



May 25, 2005

Mr. Don Hwang
Hazardous Materials Specialist
Alameda County Environmental Health Services
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Alameda County
Environmental Health
JUN 01 2005

**Subject: 2004 Fourth 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 fourth quarter 2004. 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.
Mr. Ryan Hartley, URS Corporation

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**2004 FOURTH 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
May 25, 2005**

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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 2004 fourth 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 nine monitoring wells (MW-1 through MW-9). 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, 19th 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 and 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 to define the down-gradient extent of the gasoline groundwater plume (The IT Group, February 2000). In June 2004, Fugro West Inc. installed three additional onsite wells (W4-1 through W4-3), twelve soil probes (P4-1 through P4-7, B4-1 through B4-3) and three soil borings (P4-8 through P4-10) to assist the City of Oakland Redevelopment Agency (ORA) with the planning, redevelopment, and construction activities at the uptown project (Fugro West Inc., December 2004). Chemical analysis results for groundwater samples collected by Fugro are summarized in Appendix B.

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. Historical monitoring data shows that dissolved phase TPHg and benzene have been detected in seven of the nine 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.

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 2004 fourth quarter groundwater monitoring was performed on November 10, 2004. The monitoring consisted of groundwater gauging, purging, and sampling of all nine wells (MW-1 through MW-9). 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 2004 fourth 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. 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 nine monitoring wells (MW-1 through MW-9) for laboratory analysis during the 2004 fourth 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 HACH™ colorimetric 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 Services (CDHS) accredited laboratory for analysis. The ice chest temperature was recorded at 4 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 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), and other volatile organic compounds (VOCs) 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. Drums were labeled to identify the source of the wastes and individually numbered. The drums were stored onsite and properly disposed of by a licensed waste transporter under contract with Sears, Roebuck & Co., following review of the chemical analysis data.

6.0 FINDINGS

6.1 SHALLOW GROUNDWATER CONDITIONS

The measured depth to groundwater beneath the Site during the fourth quarter monitoring event ranged from 13.74 (MW-4) to 17.50 (MW-8) feet bgs. Calculated groundwater elevations ranged between 2.82 (MW-9) and 5.41 (MW-1) feet above mean sea level (msl). Groundwater elevations in the wells have decreased an average of 0.28 feet since the 2004 third quarter monitoring event. Groundwater depths and elevations are listed in Table 1 and Appendix B. An interpretive groundwater elevation contour map, based on the 2004 fourth 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

TPHg was detected in groundwater samples collected from wells MW-1, MW-2 and MW-7 with concentrations of 75 micrograms per liter ($\mu\text{g/L}$), 252 $\mu\text{g/L}$, and 17,600 $\mu\text{g/L}$, respectively. Benzene was detected in samples collected from monitoring wells MW-2 and MW-7, with concentrations of 141 $\mu\text{g/L}$ and 14,400 $\mu\text{g/L}$, respectively. Ethylbenzene and xylene were detected in the sample collected from MW-7 at concentrations of 538 $\mu\text{g/L}$ and 575 $\mu\text{g/L}$, respectively. 1,2,4-Trimethylbenzene (1,2,4-TMB) was detected in the sample collected from MW-7 at a concentration of 268J $\mu\text{g/L}$. Concentrations flagged with a "J" by the laboratory are estimated concentrations that were reported above the method detection limit (MDL), but below the reporting limit (RL).

Various chlorinated VOCs, including tetrachloroethene (PCE), trichloroethene (TCE) and 1,2-dichloroethane (1,2-DCA) were detected in the groundwater samples collected from wells MW-1, MW-2, MW-3, MW-8, and MW-9. PCE was detected in wells MW-1, MW-3, MW-8, and MW-9 with concentrations ranging from 3.8 $\mu\text{g/L}$ to 39.3 $\mu\text{g/L}$. TCE was detected in wells MW-1, MW-2, MW-3 and MW-9 with concentrations ranging from 4.5 $\mu\text{g/L}$ to 13.6 $\mu\text{g/L}$. 1,2-DCA was detected in well MW-9 at a concentration of 13.1 $\mu\text{g/L}$.

Chemical analysis results of the 2004 fourth 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 2004 fourth 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.

7.0 DISCUSSION

The 2004 fourth quarter groundwater monitoring event represents the 37th groundwater-sampling event conducted at the Site. Groundwater elevations have decreased approximately 0.28 feet since the last sampling event conducted in August 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 three of the nine monitoring wells sampled with concentrations up to 17,600 µg/L (MW-7). Benzene was detected in two of nine monitoring wells sampled with concentrations up to 14,400 µg/L (MW-7). 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.

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).

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 220 feet, and the short axis trending northeast with a length of approximately 140 feet. The plume is defined by the existing monitoring well network and is 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.

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: February 2005,
- ◆ Submittal of 2005 First Quarter Groundwater Monitoring Report to ACEHS: June 2005.

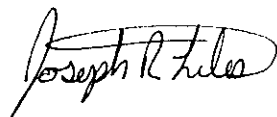
ACEHS will be notified of upcoming field activities.

