



February 5, 2004

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


**Subject: 2003 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:

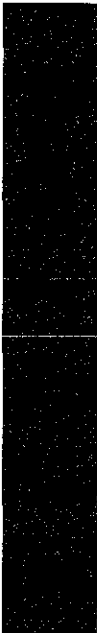
Submitted with this letter is a URS report prepared on behalf of Sears, Roebuck & Co. Presented in the report are results of groundwater monitoring conducted at the above-referenced site during the fourth quarter 2004. Please feel free to contact me at (714) 648-2793 if you have questions or comments.

Respectfully Submitted,

URS CORPORATION


J.S. Rowlands, R.G., C.H.G.
Project Manager

cc: Mr. Scott DeMuth, Sears Roebuck and Co.

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2003 FOURTH QUARTER
GROUNDWATER MONITORING REPORT
FORMER SEARS RETAIL CENTER #1039
1901-1911 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
CASE I.D. # STD 1630
FOR SEARS, ROEBUCK & CO.

URS Job No. 29863493
February 5, 2004

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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 2003 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 on the north by Williams Street, 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-grade-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 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). The State Water Resources Control Board (SWRCB) Geotracker data report for the former Chevron site is provided as Appendix A.

A total of 9 groundwater monitoring wells (MW-1 through MW-9) 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 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).

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 dissolved phase benzene have been detected in 5 of the 9 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 2003 fourth quarter groundwater monitoring was performed on December 4, 2003. 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. Groundwater depths and elevations for the 2003 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 for laboratory analysis during the 2003 fourth quarter groundwater monitoring event. Groundwater samples were collected from the discharge tubing of the well pump following well 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.

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), the 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 VOCs by EPA Method 8260B. During this quarterly event, all groundwater samples were analyzed for ferrous iron by the laboratory as well.

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, the bolts at wells MW-2, MW-4, and MW-9 were noted as damaged. The damaged well boxes were subsequently repaired during January 2004.

5.5 WASTE MANAGEMENT

Well purge water was collected and stored in three 55-gallon DOT-approved drums. Containers 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, 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 13.7 feet to 17.63 feet bgs. Calculated groundwater elevations ranged from 2.81 feet to 5.38 feet above mean sea level (msl). Groundwater elevations in the wells have decreased an average of 0.26 feet since the 2003 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 2003 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 0.01 (Figure 3).

6.2 LABORATORY ANALYTICAL RESULTS

TPHg were detected in groundwater samples collected from wells MW-2 and MW-7 with concentrations of 174 micrograms per liter ($\mu\text{g/L}$) and 23,400 $\mu\text{g/L}$, respectively. Benzene was detected in samples collected from monitoring wells MW-2, MW-4, and MW-7 with concentrations ranging from 2.5 $\mu\text{g/L}$ to 15,700 $\mu\text{g/L}$. Ethylbenzene and xylene were detected in the sample collected from MW-7 at concentrations of 443 $\mu\text{g/L}$ and 428 $\mu\text{g/L}$, respectively.

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 3.3 $\mu\text{g/L}$ to 26.7 $\mu\text{g/L}$. TCE was detected in wells MW-1, MW-2, MW-3 and MW-9 with concentrations ranging from 4.4 $\mu\text{g/L}$ to 13.2 $\mu\text{g/L}$. 1,2-DCA was detected in wells MW-2 and MW-9 at concentrations of 5.7 $\mu\text{g/L}$ and 13.0 $\mu\text{g/L}$, respectively.

Chemical analysis results of the 2003 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 2003 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 2003 fourth quarter groundwater monitoring event represents the 33rd groundwater-sampling event conducted at the Site. Groundwater elevations have decreased approximately 0.26 feet since the last sampling event conducted in September 2003. Groundwater flow direction is towards the east with a gradient of 0.01, which is consistent with previous monitoring events.

TPHg were detected in two of the nine monitoring wells sampled with concentrations up to 23,400 µg/L. Benzene was detected in three of nine monitoring wells sampled with concentrations up to 15,700 µg/L. The suspected 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. 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 120 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: February 2004,
- ◆ Submittal of 2003 Fourth Quarter Groundwater Monitoring Report to ACEHS: February 2004,

ACEHS will be notified of upcoming field activities.

