the existing monitoring well network and appears to be limited to the Site. Although TPHg and benzene concentrations have increased in well MW-7 since 1995, they have remained relatively stable during the last year. In general, monitoring data collected during the last year suggests that the dissolved phase TPHg and BTEX plume is stable and is not migrating laterally or further down gradient.

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### 8.0 SCHEDULE

The schedule for work to be conducted during the following quarter is as follows:

- ♦ Quarterly groundwater monitoring of wells MW-1 through MW-9 and recently installed wells W4-1, W4-2, and W4-3: May 2005,
- ♦ Submittal of 2005 Second Quarter Groundwater Monitoring Report to ACEHS: July 2005,

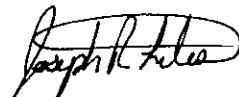
ACEHS will be notified of upcoming field activities.

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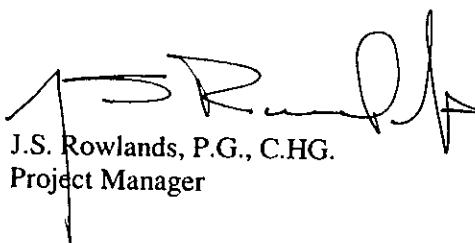
Should you have any questions or comments, please do not hesitate to contact us.

Respectfully Submitted,

**URS CORPORATION**



Joseph Liles  
Project Geologist



J.S. Rowlands, P.G., C.HG.  
Project Manager



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### 9.0 REFERENCES

- Figures, S., 1998. *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, California*, 12 p.
- Muir, Kenneth S., 1993. *Geologic Framework of the East Bay Plain Groundwater Basin, Alameda, California. Prepared for the Alameda County Flood Control and Water Conservation District*, August 1993.
- California Regional Water Quality Control Board—San Francisco Bay Region Groundwater Committee (RWQCB), 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*. June 1999, 106 p.
- Environmental Science & Engineering, Inc., 1995. *Preliminary Site Investigation and Phase II Environmental Assessment*, Goodyear Tire Facility 1901-1911 Telegraph Avenue, Oakland, California 92612, December 27.
- Fugro West, Inc. 2004. *Draft Site Assessment Report Uptown Project Area, Oakland, California*, December 2004.
- The IT Group, 2000. *Soil and Groundwater Assessment Report*, Sears Auto Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, February 9.
- The IT Group, 2001. *First Quarter 2001 Groundwater Monitoring*, Sears Auto Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, July 8.
- The IT Group, 2001. *Second Quarter 2001 Groundwater Monitoring*, Sears Auto Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, January 8.
- The IT Group, 2002. *Fourth Quarter 2001 Groundwater Monitoring*, Sears Auto Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, May 29.
- URS Corporation, 2002. *2002 First Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, August 5.
- URS Corporation, 2002. *2002 Second Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, September 30.
- URS Corporation, 2002. *2002 Third Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, December 12.
- URS Corporation, 2003. *2002 Fourth Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, February 25.
- URS Corporation, 2003. *2003 First Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, April 28.
- URS Corporation, 2003. *2003 Second Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, September 3.

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- URS Corporation, 2003. *2003 Third Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, December 10.
- URS Corporation, 2004. *2003 Fourth Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, February 5.
- URS Corporation, 2004. *2004 First Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, March 31.
- URS Corporation, 2004. *2004 Second Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, August 10.
- URS Corporation, 2005. *2004 Third Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, January 17.
- URS Corporation, 2005. *2004 Fourth Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, May 25.

## **TABLES**

**Table 1**  
**2005 1st Quarter Groundwater Levels and Parameters**  
**Sears Retail Center Store No. 1039**  
**Oakland, California**

Monitoring Well No.	Date Collected	Notes	GROUNDWATER LEVELS				GROUNDWATER SAMPLING FIELD PARAMETERS						
			Product Thickness (ft)	Depth to Groundwater (ft bgs)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	Temperature (Celsius)	pH	Conductivity ( $\mu\text{S}/\text{cm}$ )	O.R.P. (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron* (mg/L)
MW-1	2/10/2005	--	0.0	14.60	20.99	6.39	20.21	6.38	929	123.4	23.2	2.26	0.0
MW-2	2/10/2005	--	0.0	14.42	20.50	6.08	21.70	6.49	1771	-113.0	0.0	0.42	3.4
MW-3	2/10/2005	--	0.0	16.51	22.29	5.78	21.81	6.34	600	116.5	0.7	0.18	0.0
MW-4	2/10/2005	--	0.0	13.11	18.61	5.50	21.86	6.61	1754	-97.1	0.0	0.16	1.8
MW-5	2/10/2005	--	0.0	12.75	18.76	6.01	21.53	6.75	1720	-121.8	59.5	0.27	2.8
MW-6	2/10/2005	--	0.0	14.32	18.91	4.59	21.67	6.53	1861	55.4	3.6	0.27	0.0
MW-7	2/10/2005	--	0.0	15.78	20.39	4.61	21.81	6.56	1263	-136.8	14.8	0.14	3.4
MW-8	2/10/2005	--	0.0	16.85	21.12	4.27	22.29	6.52	521	80.6	2.5	5.62	0.0
MW-9	2/10/2005	--	0.0	15.76	19.20	3.44	22.92	6.54	1117	86.2	2.6	0.86	0.0
W4-1	2/10/2005	1	0.0	15.95	--	--	21.67	6.53	1099	-125.6	2.4	0.21	0.0
W4-2	2/10/2005	1	0.0	16.42	--	--	22.37	6.53	892	-121.9	4.3	0.00	3.4
W4-3	2/10/2005	1	0.0	15.52	--	--	21.72	6.44	1541	66.4	83.3	0.03	1.8

Notes:

ft - feet

MSL - Mean Sea Level

bgs - Below ground surface

Groundwater Elevation reference to MSL

Groundwater Elevation = Top of casing elevation - Depth to Water

1 - Casing elevation not available

$\mu\text{S}/\text{cm}$  - microSiemens per centimeter

mV - millivolt

mg/L - milligrams per liter

NTU - nephelometric turbidity units

O.R.P. - Oxidation Reduction Potential

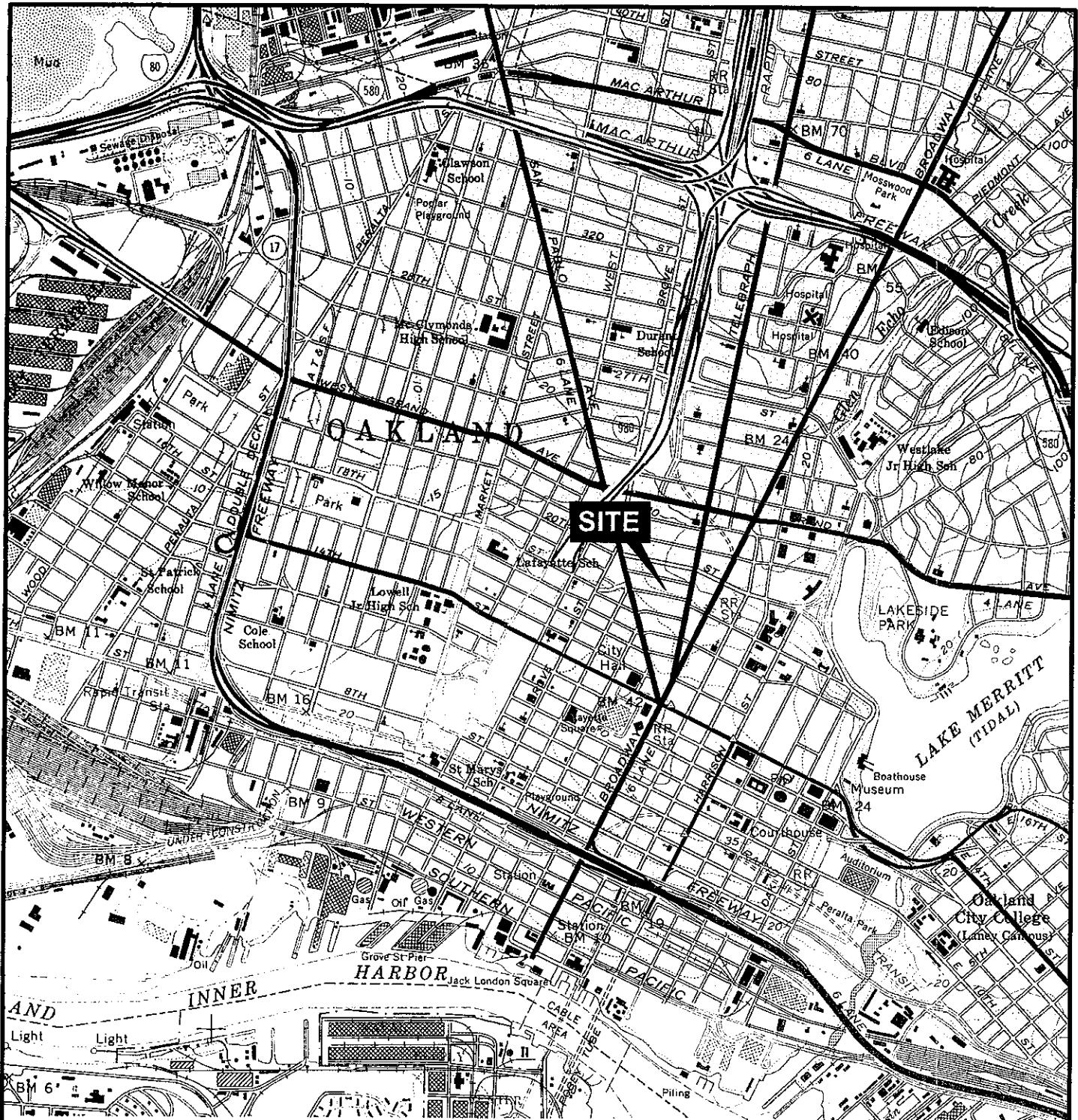
\* - Ferrous Iron Field Results

Monitoring Well No.	Sample Date	EPA Method 8015M							
		Notes	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylzene (µ)	1,2,4 - Trimethylbenzene (µg/L)	Sec-Butylbenzene (µg/L)	cis-1,2-DCE (µg/L)
MW-1	2/10/2005	--	< 50	< 1	< 1	<	< 5	< 5	< 5
MW-2	2/10/2005	-	390	177	< 1	<	< 5	< 5	< 5
MW-3	2/10/2005	--	62	< 1	< 1	<	< 5	< 5	< 5
MW-4	2/10/2005	--	< 50	< 1	< 1	<	< 5	< 5	< 5
MW-5	2/10/2005	--	< 50	< 1	< 1	<	< 5	< 5	< 5
MW-6	2/10/2005	--	< 50	< 1	< 1	<	443J	< 500	< 500
MW-7	2/10/2005	--	19,200	16,500	< 100		< 500	360J	< 500
	2/10/2005	1	21,100	18,300	< 100		< 5	< 5	< 5
MW-8	2/10/2005	-	< 50	< 1	< 1	<	< 5	< 5	< 5
MW-9	2/10/2005	--	62	< 1	< 1	<	345	< 50	< 50
W4-1	2/10/2005	--	12,400	4,560	3,980		1,150	< 500	< 500
W4-2	2/10/2005	--	45,300	6,400	20,500		< 5	< 5	2.3J
W4-3	2/10/2005	--	790	48.3	1.1	<			

Notes:

I: Duplicate sample  
 < - Analyte not detected above indicated reporting limit  
 TPHg = Total Petroleum Hydrocarbons as gasoline  
 MTBE - Methyl tertiary-butyl ether  
 DIPE - Di-isopropyl Ether  
 TAME - Tertiary Amyl Methyl Ether  
 TBA - Tertiary Butyl Alcohol  
 ETBE - Ethyl Tertiary Butyl Ether  
 PCE - Tetrachloroethane  
 TCE - Trichloroethene  
 1,2-DCA - 1,2-Dichloroethane (EDC)

## **FIGURES**



REFERENCE: USGS 7.5 Minute Series Oakland West, CA Quad, 1959, Photorevised 1980

FIGURE 1

**VICINITY MAP**  
 SEARS AUTO CENTER #1039  
 1901-1911 TELEGRAPH AVENUE  
 OAKLAND, CALIFORNIA  
 For Sears, Roebuck & Co.