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

Respectfully Submitted,

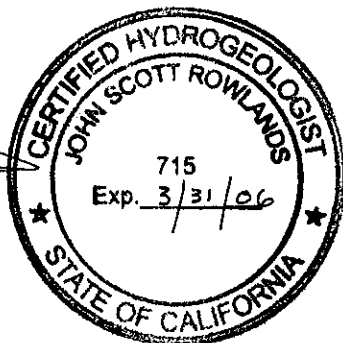
URS CORPORATION



Joseph Liles
Project Manager



J.S. Rowlands, P.G., C.HG.
Principal Geologist



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.*
- 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.*
- URS Corporation, 2003. *2003 Third Quarter Groundwater Monitoring, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, December 10.*

2004 Fourth Quarter Groundwater Monitoring Report

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, 2004. *2004 Third Quarter Groundwater Monitoring*, Former Sears Retail Center #1039, 1901-1911 Telegraph Avenue, Oakland, California, October 22. DRAFT.

Fugro West Inc., 2004. Site Assessment Report, Uptown Project Area, Oakland, California, December. DRAFT

TABLES

Table 1
2004 4th 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 (feet bgs)	Casing Elevation (MSL)	Groundwater Elevation (MSL)	Temperature (Celsius)	pH	Conductivity (μ S/cm)	O.R.P. (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron* (mg/L)	
MW-1	11/10/2004	--	0.0	15.58	20.99	5.41	20.95	6.39	950	57.7	17.5	2.56	0.4	
MW-2	11/10/2004	--	0.0	15.38	20.50	5.12	22.93	6.63	1725	-61.2	1.0	3.63	1.6	
MW-3	11/10/2004	--	0.0	17.34	22.29	4.95	22.74	6.41	640	32.7	3.2	0.87	0.0	
MW-4	11/10/2004	--	0.0	13.95	18.61	4.66	23.48	6.76	1729	-44.7	0.9	3.89	2.2	
MW-5	11/10/2004	--	0.0	13.74	18.76	5.02	22.84	7.01	1841	-80.7	16.1	3.60	2.6	
MW-6	11/10/2004	--	0.0	15.04	18.91	3.87	22.27	6.65	1834	-5.3	8.4	3.54	0.0	
MW-7	11/10/2004	--	0.0	16.50	20.39	3.89	23.02	6.69	1213	-111.1	40.7	2.62	2.4	
MW-8	11/10/2004	--	0.0	17.50	21.12	3.62	22.32	6.75	463	29.4	52.3	4.24	0.0	
MW-9	11/10/2004	--	0.0	16.38	19.20	2.82	23.45	6.66	1043	60.8	4.8	2.26	0.8	

Notes: MSL - Mean Sea Level
BGS - Below ground surface
Groundwater Elevation reference to MSL
Groundwater Elevation = Top of casing elevation - Depth to Water

μ S/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

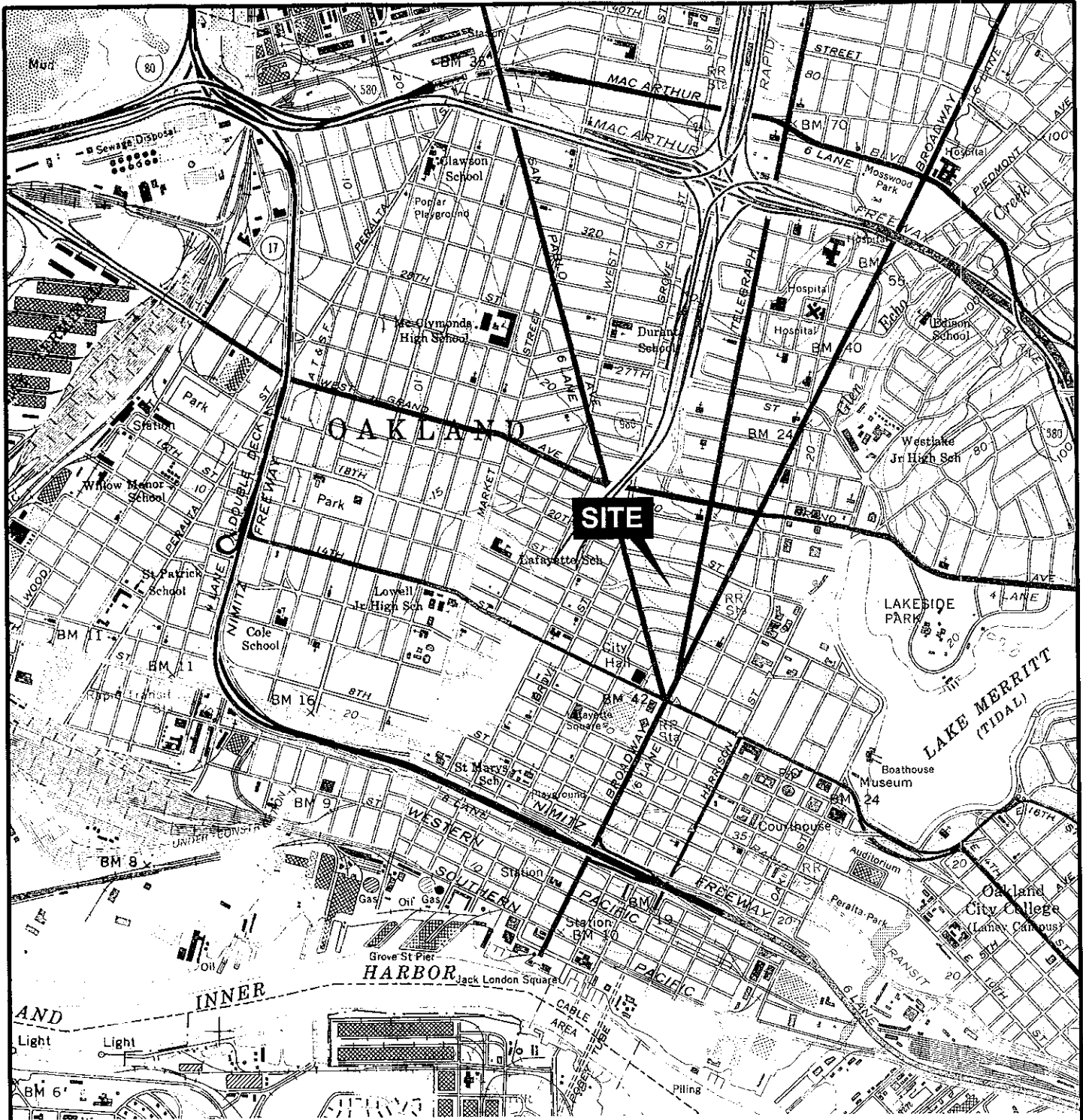
Table 2
2004 4th Quarter Groundwater Analytical Results
Sears Retail Center Store No. 1039
Oakland, California