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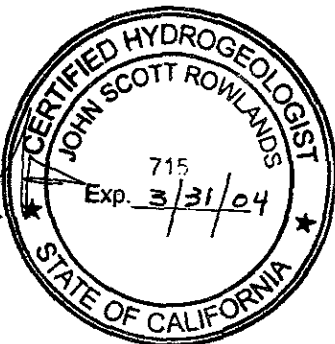
Should you have any questions or comments, please do not hesitate to contact us.

Respectfully Submitted,

URS CORPORATION

Robert Kovacs for
Steve Turner
Staff Geologist

J.S. Rowlands
J.S. Rowlands, R.G., C.H.G.
Project Manager



9.0 REFERENCES

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- 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.

TABLES

Table 1
2003 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 (µS/cm)	O.R.P. (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Ferrous Iron* (mg/L)	
MW-1	12/4/2003	--	0.0	15.61	20.99	5.38	20.84	6.29	932	103.9	14.4	1.51	0.32	
MW-2	12/4/2003	--	0.0	15.40	20.50	5.10	22.66	6.48	1699	-54.9	2.1	1.13	1.53	
MW-3	12/4/2003	--	0.0	17.40	22.29	4.89	22.59	6.25	656	137.5	9.6	0.86	0.32	
MW-4	12/4/2003	--	0.0	13.94	18.61	4.67	22.89	6.59	1734	-55.7	2.0	1.24	1.29	
MW-5	12/4/2003	1	0.0	13.70	18.76	5.06	22.54	6.72	1806	-124.8	64.0	1.25	1.70	
MW-6	12/4/2003	--	0.0	15.07	18.91	3.84	22.67	6.51	1808	168.7	5.4	1.22	0.32	
MW-7	12/4/2003	1	0.0	16.56	20.39	3.83	22.52	6.53	1158	-92.8	52.3	1.02	1.73	
MW-8	12/4/2003	--	0.0	17.63	21.12	3.49	22.35	6.45	504	97.1	37.1	3.54	0.24	
MW-9	12/4/2003	--	0.0	16.39	19.20	2.81	23.09	6.54	1024	123.1	17.1	0.87	0.13	

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

µS/cm - microSiemens per centimeter
mV - millivolt
mg/L - milligrams per liter
NTU - nephelometric turbidity units
O.R.P. - Oxygen Reduction Potential