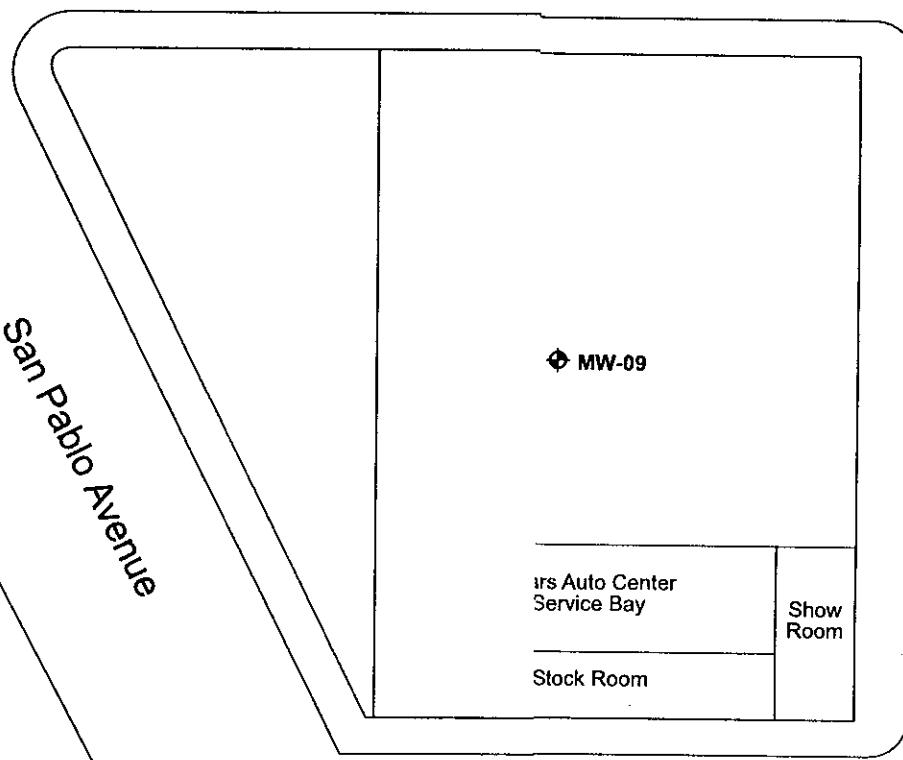


0      1/2      1

Scale in Miles

San Pablo Avenue

Telegraph Avenue



### EXPLANATION

MW-01 Monitoring Well Location

W4-1 Approximate Location of Monitoring Well Loc  
(Drilled by Fugro June 2004)

### PLOT PLAN

Project: SEARS AUTO CENTER #1039,  
1901-1911 TELEGRAPH AVE., OAKLAND, CA

Project No.: 29863493

Figure 2

San Pablo Avenue

Telegraph Avenue

MW-09  
3.44

Sears Auto Center  
Service Bay

Show  
Room

Stock Room

**GROUNDWATER CONTOUR MAP  
2005 FIRST QUARTER**

Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	Figure 3
Project No.: 29863493	
Date Sample: February 10, 2005	

San Pablo Avenue

MW-09  
62

Sears Auto Center  
Service Bay

Show  
Room

Stock Room

Telegraph Avenue

#### EXPLANATION

MW-01  
<50 ♦ Monitoring Well Location with TPHg

— 100 — TPHg Isoconcentration Contour

W4-1 ♦ Approximate Location of Monitoring  
(Drilled by Fugro June 2004)

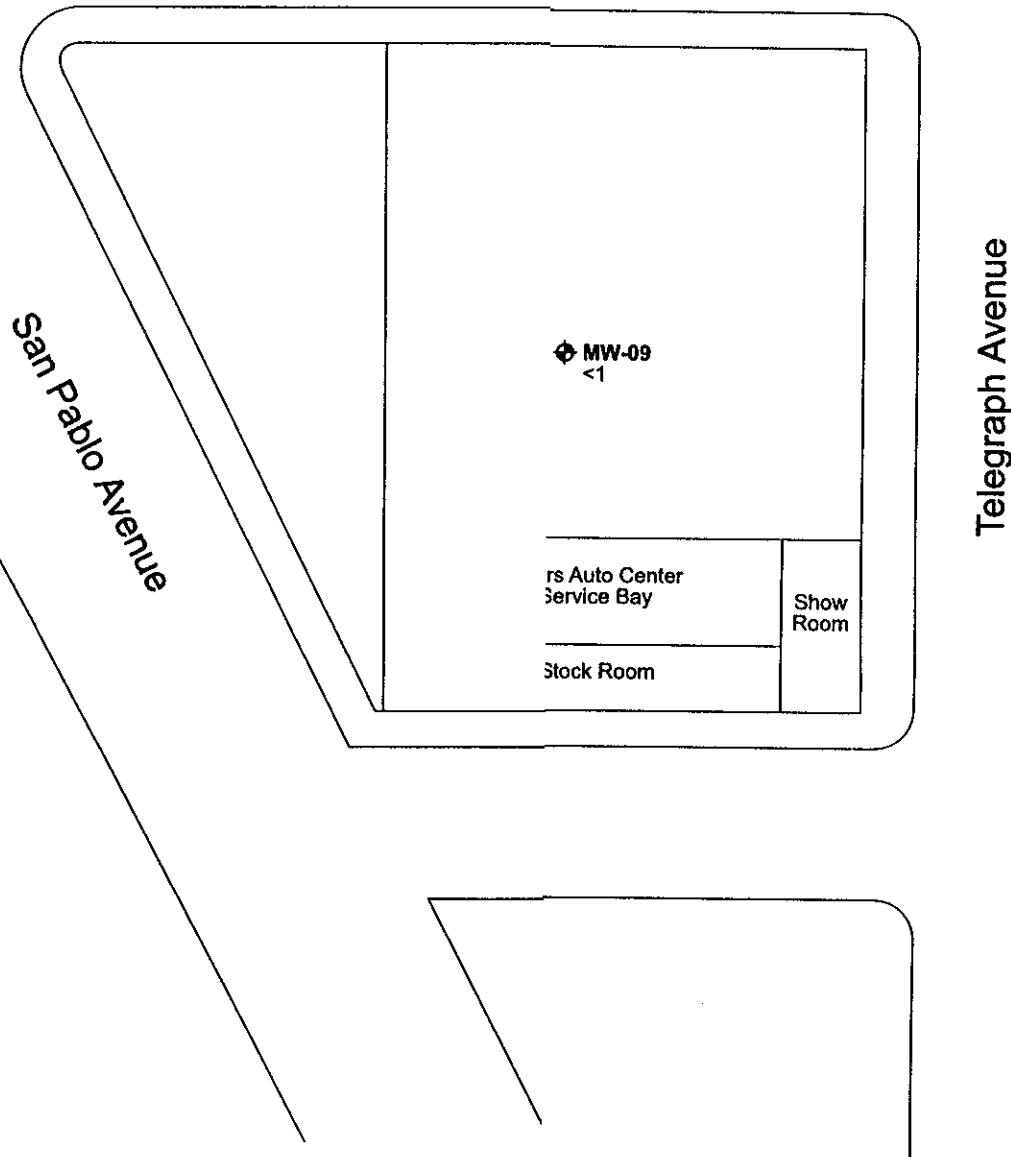
#### TPHg ISOCONCENTRATION CONTOUR MAP - 2005 FIRST QUARTER

Project: SEARS AUTO CENTER #1039,  
1901-1911 TELEGRAPH AVE., OAKLAND, CA

Project No.: 29863493

Date Sample: February 10, 2005

Figure 4

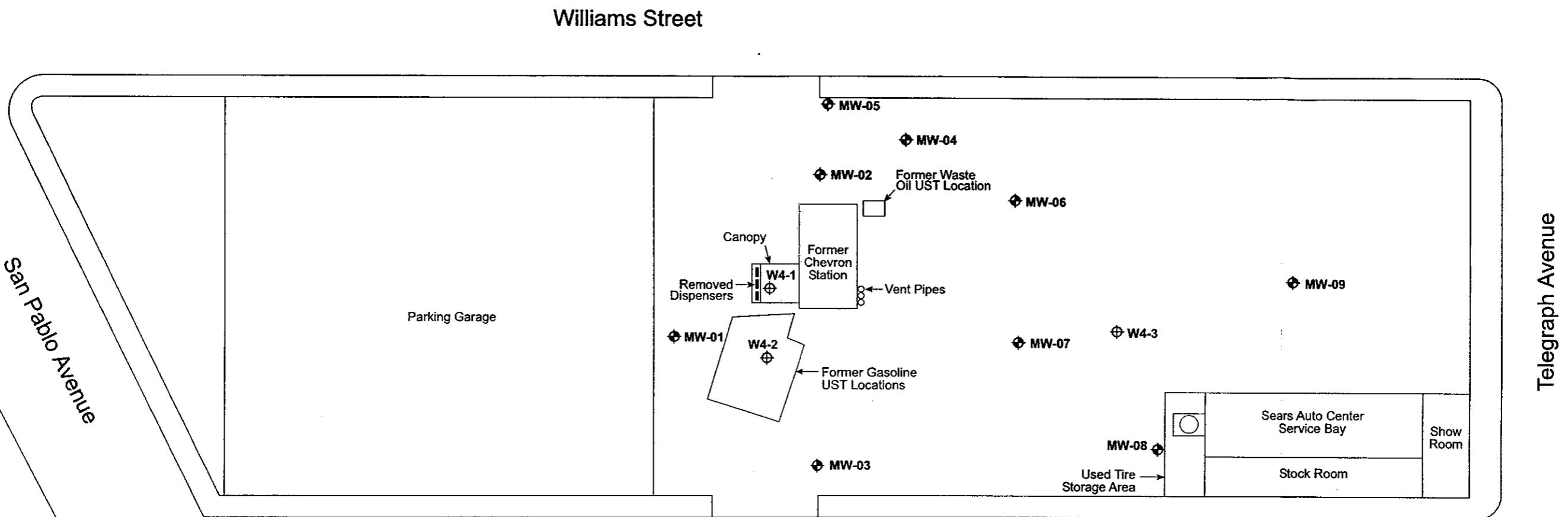


#### EXPLANATION

- MW-01 <50 ♦ Monitoring Well Location with Benzene Isoconcentration Contour
- 100 — Benzene Isoconcentration Contour
- W4-1 ♦ Approximate Location of Monitoring (Drilled by Fugro June 2004)