Monitoring Well No.	Sample Date	LABORATORY ANALYTICAL RESULTS														
		EPA Method 8015M		EPA Method 8260B												
		Notes	TPHg (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)	
MW-1	11/10/2004	--	75	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	39.3	7.3	< 5
MW-2	11/10/2004	--	252	141	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	4.5	< 5
MW-3	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	32.2	12.9	< 5
MW-4	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-5	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-6	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-7	11/10/2004	--	17,600	14,400	< 100	538	575	< 200	< 200	< 200	< 200	< 200	< 1000	< 250	< 250	< 500
	11/10/2004	I	19,500	17,100	< 100	586	607	< 200	< 200	< 200	< 200	< 200	< 1000	< 250	< 250	< 500
MW-8	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	3.8	< 2.5	< 5
MW-9	11/10/2004	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	30.4	13.6	13.1

Notes:

I: Duplicate sample
 < - Analyte not detected above indicated method detection 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)

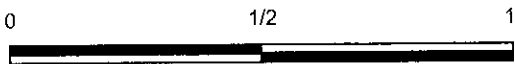
FIGURES



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.



Scale in Miles

URS

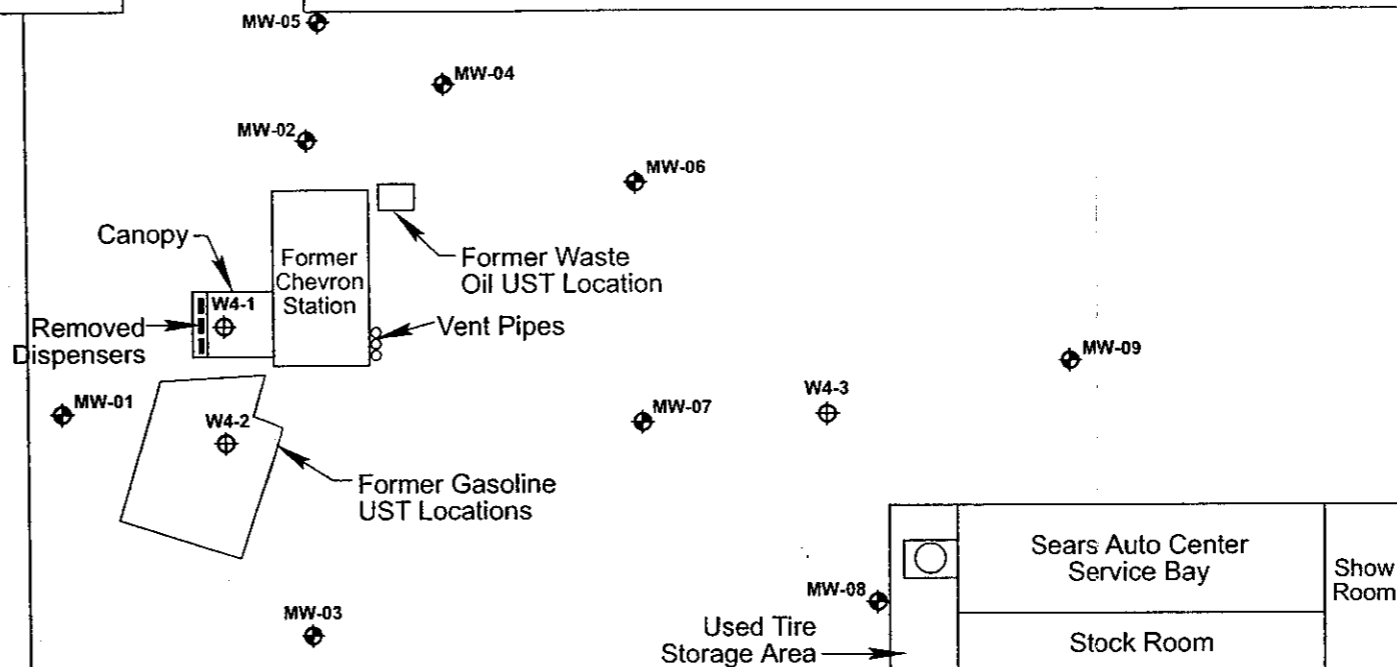
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Williams Street