* - Ferrous Iron Laboratory Results

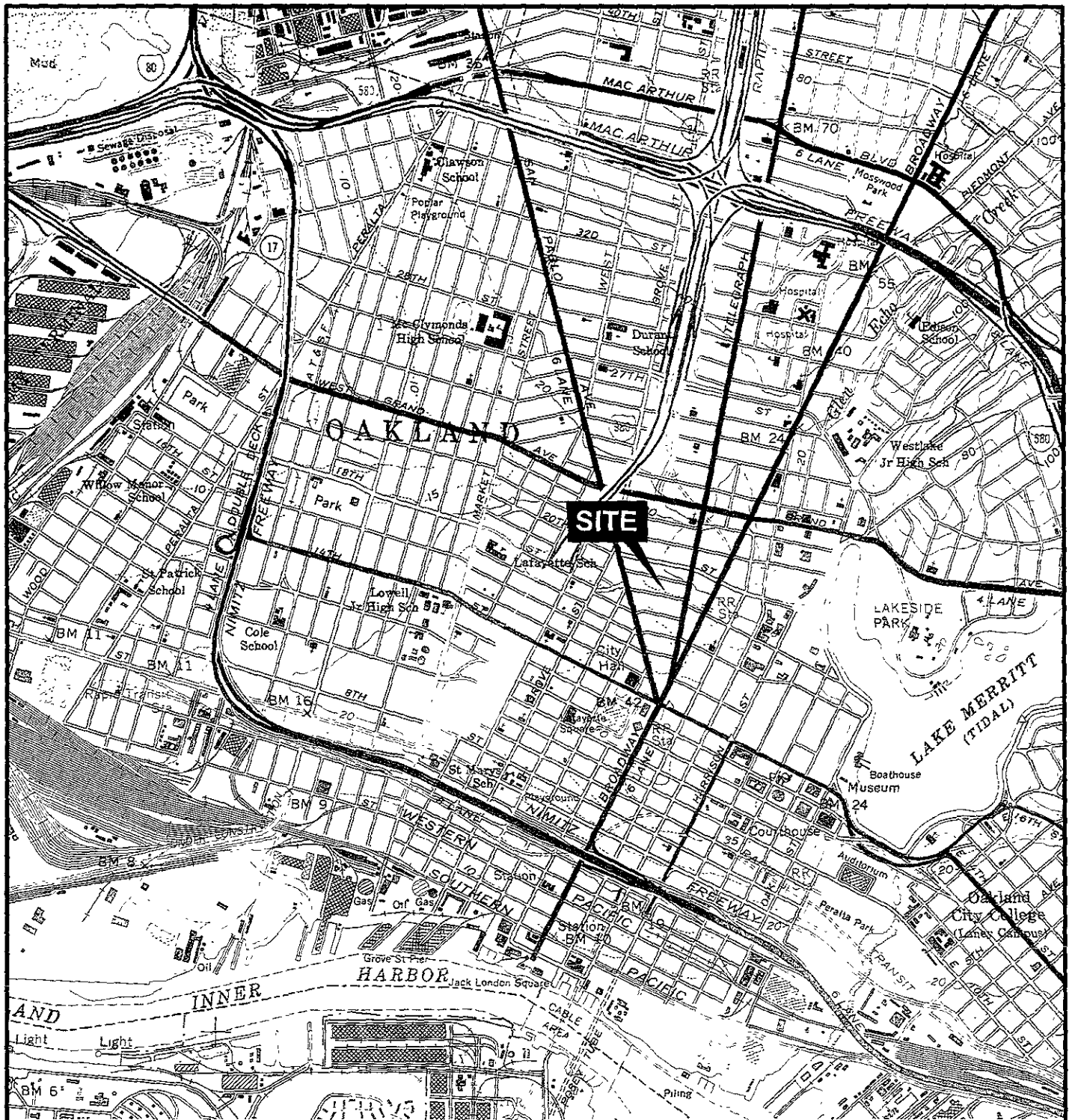
Table 2
 2003 4th Quarter Groundwater Analytical Results
 Sears Retail Center Store No. 1039
 Oakland, California

Monitoring Well No.	Sample Date	LABORATORY ANALYTICAL RESULTS														
		by EPA 8015M		Volatile Organic Compounds by GC/MS EPA 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	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	26.7	4.8	< 5
MW-2	12/4/2003	--	174	5.2	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	4.4	5.7
MW-3	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	25.9	13.2	< 5
MW-4	12/4/2003	--	< 50	2.5	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-5	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-6	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-7	12/4/2003	--	23,400	15,700	< 1	443	428	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
	12/4/2003	1	24,000	15,900	< 1	469	424	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5
MW-8	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	3.3	< 2.5	< 5
MW-9	12/4/2003	--	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	25.3	12.0	13.0

Notes:

- 1: Duplicate sample
- < - Analyte not detected above indicated method detection limit
- TPHg = Total Petroleum Hydrocarbons as gasoline range hydrocarbons by EPA Method 8015 (modified)
- 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