#### BENZENE ISOCONCENTRATION CONTOUR MAP - 2005 FIRST QUARTER

Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	Figure 5
Project No.: 29863493 Date Sample: February 10, 2005	

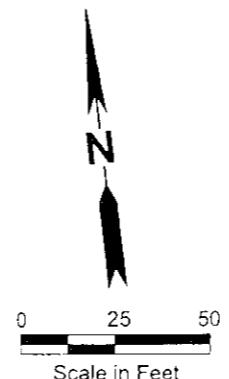


19th Street

#### EXPLANATION

MW-01 Monitoring Well Location

W4-1 Approximate Location of Monitoring Well Location  
(Drilled by Fugro June 2004)



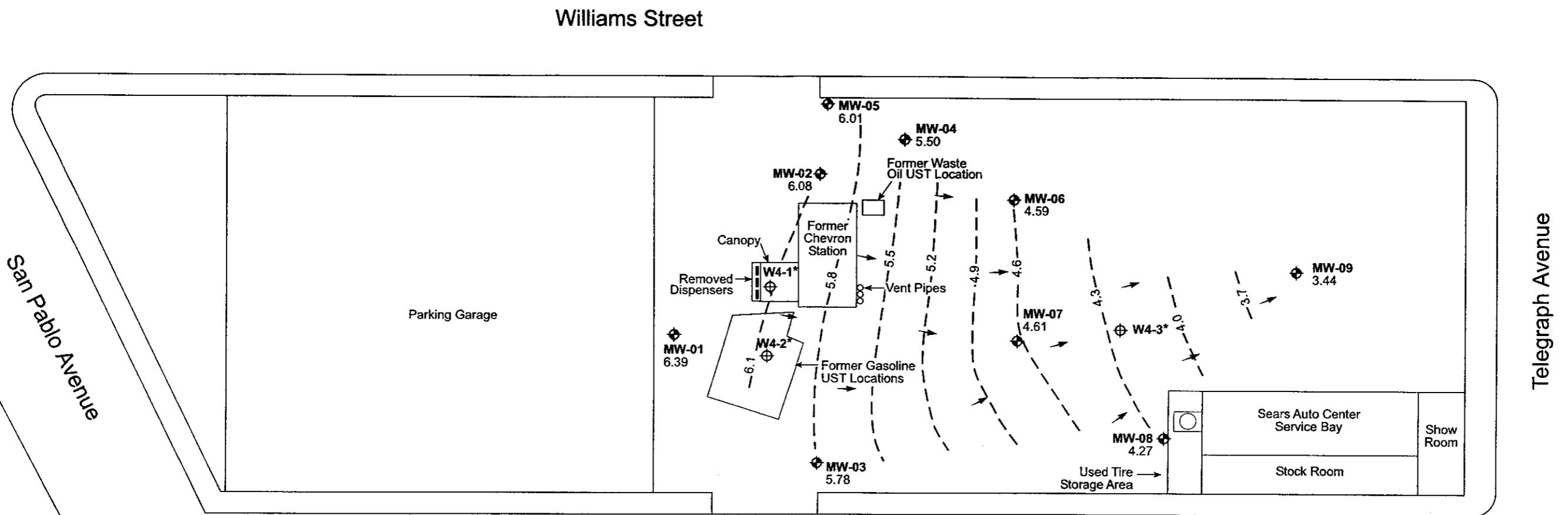
#### PLOT PLAN

Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
--	--

Project No.: 29863493

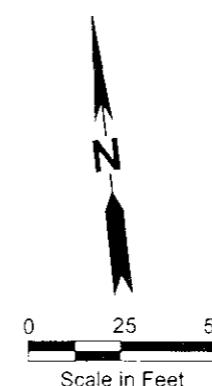
Figure 2

**URS**



#### EXPLANATION

- MW-01 <50 Monitoring Well Location
- 4.6 — Groundwater Contour
- Groundwater Flow Vector
- 6.01 Groundwater Elevation in feet MSL
- \* Well Not Used for Contouring
- W4-1 Approximate Location of Monitoring Well Location  
(Drilled by Fugro June 2004)



**GROUNDWATER CONTOUR MAP  
2005 FIRST QUARTER**

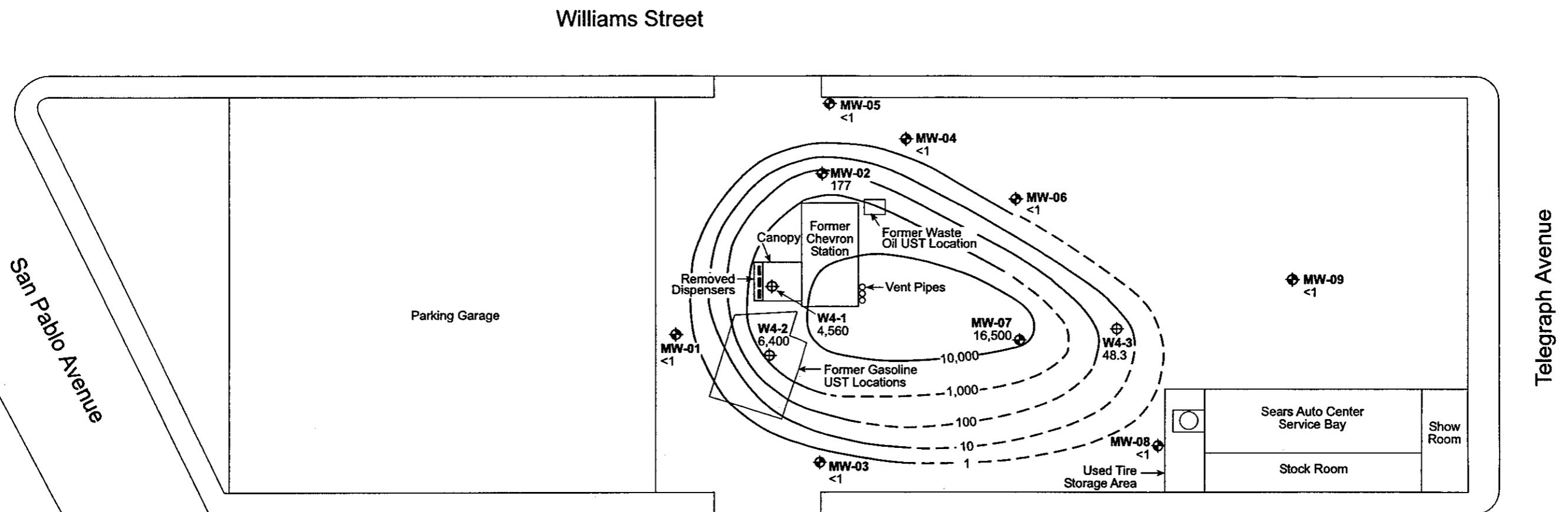
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA
--

Project No.: 29863493
-----------------------

Date Sample: February 10, 2005
--------------------------------

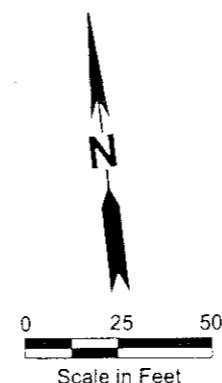
Figure 3
----------

**URS**



#### EXPLANATION

- MW-01** ♦ Monitoring Well Location with Benzene Concentration in ug/L
- 100 — Benzene Isoconcentration Contour
- W4-1** ♦ Approximate Location of Monitoring Wells  
(Drilled by Fugro June 2004)



#### BENZENE ISOCONCENTRATION CONTOUR MAP - 2005 FIRST QUARTER

Project: SEARS AUTO CENTER #1039,  
1901-1911 TELEGRAPH AVE., OAKLAND, CA

Project No.: 29863493

Date Sample: February 10, 2005

**URS**

**APPENDIX A**

**SWRCB GEOTRACKER SITE DATA**

## LUFT ANALYTICAL DATA REPORT

CHEVRON (OAKLAND)  
1911 TELEGRAPH AVE  
OAKLAND , CA 94612  
**CASE STATUS: CLOSED**  
[SHOW THIS SITE ON MAP](#)  
[RETURN TO REPORT MAIN MENU](#)

**REGIONAL BOARD - CASE #: 01-0336**  
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)  
**CONTACT: BETTY GRAHAM - (510) 622-2300**  
**LOCAL AGENCY (LEAD AGENCY) - CASE #: 1630**  
ALAMEDA COUNTY LOP - (UNK)

[View All Data](#) | [View Recent Data](#)

Note: You may select up to 6 chemicals.

[\(All Data\)](#) | [\(Most Recent\)](#) | [\(Maximum Concentrations\)](#)

NAME	DATE	PARAMETER	MATRIX	QUALIFIER	RESULT	UNITS	PLOT
NO DATA HAS BEEN SUBMITTED TO THE SWRCB FOR THIS MONITORING WELL.							

\* DENOTES A HISTORICAL VALUE

[Geotracker Home](#) | [Site/Facility Finder](#) | [Case Finder](#) | [MTBE/Case Reports](#)

## Locational Information

**CHEVRON (OAKLAND)**  
1911 TELEGRAPH AVE  
OAKLAND , CA 94612  
**CASE STATUS:** CLOSED  
[SHOW THIS SITE ON MAP](#)  
[RETURN TO REPORT MAIN MENU](#)

**REGIONAL BOARD - CASE #:** 01-0336  
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)  
**CONTACT:** BETTY GRAHAM - (510) 622-2300  
**LOCAL AGENCY (LEAD AGENCY) - CASE #:** 1630  
ALAMEDA COUNTY LOP - (UNK)

### **PHYSICAL LOCATION:**

**GLOBAL ID**  
T0600100308

**LATITUDE**  
37.80913

**LONGITUDE**  
-122.269338

### **GEOGRAPHIC DATA DETAILS:**

**DATUM**  
North American Datum 1983

**SURVEY METHOD**  
Geocoded

**PROJECTION**  
Geographic Projection

**ESTIMATED ACCURACY**  
376.24 feet

**SOURCE OF DATA**  
ETAK Geocoding Class 1 Block Match - Street Segment Exact Address Match

[Geotracker Home](#) | [Site/Facility Finder](#) | [Case Finder](#) | [MTBE/Case Reports](#)

## REGULATORY HISTORY

CHEVRON (OAKLAND)

1911 TELEGRAPH AVE

OAKLAND , CA 94612

CASE STATUS: CLOSED

SHOW THIS SITE ON MAP

RETURN TO REPORT MAIN MENU

**REGIONAL BOARD - CASE #: 01-0336**

SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)

CONTACT: BETTY GRAHAM - (510) 622-2300

**LOCAL AGENCY (LEAD AGENCY) - CASE #: 1630**

ALAMEDA COUNTY LOP - (UNK)