San Pablo Avenue

Telegraph Avenue

Parking Garage



19th Street

EXPLANATION

- MW-1 MONITORING WELL LOCATION
- W4-1 APPROXIMATE LOCATION OF MONITORING WELLS (DRILLED BY FUGRO JUNE 2004)



PLOT PLAN

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

Project No.: 29863493

Figure 2

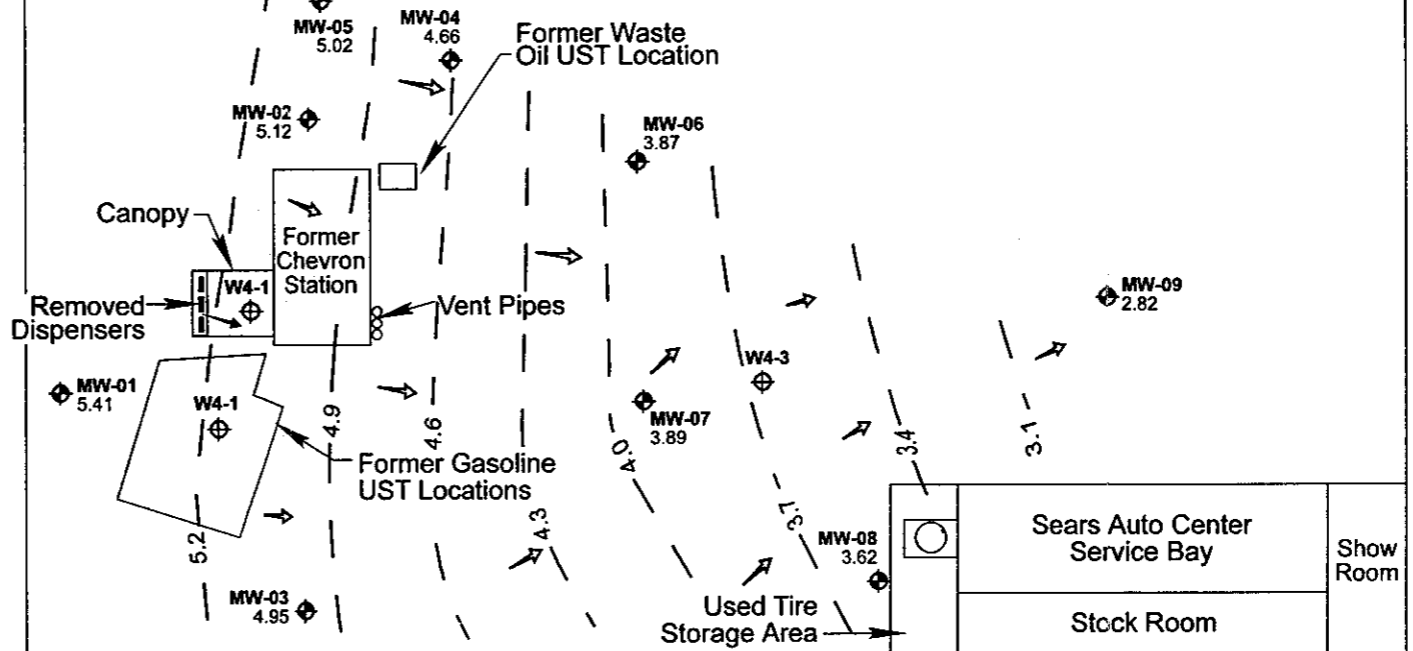


Williams Street

Telegraph Avenue

San Pablo Avenue

Parking Garage



19th Street

EXPLANATION

- MW-05 MONITORING WELL LOCATION
- 4.8 - GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- 5.41 GROUNDWATER ELEVATION
- W4-1 APPROXIMATE LOCATION OF MONITORING WELLS
(DRILLED BY FUGRO JUNE 2004)