FIGURES

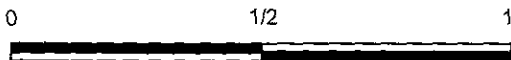


REFERENCE: USGS 7.5 Minute Series Oakland West, CA Quad, 1959, Photorevised 1980

FIGURE 1

VICINITY MAP

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



Scale in Miles



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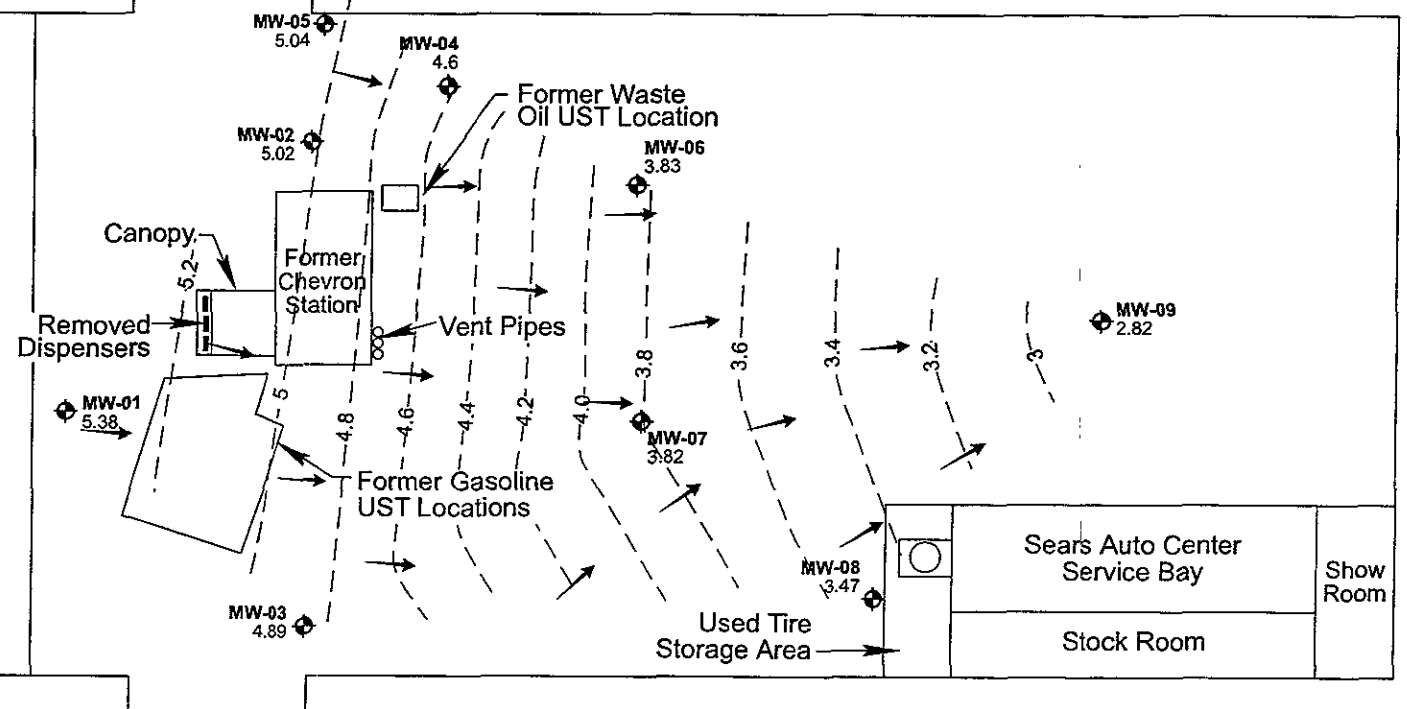
Williams Street

Telegraph Avenue

San Pablo Avenue

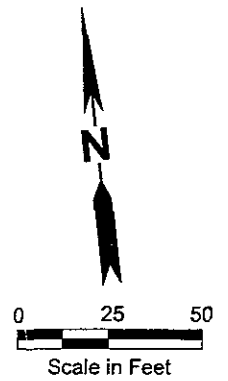
Parking Garage

19th Street



EXPLANATION

- MW-15 MONITORING WELL LOCATION
- 3.6 - GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- 5.38 GROUNDWATER ELEVATION



GROUNDWATER CONTOUR MAP 2003 FOURTH QUARTER	
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Date Measured: DECEMBER 4, 2003	Figure 3