## REGULATORY HISTORY

BEGIN_DATE	STATUS
2/23/1988	Leak Discovery
2/23/1988	Leak Reported
4/12/1988	8 - Verification Monitoring Underway
4/15/1988	Leak Stopped
3/12/1992	System Entry
8/21/1998	9 - Case Closed
8/21/1998	Regulatory Review

[Geotracker Home](#) | [Site/Facility Finder](#) | [Case Finder](#) | [MTBE/Case Reports](#)

## Detailed Release Information

**CHEVRON (OAKLAND)**  
1911 TELEGRAPH AVE  
OAKLAND , CA 94612  
**CASE STATUS:** CLOSED  
[SHOW THIS SITE ON MAP](#)  
[RETURN TO REPORT MAIN MENU](#)

**REGIONAL BOARD - CASE #:** 01-0336  
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)  
**CONTACT:** BETTY GRAHAM - (510) 622-2300  
**LOCAL AGENCY (LEAD AGENCY) - CASE #:** 1630  
ALAMEDA COUNTY LOP - (UNK)

**CASE TYPE:**  
Soil Only

**ENFORCEMENT TYPE:**

**FUNDING:**

F

**HOW LEAK WAS DISCOVERED:**  
Tank Closure

**METHOD USED TO STOP DISCHARGE:**  
Close Tank

**INTERIM:**  
Y = Interim Action Taken

**CAUSE OF LEAK:**  
Structural Failure

**SOURCE OF LEAK:**  
Tank

### SUBSTANCES RELEASED:

<b>Begin Date</b>	<b>Substance</b>	<b>Quantity</b>
UNKNOWN	WASTE OIL	

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## Remediation On Site

**CHEVRON (OAKLAND)**  
1911 TELEGRAPH AVE  
OAKLAND , CA 94612  
**CASE STATUS:** CLOSED  
**SHOW THIS SITE ON MAP**  
**RETURN TO REPORT MAIN MENU**

**REGIONAL BOARD - CASE #: 01-0336**  
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)  
**CONTACT:** BETTY GRAHAM - (510) 622-2300  
**LOCAL AGENCY (LEAD AGENCY) - CASE #: 1630**  
ALAMEDA COUNTY LOP - (UNK)

<b>Start Date</b>	<b>Method</b>	<b>Phase</b>
4/5/2000	Excavate And Dispose	Soil
4/5/2000	Excavate And Treat	Soil

[Geotracker Home](#) | [Site/Facility Finder](#) | [Case Finder](#) | [MTBE/Case Reports](#)

**APPENDIX B**

**HISTORICAL GROUNDWATER MONITORING RESULTS**

**Appendix B**  
**Historical Groundwater Monitoring Results**  
**Sears Auto Center #1039**  
**Oakland California**  
**(Page 1 of 5)**

Well No.	Sample No.	Notes	Sample Date	Sample Period	Depth to Groundwater	Stand Prod Thickness	Casing Elevation	Groundwater Elevation	TPHg	TPHd	TPHn	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE	DIPE	TAME	TBA	PCE	TCE	1,2-DCA	cis-1,3-DCE	1,1-DCE	1,2,4-TMB	Naphthalene
					(ft bgs)	(ft)	(ft MSL)	(ft MSL)	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	MW-1	5	10/1/1995	Oct-95	—	—	94.34	—	< 50	—	—	ND	ND	ND	ND	—	—	—	—	—	9.9	ND	ND	—	—	—	
MW-1	MW-1	5	1/1/1996	Jan-96	—	—	94.34	—	< 50	—	—	ND	ND	ND	ND	—	—	—	—	—	9.9	14	ND	—	—	—	
MW-1	MW-1	5	6/12/1996	Jun-96	16.21	0.00	94.34	78.13	< 50	—	—	< 0.5	1.4	< 0.5	< 2	—	—	—	—	—	12	< 0.5	< 0.5	—	—	—	
MW-1	MW-1	4	9/5/1996	Sep-96	16.89	0.00	94.34	77.45	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	12	< 0.5	< 0.5	—	—	—
MW-1	MW-1	5	12/3/1996	Dec-96	17.07	0.00	94.34	77.27	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
MW-1	MW-1	5	1/27/1997	Feb-97	15.55	0.00	94.34	78.79	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	31	1.3	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	6/10/1997	Jun-97	16.46	0.00	94.34	77.88	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	19	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	8/27/1997	Aug-97	16.97	0.00	94.34	77.37	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	11/26/1997	Nov-97	17.24	0.00	94.34	77.19	< 50	—	—	< 0.5	< 0.5	< 0.5	< 2	< 5.0	—	—	—	—	—	17	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	2/11/1998	Feb-98	16.07	0.00	94.34	78.27	< 50	—	—	< 0.5	< 0.5	< 0.5	< 3	< 5.0	—	—	—	—	—	28	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	5/19/1998	May-98	15.43	0.00	94.34	78.91	< 50	—	—	< 0.5	< 0.5	< 0.5	< 4	< 5.0	—	—	—	—	—	14	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	8/18/1998	Aug-98	15.98	0.00	94.34	78.36	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	34	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	11/9/1998	Nov-98	16.63	0.00	94.34	77.71	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 3.1	—	—	—	—	—	16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	2/6/1999	Feb-99	16.55	0.00	94.34	77.79	—	—	—	—	—	—	—	—	—	—	—	—	—	20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	5/10/1999	May-99	15.50	0.00	94.34	78.84	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	14	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	8/9/1999	Aug-99	15.82	0.00	94.34	78.52	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	14	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	11/5/1999	Nov-99	16.29	0.00	94.34	78.05	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	2/2/2000	Feb-00	16.02	0.00	94.34	78.32	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	24	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	5/2/2000	May-00	14.48	0.00	94.34	79.86	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	23	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	8/1/2000	Aug-00	15.20	0.00	94.34	79.14	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	21	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	11/6/2000	Nov-00	15.63	0.00	94.34	78.71	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	31	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	2/16/2001	Feb-01	15.45	0.00	94.34	78.39	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	32	0.7	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	4/27/2001	Apr-01	14.86	0.00	94.34	79.48	< 50	—	—	< 0.5	< 0.5	< 0.5	< 5	< 2.5	—	—	—	—	—	33	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	5	7/24/2001	Jul-01	—	0.00	94.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
MW-1	MW-1	2	3/28/2002	Mar-02	14.52	0.00	94.34	79.82	< 50	77	< 500	< 0.5	< 0.5	< 0.5	< 5	< 5.0	—	—	—	—	—	33	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	MW-1	2	6/5/2002	Jun-02	14.72	0.00	20.99	6.27	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	27.1	< 2.5	< 5	< 5	< 5	< 5
MW-1	MW-1	2	9/6/2002	Sep-02	15.15	0.00	20.99	5.84	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	<									

Well No.	Sample No.	Notes	Sample Date	Sample Period	Depth to Groundwater (ft bgs)	Stand Prod Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPHg $\mu\text{g/L}$	TPHd $\mu\text{g/L}$	TPHo $\mu\text{g/L}$	Benzene $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Historical G			
														Sea	C	Co	
MW-2	MW-2	2	12/4/2003	Dec-03	15.40	0.00	20.50	5.10	174	—	—	5.2	< 1				
MW-2	MW-2	2	2/11/2004	Feb-04	14.85	0.00	20.50	5.65	353	—	—	36.4	< 1				
MW-2	MW-2	2	5/5/2004	May-04	14.61	0.00	20.50	5.89	98	—	—	27.6	< 1				
MW-2	MW-2	2	8/11/2004	Aug-04	15.03	0.00	20.50	5.47	426	—	—	175	< 1				
MW-2	MW-2	2	11/10/2004	Nov-04	15.38	0.00	20.50	5.12	252	—	—	141	< 1				
MW-2	MW-2	2	2/10/2005	Feb-05	14.42	0.00	20.50	6.08	390	—	—	177	< 1				
MW-3	MW-3	5	10/1/1995	Oct-95	—	—	96.15	—	< 50	—	—	ND	ND	ND	ND	ND	
MW-3	MW-3	5	1/1/1996	Jan-96	—	—	96.15	—	ND	—	—	ND	ND	ND	ND	ND	
MW-3	MW-3	5	6/12/1996	Jun-96	17.56	0.00	96.15	78.59	< 50	—	< 0.5	< 0.5	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	9/5/1996	Sep-96	18.32	0.00	96.15	77.83	< 50	—	< 0.5	< 0.5	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	12/3/1996	Dec-96	18.57	0.00	96.15	77.58	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/27/1997	Feb-97	17.43	0.00	96.15	78.72	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	6/10/1997	Jun-97	18.12	0.00	96.15	78.03	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	8/27/1997	Aug-97	18.47	0.00	96.15	77.68	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	11/26/1997	Nov-97	18.70	0.00	96.15	77.45	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/11/1998	Feb-98	17.76	0.00	96.15	78.39	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	5/19/1998	May-98	16.99	0.00	96.15	79.16	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	8/10/1998	Aug-98	17.51	0.00	96.15	78.64	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	11/9/1998	Nov-98	18.07	0.00	96.15	78.08	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/8/1999	Feb-99	—	—	96.15	—	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/1/1999	Feb-99	18.07	0.00	96.15	78.08	—	—	—	—	—	—	ND	ND	ND
MW-3	MW-3	5	5/10/1999	May-99	17.04	0.00	96.15	79.11	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	8/9/1999	Aug-99	17.77	0.00	96.15	78.38	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	11/5/1999	Nov-99	18.00	0.00	96.15	78.15	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/1/2000	Feb-00	17.95	0.00	96.15	78.20	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	5/2/2000	May-00	16.83	0.00	96.15	79.32	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	8/1/2000	Aug-00	17.13	0.00	96.15	79.01	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	11/6/2000	Nov-00	17.54	0.00	96.15	78.61	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	2/16/2001	Feb-01	17.42	0.00	96.15	78.73	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	4/27/2001	Apr-01	16.80	0.00	96.15	79.35	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	5	7/24/2001	Jul-01	17.08	0.00	96.15	79.07	< 50	—	—	—	< 0.5	< 0.5	ND	ND	ND
MW-3	MW-3	4	3/27/2002	Mar-02	16.50	0.00	96.15	79.65	—	—	—	—	—	—	ND	ND	ND
MW-3	MW-3	2	6/5/2002	Jun-02	16.53	0.00	22.29	5.76	< 50	< 500	< 2000	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	9/6/2002	Sep-02	16.95	0.00	22.29	5.34	< 50	< 500	< 2000	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	12/2/2002	Dec-03	17.36	0.00	22.29	4.93	50	< 500	< 2000	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	3/13/2003	Mar-03	16.84	0.00	22.29	5.45	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	6/4/2003	Jun-03	16.54	0.00	22.29	5.75	< 50	< 500	< 2000	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	9/23/2003	Sep-03	17.13	0.00	22.29	5.16	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	12/4/2003	Dec-03	17.40	0.00	22.29	4.89	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	2/11/2004	Feb-04	16.92	0.00	22.29	5.37	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	5/5/2004	May-04	16.68	0.00	22.29	5.61	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	8/11/2004	Aug-04	17.06	0.00	22.29	5.23	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	11/18/2004	Nov-04	17.34	0.00	22.29	4.95	< 50	—	—	< 1	< 1	ND	ND	ND	ND
MW-3	MW-3	2	2/10/2005	Feb-05	16.51	0.00	22.29	5.78	61	—	—	< 1	< 1	ND	ND	ND	ND
MW-4	MW-4	5	10/1/1995	Oct-95	—	0.00	92.01	—	< 50	—	—	4.1	ND	ND	ND	ND	ND
MW-4	MW-4	5	1/1/1996	Jan-96</													