**GROUNDWATER CONTOUR MAP
2004 FOURTH QUARTER**

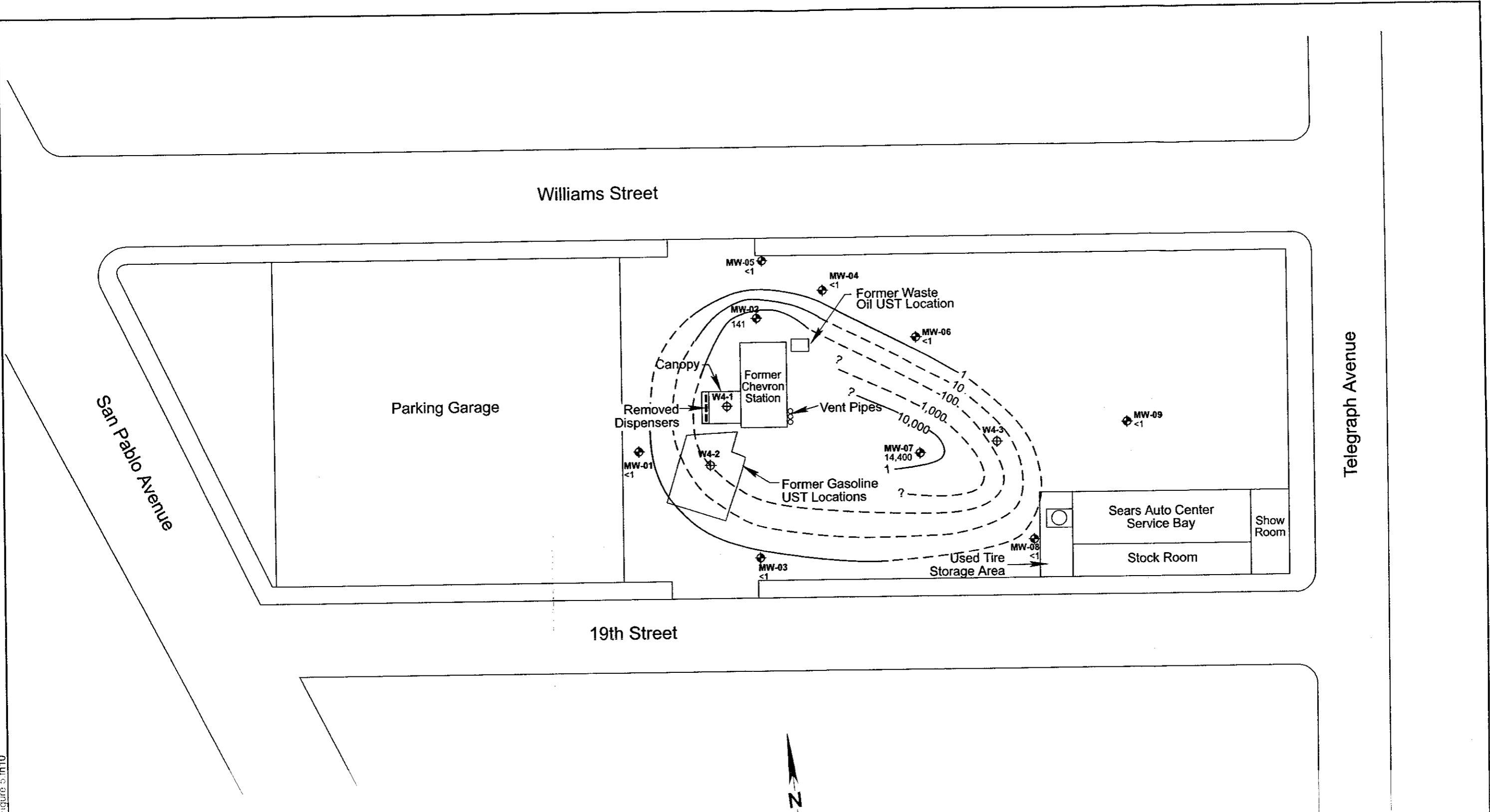
Project: SEARS AUTO CENTER #1039,
1901-1911 TELEGRAPH AVE, OAKLAND, CA

Project No.: 29863493

Date Measured: NOVEMBER 10, 2004

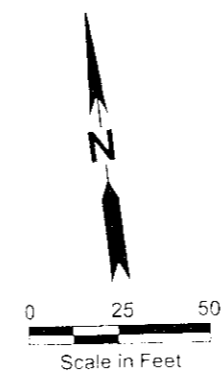
Figure 3

G:\128\Sears_128\Oakland\1901-1911 Telegraph Ave\2004\4th Qtr\GW04\Figures\Figure 5.fh10



EXPLANATION

- MW-7
14,400 MONITORING WELL LOCATION WITH BENZENE CONCENTRATION IN µg/L
- 100— BENZENE ISOCONCENTRATION CONTOUR
- W4-1 APPROXIMATE LOCATION OF MONITORING WELLS (DRILLED BY FUGRO JUNE 2004)



BENZENE ISOCONCENTRATION CONTOUR MAP- 2004 FOURTH QUARTER	
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Date Sampled: NOVEMBER 10, 2004	Figure 5

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)

All Solvents & Organics Pesticides PCBs PAHs Metals Other

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

<u>BEGIN DATE</u>	<u>STATUS</u>
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:

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

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

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)

<u>Start Date</u>	<u>Method</u>	<u>Phase</u>
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 5 of 5)