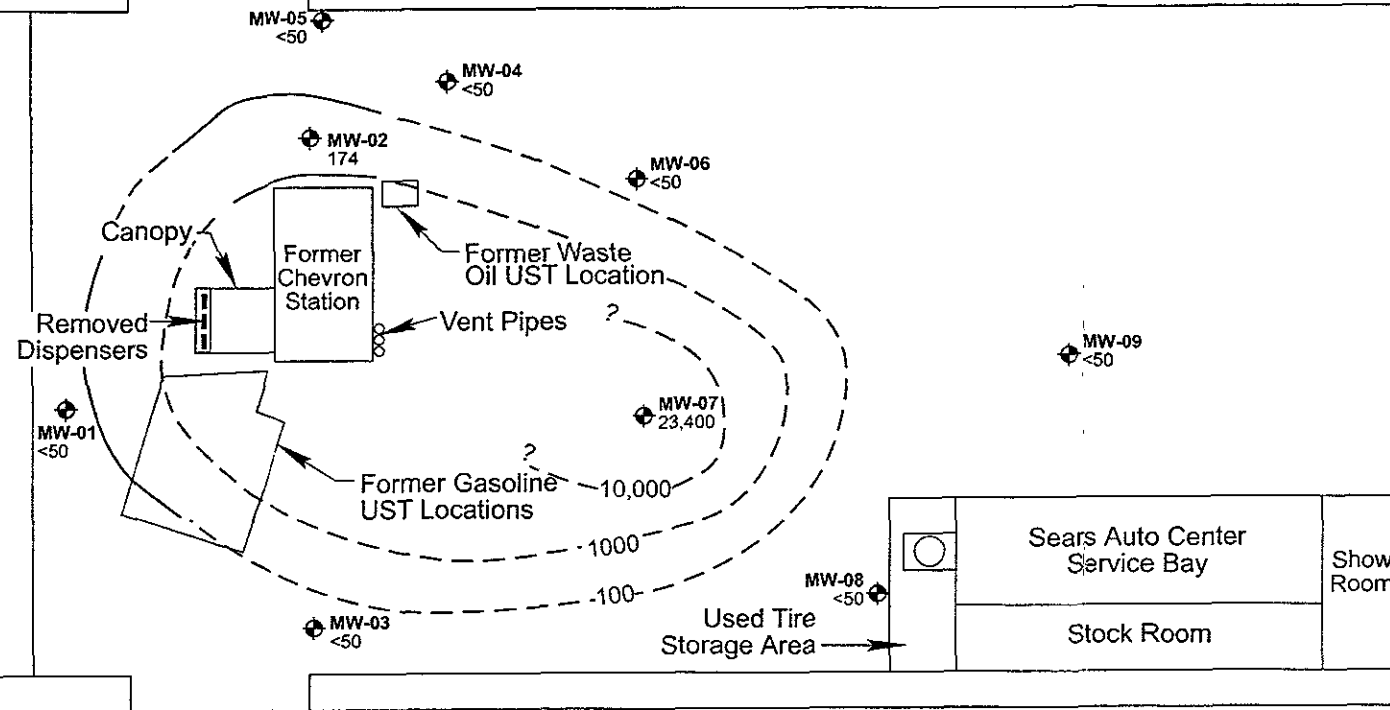
L:\Sears oakland\GW gradient 4th quart.fh10 1/04