**Appendix B**  
**Historical Groundwater Monitoring Results**  
**Sears Auto Center # 1039**  
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Well No.	Sample No.	Notes	Sample Date	Sample Period	Depth to Groundwater	Stand Prod Thickness	Casing Elevation	Groundwater Elevation	TPHg	TPHd	Benzene	Toluene	Ethyl/Benzene	Xylenes	MTBE	ETBE	DIPE	TAME	TBA	PCE	TCE	1,2-DCA	ds-1,2 DCE	1,1-DCE	1,2,4-TMB	Naphthalene
					(ft bgs)	(ft)	(ft MSL)	(ft MSL)	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-2	MW-2	2	12/1/2003	Dec-03	15.40	0.00	29.50	5.10	174	-	5.2	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	4.4	5.7	< 5	< 5	< 5	< 5
MW-2	MW-2	2	2/11/2004	Feb-04	14.85	0.00	29.50	5.65	353	-	36.4	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	4.0	5.5	< 5	< 5	< 5	< 5
MW-2	MW-2	2	5/5/2004	May-04	14.61	0.00	29.50	5.89	61	-	27.6	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	6.1	11.6	< 5	< 5	< 5	< 5
MW-2	MW-2	2	8/11/2004	Aug-04	15.03	0.00	29.50	5.47	426	-	175	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	3.3	< 5	< 5	< 5	< 5	< 5
MW-2	MW-2	2	11/18/2004	Nov-04	15.38	0.00	29.50	5.12	252	-	141	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	4.5	< 5	< 5	< 5	< 5	< 5
MW-2	MW-2	2	2/18/2005	Feb-05	14.42	0.00	29.50	6.08	390	-	177	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	3.3	4.2	< 5	< 5	< 5	< 5
MW-3	MW-3	5	10/1/1995	Oct-95	-	-	96.15	-	< 50	-	ND	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	-	-	-
MW-3	MW-3	5	1/1/1996	Jan-96	-	-	96.15	-	-	-	ND	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	-	-	-
MW-3	MW-3	5	6/12/1996	Jun-96	17.56	0.00	96.15	78.59	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	< 0.5	< 0.5	< 0.5	-	-	-	-
MW-3	MW-3	5	9/5/1996	Sep-96	18.32	0.00	96.15	77.83	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	< 0.5	< 0.5	< 0.5	-	-	-	-
MW-3	MW-3	5	12/3/1996	Dec-96	18.57	0.00	96.15	77.58	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	2.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	2/27/1997	Feb-97	17.43	0.00	96.15	78.72	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	6.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	6/10/1997	Jun-97	18.12	0.00	96.15	78.83	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	5.9	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	8/27/1997	Aug-97	18.47	0.00	96.15	77.68	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	5.8	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	11/26/1997	Nov-97	18.76	0.00	96.15	77.45	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	7.9	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	2/11/1998	Feb-98	17.76	0.00	96.15	78.39	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	7.9	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	5/19/1998	May-98	16.99	0.00	96.15	79.16	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	5.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	8/10/1998	Aug-98	17.51	0.00	96.15	78.64	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	11/8/1998	Nov-98	18.87	0.00	96.15	78.08	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	5.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	2/8/1999	Feb-99	-	-	96.15	-	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	6.4	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	5/10/1999	May-99	18.07	0.00	96.15	78.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	MW-3	5	8/9/1999	Aug-99	17.77	0.00	96.15	78.38	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	4.8	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	11/5/1999	Nov-99	18.60	0.00	96.15	78.15	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	7.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	2/1/2000	Feb-00	17.95	0.00	96.15	78.29	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	6.9	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	5/2/2000	May-00	16.83	0.00	96.15	79.32	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	6.4	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	8/1/2000	Aug-00	17.13	0.00	96.15	79.02	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	5.6	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	11/6/2000	Nov-00	17.54	0.00	96.15	78.61	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	7.9	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	2/16/2001	Feb-01	17.42	0.00	96.15	78.73	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	8.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-3	MW-3	5	4/27/2001	Apr-01	16.90	0.00	96.15	79.35	< 50	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-</							

**Appendix B**  
**Historical Groundwater Monitoring Results**  
**Sears Auto Center # 1039**  
**Oakland California**  
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Well No.	Sample No.	Notes	Sample Date	Sample Period	Depth to Groundwater (ft bgs)	Stand Prod Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPHg $\mu\text{g/L}$	TPHd $\mu\text{g/L}$	Benzene $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Ethylbenzene $\mu\text{g/L}$	Xylenes $\mu\text{g/L}$	MTBE $\mu\text{g/L}$	ETBE $\mu\text{g/L}$	DIPE $\mu\text{g/L}$	TAME $\mu\text{g/L}$	TBA $\mu\text{g/L}$	PCE $\mu\text{g/L}$	TCE $\mu\text{g/L}$	1,2-DCA $\mu\text{g/L}$	cis-1,2 DCE $\mu\text{g/L}$	1,1-DCE $\mu\text{g/L}$	1,2,4-TMB $\mu\text{g/L}$	Naphthalene $\mu\text{g/L}$
MW-4	MW-4	2	3/13/2003	Mar-03	13.28	0.00	18.61	5.33	< 50	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-4	MW-4	2	6/4/2003	Jun-03	13.83	0.00	18.61	5.58	< 50	< 500	< 2000	4.8	< 1	< 1	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-4	MW-4	2	9/25/2003	Sep-03	11.67	0.00	18.61	4.94	< 50	-	-	1.6	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	12/2/2003	Dec-03	13.94	0.00	18.61	4.67	< 50	-	-	2.5	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	2/11/2004	Feb-04	14.14	0.00	18.61	4.47	< 50	-	-	1.5	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.8	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	5/5/2004	May-04	13.44	0.00	18.61	5.17	< 50	-	-	1.8	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.8	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	8/17/2004	Aug-04	13.57	0.00	18.61	5.84	< 50	-	-	1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	11/10/2004	Nov-04	13.95	0.00	18.61	4.66	< 50	-	-	1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-4	MW-4	2	2/19/2005	Feb-05	13.11	0.00	18.61	5.50	< 50	-	-	1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	< 5
MW-5	MW-5	5	18/1/1995	Oct-95	-	0.00	92.09	-	-	-	-	86	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-
MW-5	MW-5	5	1/1/1996	Jan-96	-	0.00	92.09	-	-	-	-	160	3.6	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-
MW-5	MW-5	5	6/12/1996	Jun-96	14.13	0.00	92.09	77.96	-	-	-	54	1.1	< 0.5	< 2	-	-	-	-	< 0.5	< 0.5	< 0.5	-	-	-	-
MW-5	MW-5	5	9/5/1996	Sep-96	14.77	0.00	92.09	77.32	-	-	-	22	1.0	< 0.5	< 2	< 5.6	-	-	-	< 0.5	< 0.5	< 0.5	-	-	-	-
MW-5	MW-5	5	12/3/1996	Dec-96	13.99	0.00	92.09	78.10	-	-	-	18	0.6	< 0.5	< 2	6	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	2/27/1997	Feb-97	12.08	0.00	92.09	80.81	-	-	-	74	2.0	< 0.5	< 2	< 5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	6/10/1997	Jun-97	16.08	0.00	92.09	76.89	1,200	-	-	490	19.0	< 3.0	< 10	< 30	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	8/27/1997	Aug-97	14.55	0.00	92.09	77.54	-	-	-	190	4.6	< 0.5	< 2	< 5.0	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	11/24/1997	Nov-97	14.95	0.00	92.09	77.14	-	-	-	78	4.5	0.6	< 2	< 5.0	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	2/1/1998	Feb-98	13.97	0.00	92.09	78.12	-	-	-	61	2.9	< 0.5	< 2	< 5.0	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	5/19/1998	May-98	13.52	0.00	92.09	78.57	-	-	-	97	2.6	< 0.5	< 2	< 5.0	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	8/19/1998	Aug-98	13.97	0.00	92.09	78.12	-	-	-	48	1.9	< 0.5	< 2.5	11	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	11/19/1998	Nov-98	14.67	0.00	92.09	77.42	81	-	-	-	3.8	< 0.5	< 0.5	< 2.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	2/8/1999	Feb-99	-	0.00	92.09	-	82	-	-	3	< 0.5	< 0.5	< 0.5	3.8	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	5/11/1999	Feb-99	14.50	0.00	92.09	77.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	MW-5	5	8/10/1999	May-99	13.23	0.00	92.09	78.86	< 50	-	-	8.8	< 0.5	< 0.5	< 0.5	2.8x<1.0*	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	8/9/1999	Aug-99	13.90	0.00	92.09	78.19	150	-	-	25	< 0.5	< 0.5	< 0.5	5.6x<2.0*	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	11/5/1999	Nov-99	14.40	0.00	92.09	77.69	160	-	-	20	< 0.5	< 0.5	0.76	4.3x<2.0*	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	2/1/2000	Feb-00	14.15	0.00	92.09	77.94	180	-	-	42	1.2	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-
MW-5	MW-5	5	5/2/2000	May-00	13.10	0.00	92.09	78.99	120	-	-	12	0.7	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5			