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 $\mu\text{g/L}$	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-9	MW-9	5	1/5/1999	Nov-99	16.86	0.00	92.54	75.68	< 50	--	--	< 0.5	< 0.5	< 0.5	< 0.5	32.4*	--	--	--	--	65	39	32	< 0.5	< 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*	--	--	--	--	60	22	36	0.7	< 0.5	--	--	
MW-9	MW-9	5	5/2/2000	May-00	16.62	0.00	92.54	76.52	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	76.26	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	< 1.0	< 5.0	--	--	--	--	32	--	17	0.73	< 0.50	--	--	
MW-9	MW-9	2	6/5/2002	Jun-02	15.71	0.00	19.20	3.49	33.2	< 500	< 2000	< 1	< 1	< 1	< 2	2.3	< 2	< 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	< 2	< 2	< 2	< 10	28.1	18.6	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	19.3	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	< 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	< 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	< 5	
MW-9	MW-9	2	2/11/2004	Feb-04	16.05	0.00	19.20	3.15	< 50	--	--	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	42	13.9	17.6	< 5	< 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	< 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	< 5	
MW-9	MW-9	2	11/18/2004	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	< 5	
W4-1	W4-1	6	6/9/2004	Jun-04	19.5	0.00	--	--	14,700	< 600	< 400	2,400	2,100	170	760	< 1	--	--	--	--	38	8.9	100.0	< 1.0	--	--	270	60
W4-2	W4-2	6	6/9/2004	Jun-04	22.0	0.00	--	--	56,700	< 1600	< 400	2,900	8,700	900	3,300	< 1	--	--	--	--	60	19	< 1.0	< 1.0	--	--	960	< 2.0
W4-3	W4-3	6	6/9/2004	Jun-04	20.3	0.00	--	--	1,070	< 100	< 400	190	< 1.0	< 1.0	< 1.0	< 1	--	--	--	--	6.8	12	8	< 3.2	--	< 1.0	< 2.0	

Notes

- 1: "Pre-purge" sample
 - 2: "Post-purge" sample
 - 3: Duplicate sample
 - 4: Well not sampled
 - 5: Data obtained from Previous Consultant
 - 6: Data collected by Fugro West Inc.
 - = Not applicable and/or no measurements taken/provided
 - Historical data before June 1996 as reported by previous consultants
 - MSL = Mean Sea Level
 - * = Duplicate Sample
 - ND = Not detected at or above the method detection limit
 - SP = Separate-phase petroleum hydrocarbons present, not sampled
- < = Analyte not detected above indicated method detection limit
 J = Analyte was detected at a concentration below the Reporting Limit and above the Laboratory Method Detection Limit. Reported value is estimated.
 TPHg = Total Petroleum Hydrocarbons as gasoline range hydrocarbons by EPA Method 8015 (modified)
 TPHd = Total Petroleum Hydrocarbons as diesel range hydrocarbons by EPA Method 8015 (modified)
 TPHo = Total Petroleum Hydrocarbons as oil range by EPA Method 8015 (modified)
 PCE = Tetrachloroethane
 1,2-DCA = 1,2-Dichloroethane (-EDC)
 TCE = Trichloroethene
 cis-1,2-DCE = cis-1,2 Dichloroethene
 1,1-DCE = 1,1-Dichloroethene
 1,2,4-TMB = 1,2,4-Trimethylbenzene

- MTBE - Methyl tert-Butyl ether (Prior to 5/99 analyzed using EPA Method 8020; 1999 duplicates and all post-1999 samples analyzed using EPA Method 8260)
- DIPE - Di-isopropyl Ether
- TAME - Tertiary Amyl Methyl Ether
- TBA - Tertiary Butyl Alcohol
- ETBE - Ethyl Tertiary Butyl Ether

APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS



Southland Technical Services, Inc.
Environmental Laboratories

11-23-2004

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: 11-10-2004
Lab Job No.: UR411056

Dear Mr. Rowlands:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-11-2004 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 4°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,


Roger Wang, Ph. D.
Laboratory Director

Enclosures

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



Southland Technical Services, Inc.

Environmental Laboratories

11-23-2004

Client: URS Corporation
 Project: 29863493.04034/Sears Oakland 1039
 Project Site: 1901 Telegraph Ave., Oakland, CA
 Matrix: Water
 Batch No.: AMK12-GW1

Lab Job No.: UR411056
 Date Sampled: 11-10-2004
 Date Received: 11-11-2004
 Date Analyzed: 11-12-2004

EPA 8015M (Gasoline)
Reporting Unit: µg/L (ppb)

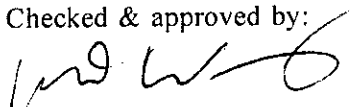
Date of Analysis for TPH (Gasoline)		11-12-04	11-12-04	11-12-04	11-12-04	11-12-04
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
LAB SAMPLE I.D.		MB	UR411056-1	UR411056-2	UR411056-3	UR411056-4
CLIENT SAMPLE I.D.			MW-1	MW-2	MW-3	MW-4
Analyte	DF	1	1	1	1	1
TPH-Gasoline (C4 - C12)		MDL=50	ND	75	252	ND
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	83	84	86	82