Williams Street

Telegraph Avenue

San Pablo Avenue

Parking Garage



19th Street

EXPLANATION

- MW-7 23,400 MONITORING WELL LOCATION WITH TPHg CONCENTRATION IN μg/L
- 100— TPHg ISOCONCENTRATION CONTOUR



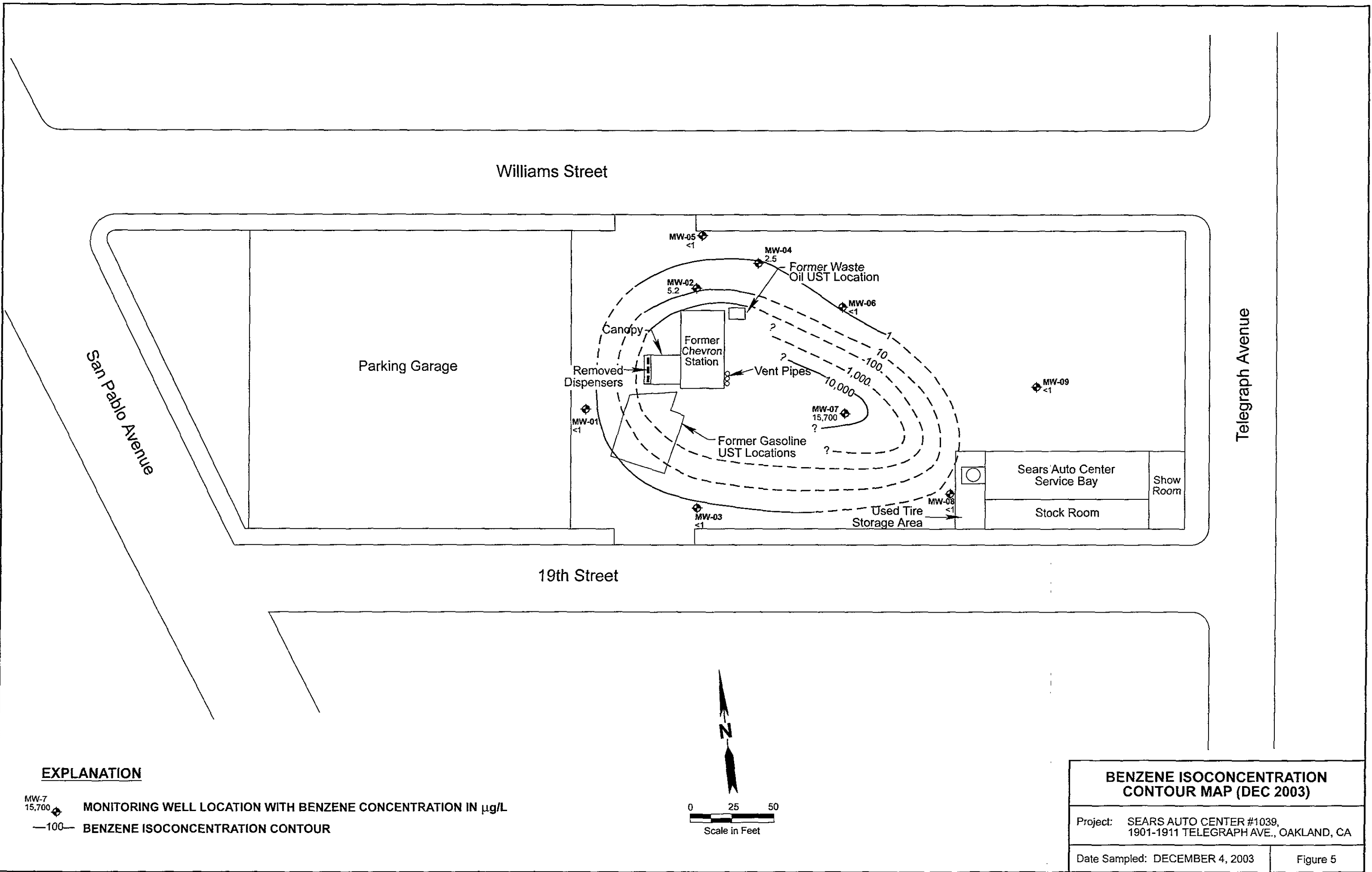
TPHg ISOCONCENTRATION CONTOUR MAP (DEC 2003)

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

Date Sampled: DECEMBER 4, 2003

Figure 4

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EXPLANATION

MW-7
15,700
—100— MONITORING WELL LOCATION WITH BENZENE CONCENTRATION IN µg/L
BENZENE ISOCONCENTRATION CONTOUR



**BENZENE ISOCONCENTRATION
CONTOUR MAP (DEC 2003)**

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

Date Sampled: DECEMBER 4, 2003

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)

[Print Selected Chemicals](#)

[Results Tables](#)

Note: You may select up to 6 chemicals.

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

<u>NAME</u>	<u>DATE</u>	<u>PARAMETER</u>	<u>MATRIX</u>	<u>QUALIFIER</u>	<u>RESULT</u>	<u>UNITS</u>	<u>PLOT</u>
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

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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

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Detailed Release Information

CHEVRON (OAKLAND)
1911 TELEGRAPH AVE
OAKLAND , CA 94612
CASE STATUS: CLOSED
[SHOW THIS SITE ON MAP](#)
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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	

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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)