**Appendix B**  
**Historical Groundwater Monitoring Results**  
**Sears Auto Center # 1039**  
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Well No.	Sample No.	Notes	Sample Date	Sample Period	Depth to Groundwater	Stand Prod Thickness	Casing Elevation	Groundwater Elevation	TPHg	TPHd	TPHo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE	DIPE	TAME	TBA	PCE	TCE	1,2-DCA	ds-1,2 DCE	1,1-DCE	1,2,4-TMB	Naphthalene
					(ft bgs)	(ft)	(ft MSL)	(ft MSL)	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-6	MW-6	4	3/27/2002	Mar-02	14.99	0.00	92.16	78.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW-6	MW-6	4	6/5/2002	Jun-02	14.26	0.00	18.91	4.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW-6	MW-6	4	9/6/2002	Sep-02	14.69	0.00	18.91	4.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW-6	MW-6	2	12/12/2002	Dec-02	15.13	0.00	18.91	3.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW-6	MW-6	2	3/13/2003	Mar-03	14.45	0.00	18.91	4.26	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	-	< 5	< 5	-	
MW-6	MW-6	2	6/4/2003	Jun-03	14.27	0.00	18.91	4.64	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	9/25/2003	Sep-03	14.89	0.00	18.91	4.02	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	12/24/2003	Dec-03	15.97	0.00	18.91	3.84	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	2/1/2004	Feb-04	14.67	0.00	18.91	4.24	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	5/5/2004	May-04	14.49	0.00	18.91	4.42	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	8/11/2004	Aug-04	14.99	0.00	18.91	4.11	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	11/18/2004	Nov-04	15.04	0.00	18.91	3.87	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-6	MW-6	2	2/10/2005	Feb-05	14.32	0.00	18.91	4.59	< 50	-	-	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	-	
MW-7	MW-7	5	10/1/1995	Oct-95	-	0.00	93.00	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	5.3	3.5	8.3	-	-	-	
MW-7	MW-7	5	1/1/1996	Jan-96	-	0.00	93.00	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	9.3	4.8	5.7	-	-	-	
MW-7	MW-7	5	6/12/1996	Jun-96	16.56	0.00	93.00	77.24	< 50	-	-	0.6	< 0.5	< 0.5	< 2	-	-	-	-	-	6.1	3.4	2.9	-	-	-	
MW-7	MW-7	5	9/5/1996	Sep-96	17.10	0.00	93.00	76.70	< 50	-	-	1.2	< 0.5	< 0.5	< 2	< 5	-	-	-	-	8.3	4.2	5.9	-	-	-	
MW-7	MW-7	5	12/3/1996	Dec-96	17.12	0.00	93.00	76.68	120	-	< 0.5	250	< 5	< 5	30	< 5	-	-	-	-	4	4	75	< 3	< 3	-	
MW-7	MW-7	5	2/27/1997	Feb-97	16.20	0.00	93.00	77.60	2,500	-	-	1500	3.0	23	< 10	< 30	-	-	-	-	2	4	65	< 0.5	< 0.5	-	
MW-7	MW-7	5	6/10/1997	Jun-97	17.80	0.00	93.00	76.80	3,200	-	-	1700	< 5	59	< 20	< 50	-	-	-	-	2	4.2	85	< 0.5	< 0.5	-	
MW-7	MW-7	5	8/27/1997	Aug-97	17.18	0.00	93.00	76.62	3,900	-	-	1700	8.0	200	40	90	-	-	-	-	3	5	93	< 3	< 3	-	
MW-7	MW-7	5	11/26/1997	Nov-97	17.40	0.00	93.00	76.48	5,600	-	-	3,100	15.0	190	30	90	-	-	-	-	3	5.9	120	1	< 0.5	-	
MW-7	MW-7	5	2/11/1998	Feb-98	16.65	0.00	93.00	77.15	8,500	-	-	3,800	25.0	250	80	90	-	-	-	-	4	8.9	93	1.2	< 0.5	-	
MW-7	MW-7	5	5/19/1998	May-98	15.96	0.00	93.00	77.84	5,000	-	-	2,100	440.0	150	220	300	-	-	-	-	2	3.8	74	0.6	< 0.5	-	
MW-7	MW-7	5	8/10/1998	Aug-98	16.48	0.00	93.00	77.32	1,600	-	-	690	< 10	13	< 10	< 50	-	-	-	-	< 3	3.3	100	< 2.5	< 2.5	-	
MW-7	MW-7	5	11/5/1998	Nov-98	16.98	0.00	93.00	76.82	930	-	-	295	5.5	4.3	1.5	8.7	-	-	-	-	4.3	6.5	110	< 2.5	< 2.5	-	
MW-7	MW-7	5	2/8/1999	Feb-99	-	0.00	93.00	-	-	-	-	670	< 10	14	< 10	< 50	-	-	-	-	6	3.4	74	< 1.2	< 1.2	-	
MW-7	MW-7	5	2/11/1999	Feb-99	16.94	0.00	93.00	76.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW-7	MW-7	5	5/10/1999	May-99	15.87	0.00	93.00	77.93	2,800	-	-	1,800	16.0	81	130	631<2.8*	-	-	-	-	1	2.6	65	0.63	< 0.5	-	
MW-7	MW-7	5	8/9/1999	Aug-99	16.60	0.00	93.00	77.20	1,500	-	-	570	5.1	28	30	300/5*	-	-	-	-	< 1	1.2	95	0.57	< 0.5	-	
MW-7	MW-7	5	11/5/1999	Nov-99	17.01	0.00	93.00	76.79	1,100	-																	

**Appendix B**  
**Historical Groundwater Monitoring Results**  
**Sears Auto Center # 1039**  
**Oakland California**  
**(Page 5 of 5)**

Well No.	Sample No.	Notes	Sample Date	Sample Period	Analyte Concentrations (µg/L)																					
					Depth to Groundwater (ft.bgs)	Stand Prod Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPHg µg/L	TPHd µg/L	TPHo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	ETBE µg/L	DIPE µg/L	TAME µg/L	TBA µg/L	PCE µg/L	TCE µg/L	1,2-DCA µg/L	cis-1,2 DCE µg/L	1,1-DCE µg/L	1,2,4-TMB µg/L
MW-8	MW-8	2	2/11/2004	Feb-04	17.26	0.00	21.12	18.86	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	5	< 2.5	< 5	< 5	< 5	< 5
MW-8	MW-8	2	5/5/2004	May-04	17.81	0.00	21.12	4.10	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 3	< 2	< 2	< 10	3.3	< 2.5	< 5	< 5	< 5	< 5
MW-8	MW-8	2	8/11/2004	Aug-04	17.30	0.00	21.12	3.82	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	4.2	< 2.5	< 5	< 5	< 5	< 5
MW-8	MW-8	2	11/10/2004	Nov-04	17.20	0.00	21.12	3.62	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 3	< 2	< 10	3.8	< 2.5	< 5	< 5	< 5	< 5
MW-8	MW-8	2	2/10/2005	Feb-05	16.85	0.00	21.12	4.27	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	4.8	< 2.5	< 5	< 5	< 5	< 5
MW-9	MW-9	5	11/5/1999	Nov-99	16.86	0.00	92.54	75.48	< 50	—	—	< 0.5	< 0.5	< 0.5	< 0.5	32.4*	—	—	—	—	65	29	32	40.5	< 0.5	—
MW-9	MW-9	5	2/1/2000	Feb-00	16.70	0.00	92.54	75.84	< 50	—	—	2.6	< 0.5	< 0.5	< 0.5	3.0*	—	—	—	—	68	22	36	0.7	< 0.5	—
MW-9	MW-9	5	5/2/2000	May-00	16.02	0.00	92.54	76.32	77	—	—	0.6	< 0.5	< 0.5	< 0.5	2.0*	—	—	—	—	39	19	30	0.5	< 0.5	—
MW-9	MW-9	5	8/1/2000	Aug-00	16.34	0.00	92.54	76.28	78	—	—	< 0.5	< 0.5	< 0.5	< 0.5	2.7	—	—	—	—	41	19	37	0.7	< 0.5	—
MW-9	MW-9	5	11/6/2000	Nov-00	16.55	0.00	92.54	75.99	74	—	—	0.6	< 0.5	< 0.5	< 0.5	3.2	—	—	—	—	31	15	34	0.8	< 0.5	—
MW-9	MW-9	5	2/16/2001	Feb-01	16.31	0.00	92.54	76.23	52	—	—	< 0.5	< 0.5	< 0.5	< 0.5	3.4	—	—	—	—	26	14	33	0.9	< 0.5	—
MW-9	MW-9	5	4/27/2001	Apr-01	15.90	0.00	92.54	76.64	64	—	—	< 0.5	< 0.5	< 0.5	< 0.5	1.9	—	—	—	—	42	16	38	0.6	< 0.5	—
MW-9	MW-9	5	7/24/2001	Jul-01	16.19	0.00	92.54	76.35	< 50	—	—	< 0.5	< 0.5	< 0.5	< 0.5	1.7	—	—	—	—	31	12	34	0.7	< 0.5	—
MW-9	MW-9	2	3/27/2002	Mar-02	15.61	0.00	92.54	76.93	< 50	< 50	< 500	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 5.0	—	—	—	32	10	17	0.73	< 0.50	—
MW-9	MW-9	2	6/5/2002	Jun-02	15.71	0.00	19.20	3.49	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	2.3	< 2	< 2	< 2	< 10	33.2	12	< 5	< 5	< 5	—
MW-9	MW-9	2	9/6/2002	Sep-02	16.13	0.00	19.20	3.49	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 3	< 2	< 2	< 10	28.1	10.6	24.2	< 5	< 5	—
MW-9	MW-9	2	12/12/2002	Dec-02	16.48	0.00	19.20	2.72	68	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	26.3	10.3	12.0	< 5	< 5	—
MW-9	MW-9	2	3/13/2003	Mar-03	16.07	0.00	19.20	3.13	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	31.3	13.8	16.5	< 5	< 5	< 5
MW-9	MW-9	4	6/4/2003	Jun-03	15.68	0.00	19.20	3.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-9	MW-9	2	9/25/2003	Sep-03	16.27	0.00	19.20	2.93	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	25.2	9.7	11.7	< 5	< 5	< 5
MW-9	MW-9	2	12/4/2003	Dec-03	16.39	0.00	19.20	2.81	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	25.3	12.0	13.0	< 5	< 5	< 5
MW-9	MW-9	2	2/11/2004	Feb-04	16.85	0.00	19.20	3.15	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	42	13.9	17.6	< 5	< 5	< 5
MW-9	MW-9	2	5/5/2004	May-04	15.95	0.00	19.20	3.25	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	34.9	13.9	26.2	< 5	< 5	< 5
MW-9	MW-9	2	8/11/2004	Aug-04	16.25	0.00	19.20	2.95	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	30.9	10.6	11.3	< 5	< 5	< 5
MW-9	MW-9	2	11/10/2004	Nov-04	16.38	0.00	19.20	2.82	< 50	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	30.4	13.6	13.1	< 5	< 5	< 5
MW-9	MW-9	2	11/10/2004	Nov-04	15.76	0.00	19.20	3.44	62	—	—	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	31.6	12.1	9.1	< 5	< 5	< 5
W4-1	W4-1	6	6/9/2004	Jun-04	19.5	0.00	—	14,700	< 600	< 400	2,400	2,100	178	760	< 1	—	—	—	—	38	8.9	100.0	< 1.0	—	270	
W4-1	W4-1	2	2/10/2005	Feb-05	15.55	0.00	—	12,400	—	—	4,560	3,900	836	<												

**APPENDIX C**

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS**



# **Southland Technical Services, Inc.**

**Environmental Laboratories**

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02-21-2005

Mr. Scott Rowlands  
URS Corporation  
2020 E. First Street, Suite 400  
Santa Ana, CA 92705

Project: 29863493.04034/Sears Oakland 1039  
Project Site: 1901 Telegraph Ave., Oakland, CA  
Sample Date: 02-10-2005  
Lab Job No.: UR502089

Dear Mr. Rowlands:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 02-14-2005 and analyzed for the following parameters:

EPA 8015M (Gasoline)  
EPA 8260B (VOCs by GC/MS)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled at 5°C, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (323) 888-0728 if our laboratory can be of further service to you.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Wang".