Date of Analysis for TPH (Gasoline)		11-12-04	11-12-04	11-12-04	11-12-04	11-12-04
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
LAB SAMPLE I.D.		UR411056-5	UR411056-6	UR411056-7	UR411056-8	UR411056-9
CLIENT SAMPLE I.D.		MW-5	MW-6	MW-7	MW-8	MW-9
Analyte	DF	1	1	100	1	1
TPH-Gasoline (C4 - C12)		MDL=50	ND	ND	17,600	ND
Surrogate	Spk Conc.	ACP%	%RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	86	84	84	81

Date of Analysis for TPH (Gasoline)		11-12-04	11-12-04	11-12-04	11-12-04	
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	
LAB SAMPLE I.D.		MB	UR411056-10	UR411056-11	UR411056-12	
CLIENT SAMPLE I.D.			DUP-1	EB-1	TB-1	
Analyte	DF	1	100	1	1	
TPH-Gasoline (C4 - C12)		MDL=50	ND	19,500	ND	ND
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	83	83	87	86

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery
 MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed
 m=Matrix interference.

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.: UR411056
Matrix: Water

Date Reported: 11-23-2004
Date Sampled: 11-10-2004

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

Date ANALYZED		11-12-04	11-12-04	11-12-04	11-12-04	11-12-04	11-12-04	11-12-04
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	1	1	1	1	1	1
LAB SAMPLE I.D.			UR411056-1	UR411056-2	UR411056-3	UR411056-4	UR411056-5	UR411056-6
CLIENT SAMPLE I.D.			MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
COMPOUND	MDL	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	ND
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	ND	ND	ND	ND
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	ND	141	ND	ND	ND	ND
Trichloroethene	2.5	ND	7.3	4.5	12.9	ND	ND	ND
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	ND	ND	ND
Tetrachloroethene	2.5	ND	39.3	ND	32.2	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.: UR411056

Date Reported: 11-23-2004

Project: 29863493.04034/Sears Oakland 1039

Matrix: Water

Date Sampled: 11-10-2004

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

COMPOUND	MDL	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	97	89	93	88	89	97	96
Toluene-d8	79-121	107	117	112	107	108	107	112
Bromofluoro-benzene	71-131	86	87	90	86	85	89	87

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL).

Note: Surrogate spike concentration is 25 ppb for all compounds.



Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation

Lab Job No.: UR411056

Date Reported: 11-23-2004

Project: 29863493.04034/Sears Oakland 1039 Matrix: Water

Date Sampled: 11-10-2004

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

Date ANALYZED		11-12-04	11-12-04	11-12-04	11-12-04	11-12-04	11-12-04	11-12-04
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	100	1	1	100	1	1
LAB SAMPLE I.D.			UR411056-7	UR411056-8	UR411056-9	UR411056-10	UR411056-11	UR411056-12
CLIENT SAMPLE I.D.			MW-7	MW-8	MW-9	DUP-1	EB-1	TB-1
COMPOUND	MDL	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	ND
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	13.1	ND	ND	ND
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	14,400	ND	ND	17,100	ND	ND
Trichloroethene	2.5	ND	ND	ND	13.6	ND	ND	ND
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	ND	ND	ND
Tetrachloroethene	2.5	ND	ND	3.8	30.4	ND	ND	ND
1,2-Dibromoethane(EDB)	5	ND	ND	ND	ND	ND	ND	ND



Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation
Project: 29863493.04034/Sears Oakland 1039

Lab Job No.: UR411056
Matrix: Water

Date Reported: 11-23-2004
Date Sampled: 11-10-2004

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

COMPOUND	MDL	MB	MW-7	MW-8	MW-9	DUP-1	EB-1	TB-1
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	538	ND	ND	586	ND	ND
Total Xylenes	2	ND	575	ND	ND	607	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	268 j	ND	ND	266 j	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	97	97	97	102	97	90	97
Toluene-d4	79-121	107	109	109	111	107	111	106
Bromofluoro-benzene	71-131	86	88	84	89	87	90	89

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF x MDL).

j=trace concentration, below reporting limit. Note: Surrogate spike concentration is 25 ppb for all compounds.



Southland Technical Services, Inc.
Environmental Laboratories

11-23-2004

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

Client: URS Corporation
Project: 29863493.04034/Sears Oakland 1039
Matrix: Water
Batch No.: AMK12-GW1

Lab Job No.: UR411056
Lab Sample ID: UR411056-4
Date Analyzed: 11-12-2004

**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	1,050	1,110	105.0	111.0	5.6	30	70-130

**II. LCS Result
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
TPH-g	1,020	1,000	102.0	80-120

ND: Not Detected.