Roger Wang, Ph. D.  
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



# Southland Technical Services, Inc.

Environmental Laboratories

02-21-2005

Client: URS Corporation Lab Job No.: UR502089  
Project: 29863493.04034/Sears Oakland 1039  
Project Site: 1901 Telegraph Ave., Oakland, CA Date Sampled: 02-10-2005  
Matrix: Water Date Received: 02-14-2005  
Batch No.: BMB18-GW1 Date Analyzed: 02-18-2004

**EPA Method 8015M (TPH-Gasoline)**  
**Reporting Unit: µg/L (ppb)**

Sample ID	Lab ID	DF	Gasoline Range TPH (C4-C12)	Surrogate (BFB) Rec.%
Method Detect. Limit (MDL)			50	
Method Blank		1	ND	100
MW-1	UR502089-1	1	ND	94
MW-2	UR502089-2	1	390	95
MW-3	UR502089-3	1	62	102
MW-4	UR502089-4	1	ND	90
MW-5	UR502089-5	1	ND	101
MW-6	UR502089-6	1	ND	100
MW-7	UR502089-7	100	19,200	97
MW-8	UR502089-8	1	ND	99
MW-9	UR502005-9	1	62	102
W4-1	UR502089-10	10	12,400	93
W4-2	UR502089-11	100	45,300	96
W4-3	UR502089-12	1	790	103
DUP-1	UR502089-13	100	21,100	98
Trip Blank	UR502089-14	1	ND	108
EB-1	UR502089-15	1	ND	92

DF: Dilution Factor (DF × MDL = Reporting Limit for the sample).

ND: Not Detected (at the specified limit);

Note: Surrogate recovery acceptance limits are 70-130%.

Checked & approved by:

Roger Wang, Ph.D.  
Laboratory Director.



# Southland Technical Services, Inc.

## Environmental Laboratories

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR502089  
Matrix: Water

Date Reported: 02-21-2005  
Date Sampled: 02-10-2005

### EPA 8260B (VOCs by GC/MS, Page 1 of 2) Reporting Unit: µg/L(ppb)

Date ANALYZED	02-18-05	02-18-05	02-18-05	02-18-05	02-18-05	02-18-05	02-18-05
PREPARATION METHOD	5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR	1	1	1	1	1	1	1
LAB SAMPLE I.D.	UR502089-1	UR502089-2	UR502089-3	UR502089-4	UR502089-5	UR502089-6	
CLIENT SAMPLE I.D.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	
COMPOUND	PQL	MB					
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Iodomethane	5	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Bromochloromethane	5	ND	ND	ND	ND	ND	ND
Chloroform	5	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane(EDC)	5	ND	ND	4.2 j	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	177	ND	ND	ND
Trichloroethene	2.5	ND	3.4	3.3	10.1	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND
Dibromomethane	5	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	5	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND
Bromobenzene	5	ND	ND	ND	ND	ND	ND
Toluene	1	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.5	ND	29.3	ND	34.2	ND	ND
1,2-Dibromoethane(EDB)	5	ND	ND	ND	ND	ND	ND



# Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR502089  
Matrix: Water

Date Reported: 02-21-2005  
Date Sampled: 02-10-2005

**EPA 8260B (VOCs by GC/MS, Page 2 of 2) Reporting Unit: ppb**

COMPOUND	PQL	MB	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	2	ND	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	5	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	5	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	5	ND	ND	ND	ND	ND	ND	ND
Naphthalene	5	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
Acetone	25	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	25	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	25	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	25	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	25	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	25	ND	ND	ND	ND	ND	ND	ND
Ethanol	500	ND	ND	ND	ND	ND	ND	ND
MTBE	2	ND	ND	ND	ND	ND	ND	ND
ETBE	2	ND	ND	ND	ND	ND	ND	ND
DIPE	2	ND	ND	ND	ND	ND	ND	ND
TAME	2	ND	ND	ND	ND	ND	ND	ND
t-Butyl Alcohol	10	ND	ND	ND	ND	ND	ND	ND
SURROGATE	Accept Limit%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Dibromofluoro-methane	79-126	94	97	95	103	96	100	98
Toluene-d8	79-121	87	87	86	85	81	85	80
Bromofluoro-benzene	71-131	90	82	91	94	88	93	86

MB=Method Blank; PQL=Practical Quantitation Limit; RL=Reporting Limit (DF × PQL); ND=Not Detected (below RL);  
j=trace concentration, below reporting limit. Note: Surrogate spike concentration is 25 ppb for all compounds.



# Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR502089  
Matrix: Water

Date Reported: 02-21-2005  
Date Sampled: 02-10-2005

EPA 8260B (VOCS by GC/MS, Page 1 of 2) Reporting Unit: µg/L(ppb)

Date ANALYZED		02-18-05	02-18-05	02-18-05	02-18-05	02-18-05	02-18-05	02-18-05
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	100	1	1	10	100	1
LAB SAMPLE I.D.			UR502089-7	UR502089-8	UR502089-9	UR502089-10	UR502089-11	UR502089-12
CLIENT SAMPLE I.D.			MW-7	MW-8	MW-9	W4-1	W4-2	W4-3
COMPOUND	PQL	MB						
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Iodomethane	5	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	2.3 j
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	ND
Chloroform	5	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane(EDC)	5	ND	ND	ND	9.1	78.0	ND	2.7 j
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	16,500	ND	ND	4,560	6,400	48.3
Trichloroethene	2.5	ND	ND	ND	12.1	ND	ND	5.4
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	5	ND	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	5	ND	ND	ND	ND	ND	ND	ND
Toluene	1	ND	ND	ND	ND	3,980	20,500	1.1
Tetrachloroethene	2.5	ND	ND	4.8	31.6	ND	ND	ND
1,2-Dibromoethane(EDB)	5	ND	ND	ND	ND	ND	ND	ND



# Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation

Lab Job No.: UR502089

Date Reported: 02-21-2005

Project: 29863493.04034/Sears Oakland 1039

Matrix: Water

Date Sampled: 02-10-2005

**EPA 8260B (VOCs by GC/MS, Page 2 of 2) Reporting Unit: ppb**

COMPOUND	PQL	MB	MW-7	MW-8	MW-9	W4-1	W4-2	W4-3
Chlorobenzene	5	ND						
1,1,1,2-Tetrachloroethane	5	ND						
Ethylbenzene	1	ND	514	ND	ND	299	1,740	ND
Total Xylenes	2	ND	550	ND	ND	836	5,590	ND
Styrene	5	ND						
1,1,2,2-Tetrachloroethane	5	ND						
1,2,3-Trichloropropane	5	ND						
n-Propylbenzene	5	ND	ND	ND	ND	ND	559	ND
2-Chlorotoluene	5	ND						
4-Chlorotoluene	5	ND						
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	122	646	ND
tert-Butylbenzene	5	ND						
1,2,4-Trimethylbenzene	5	ND	443 j	ND	ND	345	1,150	ND
Sec-Butylbenzene	5	ND						
1,3-Dichlorobenzene	5	ND						
p-Isopropyltoluene	5	ND						
1,4-Dichlorobenzene	5	ND						
1,2-Dichlorobenzene	5	ND						
n-Butylbenzene	5	ND						
1,2,4-Trichlorobenzene	5	ND						
1,2-Dibromo-3-Chloropropane	5	ND						
Hexachlorobutadiene	5	ND						
Naphthalene	5	ND						
1,2,3-Trichlorobenzene	5	ND						
Acetone	25	ND						
2-Butanone (MEK)	25	ND						
Carbon disulfide	25	ND						
4-Methyl-2-pentanone	25	ND						
2-Hexanone	25	ND						
Vinyl Acetate	25	ND						
Ethanol	500	ND						
MTBE	2	ND						
ETBE	2	ND						
DIPE	2	ND						
TAME	2	ND						
t-Butyl Alcohol	10	ND						
<b>SURROGATE</b>	<b>Accept Limit%</b>	<b>%RC</b>						
Dibromofluoro-methane	79-126	94	97	107	99	114	101	103
Toluene-d4	79-121	87	87	81	84	102	96	89
Bromofluoro-benzene	71-131	90	86	92	88	84	86	91

MB=Method Blank; PQL=Practical Quantitation Limit; RL=Reporting Limit (DF × PQL); ND=Not Detected (below RL);  
j=trace concentration, below reporting limit. Note: Surrogate spike concentration is 25 ppb for all compounds.



# Southland Technical Services, Inc.

## Environmental Laboratories

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR502089  
Matrix: Water

Date Reported: 02-21-2005  
Date Sampled: 02-10-2005

EPA 8260B (VOCs by GC/MS, Page 1 of 2) Reporting Unit: µg/L(ppb)

Date ANALYZED		02-18-05	02-18-05	02-18-05	02-18-05			
PREPARATION METHOD		5030	5030	5030	5030			
DILUTION FACTOR		1	100	1	1			
LAB SAMPLE I.D.		UR502089-13	UR502089-14	UR502089-15				
CLIENT SAMPLE I.D.		DUP-1	Trip Blank	EB-1				
COMPOUND	PQL	MB						
Dichlorodifluoromethane	5	ND	ND	ND	ND			
Chloromethane	5	ND	ND	ND	ND			
Vinyl Chloride	2	ND	ND	ND	ND			
Bromomethane	5	ND	ND	ND	ND			
Chloroethane	5	ND	ND	ND	ND			
Trichlorofluoromethane	5	ND	ND	ND	ND			
1,1-Dichloroethene	5	ND	ND	ND	ND			
Iodomethane	5	ND	ND	ND	ND			
Methylene Chloride	5	ND	ND	ND	ND			
trans-1,2-Dichloroethene	5	ND	ND	ND	ND			
1,1-Dichloroethane	5	ND	ND	ND	ND			
2,2-Dichloropropane	5	ND	ND	ND	ND			
cis-1,2-Dichloroethene	5	ND	ND	ND	ND			
Bromochloromethane	5	ND	ND	ND	ND			
Chloroform	5	ND	ND	ND	ND			
1,2-Dichloroethane(EDC)	5	ND	ND	ND	ND			
1,1,1-Trichloroethane	5	ND	ND	ND	ND			
Carbon tetrachloride	5	ND	ND	ND	ND			
1,1-Dichloropropene	5	ND	ND	ND	ND			
Benzene	1	ND	18,300	ND	ND			
Trichloroethene	2.5	ND	ND	ND	ND			
1,2-Dichloropropane	5	ND	ND	ND	ND			
Bromodichloromethane	5	ND	ND	ND	ND			
Dibromomethane	5	ND	ND	ND	ND			
Trans-1,3-Dichloropropene	5	ND	ND	ND	ND			
cis-1,3-Dichloropropene	5	ND	ND	ND	ND			
1,1,2-Trichloroethane	5	ND	ND	ND	ND			
1,3-Dichloropropane	5	ND	ND	ND	ND			
Dibromochloromethane	5	ND	ND	ND	ND			
2-Chloroethylvinyl ether	5	ND	ND	ND	ND			
Bromoform	5	ND	ND	ND	ND			
Isopropylbenzene	5	ND	ND	ND	ND			
Bromobenzene	5	ND	ND	ND	ND			
Toluene	1	ND	ND	ND	ND			
Tetrachloroethene	2.5	ND	ND	ND	ND			
1,2-Dibromoethane(EDB)	5	ND	ND	ND	ND			



# Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR502089  
Matrix: Water

Date Reported: 02-21-2005  
Date Sampled: 02-10-2005

**EPA 8260B (VOCs by GC/MS, Page 2 of 2) Reporting Unit: ppb**

COMPOUND	PQL	MB	DUP-1	Trip Blank	EB-1		
Chlorobenzene	5	ND	ND	ND	ND		
1,1,1,2-Tetrachloroethane	5	ND	ND	ND	ND		
Ethylbenzene	1	ND	525	ND	ND		
Total Xylenes	2	ND	493	ND	ND		
Styrene	5	ND	ND	ND	ND		
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND		
1,2,3-Trichloropropane	5	ND	ND	ND	ND		
n-Propylbenzene	5	ND	ND	ND	ND		
2-Chlorotoluene	5	ND	ND	ND	ND		
4-Chlorotoluene	5	ND	ND	ND	ND		
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND		
tert-Butylbenzene	5	ND	ND	ND	ND		
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND		
Sec-Butylbenzene	5	ND	360 j	ND	ND		
1,3-Dichlorobenzene	5	ND	ND	ND	ND		
p-Isopropyltoluene	5	ND	ND	ND	ND		
1,4-Dichlorobenzene	5	ND	ND	ND	ND		
1,2-Dichlorobenzene	5	ND	ND	ND	ND		
n-Butylbenzene	5	ND	ND	ND	ND		
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND		
1,2-Dibromo-3-Chloropropane	5	ND	ND	ND	ND		
Hexachlorobutadiene	5	ND	ND	ND	ND		
Naphthalene	5	ND	ND	ND	ND		
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND		
Acetone	25	ND	ND	ND	ND		
2-Butanone (MEK)	25	ND	ND	ND	ND		
Carbon disulfide	25	ND	ND	ND	ND		
4-Methyl-2-pentanone	25	ND	ND	ND	ND		
2-Hexanone	25	ND	ND	ND	ND		
Vinyl Acetate	25	ND	ND	ND	ND		
Ethanol	500	ND	ND	ND	ND		
MTBE	2	ND	ND	ND	ND		
ETBE	2	ND	ND	ND	ND		
DIPE	2	ND	ND	ND	ND		
TAME	2	ND	ND	ND	ND		
n-Butyl Alcohol	10	ND	ND	ND	ND		
<b>SURROGATE</b>	<b>Accept Limit%</b>	<b>%RC</b>	<b>%RC</b>	<b>%RC</b>	<b>%RC</b>		
Dibromofluoro-methane	79-126	94	93	107	111		
Toluene-d8	79-121	87	80	91	90		
Bromofluoro-benzene	71-131	90	91	104	94		

MB=Method Blank; PQL=Practical Quantitation Limit; RL=Reporting Limit ( $DF \times PQL$ ); ND=Not Detected (below RL);  
j=trace concentration, below reporting limit. Note: Surrogate spike concentration is 25 ppb for all compounds.



# **Southland Technical Services, Inc.**

**Environmental Laboratories**

02-21-2005

## **EPA 8015M (TPH) Batch QA/QC Report**

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039  
Matrix: Water  
Batch No.: BMB18-GW1

Lab Job No.: UR502089  
Lab Sample ID: UR502089-4  
Date Analyzed: 02-18-2005

### **I. MS/MSD Report Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-g	ND	1,000	910	888	91.0	88.8	2.4	30	70-130

### **II. LCS Result Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
TPH-g	1,030	1,000	103.0	80-120

ND: Not Detected.



# **Southland Technical Services, Inc.**

**Environmental Laboratories**

02-21-2005

## **EPA 8260B Batch QA/QC Report**

Client: URS Corporation  
Project: 29863493.04034/Sears Oakland 1039  
Matrix: Water  
Batch No: 0218-VOBW

Lab Job No.: UR502089  
Lab Sample ID: UR502089-4  
Date Analyzed: 02-18-2005

### **I. MS/MSD Report Unit: ppb**

Compound	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
1,1-Dichloroethene	ND	20	18.7	19.6	93.5	98.0	4.7	30	70-130
Benzene	ND	20	15.5	16.6	77.5	83.0	6.9	30	70-130
Trichloro-ethene	ND	20	14.3	16.3	71.5	81.5	13.1	30	70-130
Toluene	ND	20	15.0	14.6	75.0	73.0	2.7	30	70-130
Chlorobenzene	ND	20	14.8	16.5	74.0	82.5	10.9	30	70-130

### **II. LCS Result Unit: ppb**

Compound	LCS Report Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	21.3	20	106.5	80-120
Benzene	16.3	20	81.5	80-120
Trichloro-ethene	16.4	20	82.0	80-120
Toluene	16.2	20	81.0	80-120
Chlorobenzene	16.9	20	84.5	80-120

ND: Not Detected (at the specified limit)

# URS CORPORATION

2020 East First Street, Suite 400  
 Santa Ana, CA 92705  
 (714) 835-6886  
 FAX (714) 667-7147

## CHAIN OF CUSTODY RECORD

Date: 2/10/05

Page 1 of 2

Data Requested in GISKey Format

Lab Name:	URS Project/PO Number: 2986 3493.05012						Requested Analyses:						Special Instructions:				
STS							( Vec)	B 2000	C 15m (TPC)								
Client Name/Project Name/Location: <b>SEARS #1039</b>	GeoTracker Information:																
URS Project Manager: <b>J. S. ROWLANDS</b>	EDF Reporting: Y N Global ID:																
Sampler Name and Signature: <i>Tim Nyfie</i>	COELT Log Number:																
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:											HOLD
MW5 502089-5	2/10/05	0848	N	HCR	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	4	2	2									
MW4 -4		0952	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW6 -6		1024	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW2 -2		1200	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW8 -8		1233	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW9 -9		1259	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW3 -3		1334	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW1 -1		1400	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
W4-1 -10		1440	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		2	2									
MW7 -7		1513	Y	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	↓	2	2									
Relinquished by:	Date:	Received By:	Date/Time: 1/14/05 2-20						Turnaround Time: (Check)				Lab Use Only				
<i>Tim Nyfie</i>	2/14/05	<i>John Zin</i>							Same Day:	72 Hour:							
Relinquished by:	Date:	Received By:	Date/Time:						24 Hour:	5 Day:	Cooler Temperature*: 5°C *Record upon arrival						
Relinquished by:	Date:	Received By:	Date/Time:						48 Hour:	Standard:	<b>URS</b>						

S=Solid L=Liquid G=Gas

White Copy in Final Report, Yellow to File, Pink to URS at Dropout

# URS CORPORATION

2020 East First Street, Suite 400  
 Santa Ana, CA 92705  
 (714) 835-6886  
 FAX (714) 667-7147

## CHAIN OF CUSTODY RECORD

Date: 2/10/05

Page 2 of 2

Data Requested in GISKey Format

Lab Name:	STS		URS Project/PO Number:		29863493 - 05012		Requested Analyses:		Special Instructions:  HOLD	
Client Name/Project Name/Location:	SEARS #1039		Geo Tracker Information:							
URS Project Manager:	J.S. ROWLANDS		EDF Reporting: Y N Global ID:							
Sampler Name and Signature:	Tim Neff		COELT Log Number:							
Sample #	Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.	8260B (VOA)	80.5m (TPH)	
1	DUP-1 502089-13	2/10/05	1518	Y	HCL	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	4	2	2	
2	W4-2 -11		1554	Y						
3	W4-3 -12	↓	1754	Y						
4	TRIP BLANK -14	—	—	Y	HCL	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	1	1		
5	TEMP. BLANK-15	—	—	Y	O	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	1			
6	EB-1	-15		Y		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA				
7				Y		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA				
8				N						
9				Y		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA				
10				N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA				
Relinquished by:		Date:	Received By:		Date/Time:	PM	Turnaround Time: (Check)		Lab Use Only	
<u>Tim Neff</u>		<u>2/14/05</u>	Guerry LIBO		<u>1/14/05</u>	<u>2:00</u>	Same Day:	72 Hour:	Cooler Temperature: <u>5°C</u>	
Relinquished by:		Date:	Received By:		Date/Time:		24 Hour:	5 Day:	*Record upon arrival	
							48 Hour:	Standard:		
										

S=Solid L=Liquid G=Gas

White Copy in Final Report, Yellow to File, Pink to URS at Dropoff

**APPENDIX D**  
**URS DATA VALIDATION REPORTS**

### Level III Data Validation Summary

**PROJECT:** Sears Oakland 1039  
**LABORATORY:** Southland Technical Services, Inc. (STS)  
**MATRIX:** Groundwater  
**LAB PROJECT #:** UR502089  
**SAMPLES:** See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	VOCs (including Fuel Oxygenates)
MW-5		UR502089-5	X	X
MW-4		UR502089-4	X	X
MW-6		UR502089-6	X	X
MW-2		UR502089-2	X	X
MW-8		UR502089-8	X	X
MW-9		UR502089-9	X	X
MW-3		UR502089-3	X	X
MW-1		UR502089-1	X	X
W4-1		UR502089-10	X	X
MW-7		UR502089-7	X	X
DUP-1	Field duplicate of MW-7	UR502089-13	X	X
W4-2		UR502089-11	X	X
W4-3		UR502089-12	X	X
Trip Blank	Trip Blank	UR502089-14	X	X
EB-1	Equipment Blank	UR502089-15	X	X

Date Sampled: 02/10/05

TPH-Gasoline= Total petroleum hydrocarbons – gasoline range (C4-C12)

VOCs = Volatile organic compounds

Fuel Oxygenates = t-butyl alcohol (TBA), t-amyl methyl ether (TAME), di - isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), methyl t-butyl ether (MTBE).

STS is certified by California Department of Health Services (Certificate Number 1986).

### DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline EPA5030/8015M	VOCs EPA5030/8260B
Chain-of-custody (COC)	✓	✓
Sample Receipt	✓	✓
Holding Times	✓	✓
Method Blank	✓	✓
Surrogate Recovery	✓	✓
Laboratory Control Sample	✓	✓
Matrix Spike	✓(1)	✓(1)
Duplicate or Spike Duplicate	✓(1)	✓(1)
Field Duplicate	✓	✓
Trip Blank	✓	✓
Equipment Blank	✓	✓

✓ = Quality control evaluation criteria met.

Notes:

- MS/MSD was conducted on sample MW-4. The results were within acceptance criterion.

Summary: Based on this Level III validation covering the QC parameters listed in the table above, these data are considered to be useable for meeting project objectives. However, the data user must evaluate the ultimate usability of the data based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
TPH-Gasoline	50
VOCs	1 to 25
MTBE	2
TBA	10
Ethanol	500
Other Oxygenates	2

Aqueous units are microgram per Liter ( $\mu\text{g/L}$ )

Four samples (MW-7, W4-1, W4-2, and DUP-1) required dilution for the 8015M and 8260B analyses in order to quantitate detected target analytes due to the high concentration of non-target and target analytes. For these samples, there are also non-detect VOCs and fuel oxygenates results with elevated reporting limits. The data user must evaluate the utility of non-detect VOCs and fuel oxygenates results with elevated reporting limits.