Southland Technical Services, Inc.
Environmental Laboratories

11-23-2004

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

Client: URS Corporation
Project: 29863493.04034/Sears Oakland 1039
Matrix: Water
Batch No: 1112-VOAW

Lab Job No.: UR411056
Lab Sample ID: UR411056-4
Date Analyzed: 11-12-2004

**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	20.5	18.8	102.5	94.0	8.7	30	70-130
Benzene	ND	20	24.4	23.0	122.0	115.0	5.9	30	70-130
Trichloro-ethene	ND	20	21.5	18.2	107.5	91.0	16.6	30	70-130
Toluene	ND	20	23.9	21.9	119.5	109.5	8.7	30	70-130
Chlorobenzene	ND	20	24.0	21.0	120.0	105.0	13.3	30	70-130

**II. LCS Result
Unit: ppb**

Compound	LCS Report Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	18.9	20	94.5	80-120
Benzene	21.3	20	106.5	80-120
Trichloro-ethene	18.5	20	92.5	80-120
Toluene	22.7	20	113.5	80-120
Chlorobenzene	21.8	20	109.0	80-120

ND: Not Detected (at the specified limit)

URS CORPORATION

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Date: 11/10/04
Page 1 of 2

CHAIN OF CUSTODY RECORD

UR41056

Data Requested in GISKey Format

Lab Name: <u>ST5</u>		URS Project PO Number: <u>29863493.04034</u>		Requested Analyses:										
Client Name/Project Name/Location: <u>SCARS Oakland 1039</u>		Geo Tracker Information:		Special Instructions:										
URS Project Manager: <u>Scott Rowland</u>		EDF Reporting Y N Global ID:		<div style="display: flex; justify-content: space-between;"> VOC+TPH-g HOLD </div>										
Sampler Name and Signature: <u>Jeffrey Miller</u>		COELT Log Number:												
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:								
MW-5	11/10/04	245	Ⓞ HCl	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
TB-1		940 JM	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	1								
MW-4		1010 JM 940	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-6		1010	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-8		1045	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-2		1210	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-3		1245	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-1		1310	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
MW-9		1345	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								
EB-1		1400	Ⓞ	S G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA	3								

UR41056-5
-12
-4
-6
-8
-2
-3
-1
-9
-11

Relinquished by: <u>Jeffrey Miller</u>	Date: <u>11/11/04</u>	Received By: <u>[Signature]</u>	Date/Time: <u>11/11/04 3:00p</u>	Turnaround Time: (Check)		Lab Use Only	
Relinquished by:	Date:	Received By:	Date/Time:	Same Day: _____	72 Hour: _____	Cooler Temperature*: <u>4°C</u>	
Relinquished by:	Date:	Received By:	Date/Time:	24 Hour: _____	5 Day: _____	*Record upon arrival	
				48 Hour: _____	Standard: <input checked="" type="checkbox"/>	URS	

S=Solid L=Liquid G= Gas White Copy in Final Report, Yellow to File, Pink to URS at Dropoff

URS CORPORATION

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Santa Ana, CA 92705
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FAX (714) 667-7147

Date: 11/10/04
Page 2 of 2

CHAIN OF CUSTODY RECORD

UR41056

Data Requested in GISKey Format

Lab Name: <u>STS</u>		URS Project/PO Number: <u>29463493.04034</u>		Requested Analyses:										Special Instructions:			
Client Name/Project Name/Location: <u>Sears Oakland 1039</u>		GeoTracker Information:		VOGT PH-9										HOLD			
URS Project Manager: <u>Scott Rowlands</u>		EDF Reporting: Y N Global ID:															
Sampler Name and Signature: <u>Jeff Miller jmm</u>		COELT Log Number:															
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:											
<u>MW-7</u>	<u>11/10/04</u>	<u>1420</u>	<u>Y</u> <u>N</u>	<u>HCl</u> S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>	<u>3</u>											<u>UR41056-7</u>
<u>Dup-1</u>	<u>11/10/04</u>	<u>1425</u>	<u>Y</u> <u>N</u>	<u>HCl</u> S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>	<u>3</u>											<u>-10</u>
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
			<u>Y</u> <u>N</u>	S L G	<u>Acetate SS. Brass Jar Encore</u> <u>ml Amb. Plas. Glass VOA</u>												
Relinquished by: <u>[Signature]</u>		Date: <u>11/11/04</u>	Received By: <u>[Signature]</u>		Date/Time: <u>11/11/04 3:00pm</u>	Turnaround Time: (Check)		Lab Use Only									
Relinquished to:		Date:	Received By:		Date/Time:	Same Day: _____ 72 Hour: _____		Cooler Temperature*: <u>4°C</u>									
Relinquished by:		Date:	Received By:		Date/Time:	24 Hour: _____ 5 Day: _____		*Record upon arrival									
		Date:			Date/Time:	48 Hour: _____ Standard: <input checked="" type="checkbox"/>											

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: Water
LAB PROJECT #: UR411056
SAMPLES: See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	VOCs (including Fuel Oxygenates)
MW-5		UR411056-5	X	X
TB-1	Trip Blank	UR411056-12	X	X
MW-4		UR411056-4	X	X
MW-6		UR411056-6	X	X
MW-8		UR411056-8	X	X
MW-2		UR411056-2	X	X
MW-3		UR411056-3	X	X
MW-1		UR411056-1	X	X
MW-9		UR411056-9	X	X
EB-1	Equipment blank	UR411056-11	X	X
MW-7		UR411056-7	X	X
DUP-1	Field duplicate of MW-7	UR411056-10	X	X

Date Sampled: 11/10/04

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	✓	✓
Equipment Blank	✓	✓
Trip 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 ($\mu\text{g/L}$)

Samples MW-7 and DUP-1 required dilution for the 8260B and 8015M analyses 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.