<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	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS																				
					Depth to Groundwater (ft bgs)	Stand Prod Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	Anal. Units	TPHg	TPHd	TPHo	Benzenes	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE	DIPE	TAME	TBA	PCE	TCE	1,2-DCA	cis-1,2 DCE	1,1-DCE	1,2,4-TMB	Naphthalene	
MW-8	MW-8	4	6/5/2002	Jun-02	16.81	0.00	21.12	4.31	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-8	MW-8	2	9/6/2002	Sep-02	17.26	0.00	21.12	3.86	µg/L	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	4.5	< 2.5	< 5	< 5	< 5	--	--	
MW-8	MW-8	2	12/12/2002	Dec-02	17.62	0.00	21.12	3.50	µg/L	69	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	< 2.5	< 2.5	< 5	< 5	< 5	< 5	--	
MW-8	MW-8	2	3/13/2003	Mar-03	17.19	0.00	21.12	3.93	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	5.2	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-8	MW-8	2	6/4/2003	Jun-03	16.80	0.00	21.12	4.32	µg/L	< 50	< 500	< 2000	1.2	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	2.5	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-8	MW-8	2	9/25/2003	Sep-03	17.39	0.00	21.12	3.73	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	4.7	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-8	MW-8	2	12/4/2003	Dec-03	17.63	0.00	21.12	3.49	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	3.3	< 2.5	< 5	< 5	< 5	< 5	< 5	
MW-9	MW-9	5	11/5/1999	Nov-99	16.86	0.00	92.54	75.68	µg/L	< 50	--	--	< 0.5	< 0.5	< 0.5	< 0.5	3/2.6*	--	--	--	--	65	29	32	< 0.5	< 0.5	--	--	
MW-9	MW-9	5	2/1/2000	Feb-00	16.70	0.00	92.54	75.84	µg/L	< 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	16.02	0.00	92.54	76.52	µg/L	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	76.20	µg/L	70	--	--	< 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	µg/L	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	µg/L	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	µg/L	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	µg/L	< 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	µg/L	< 50	< 50	< 500	< 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	µg/L	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	µg/L	< 50	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 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	µg/L	68	< 500	< 2000	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	26.5	10.3	12.0	< 5	< 5	--	--
MW-9	MW-9	2	3/13/2003	Mar-03	16.07	0.00	19.20	3.13	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 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	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	MW-9	2	9/25/2003	Sep-03	16.27	0.00	19.20	2.93	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 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	µg/L	< 50	--	--	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2	< 10	25.3	12.0	13.0	< 5	< 5	< 5	< 5

Notes

-- = Not applicable and/or no measurements taken/provided

- 1: "Pre-purge" sample
 - 2: "Post-purge" sample
 - 3: Duplicate sample
 - 4: Well not sampled
 - 5: Data obtained from Previous Consultant
 - 6: Well was not accessible during gauging/sampling event
- MSL = Mean Sea Level
Groundwater Elevation =
Top of casing elevation -(Depth to Water - (0.5 * Standing Product thickness).
J = Sample analyzed beyond holding time. The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
* = Duplicate Sample

< = Analyte not detected above indicated method detection limit
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)
ND = Not detected at or above the method detection limit
SP = Separate-phase petroleum hydrocarbons present, not sampled
PCE = Tetrachloroethene
1,2-DCA = 1,2-Dichloroethane
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
Notes: Historical data before June 1996 as reported by previous consultants

APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS



Southland Technical Services, Inc.
Environmental Laboratories

12-19-2003

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

Project: 29863493.03034/Sears Oakland 1039
Project Site: 1901 Telegraph Ave., Oakland, CA
Sample Date: 12-04-2003
Lab Job No.: UR312061

Dear Mr. Rowlands:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 12-08-2003 and analyzed for the following parameters:

EPA 8015M (Gasoline)
EPA 8015M (Diesel & Oil)
EPA 8260B (VOCs by GC/MS)
Ferrous Iron

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

12-19-2003

Client: URS Corporation
Project: 29863493.03034/Sears Oakland 1039
Project Site: 1901 Telegraph Ave., Oakland, CA
Matrix: Water

Lab Job No.: UR312061
Date Sampled: 12-04-2003
Date Received: 12-08-2003
Date Analyzed: 12-09-2003

Ferrous Iron (Colorimetry)
Reporting Units: mg/L (ppm)

Sample ID	Lab ID	Ferrous Iron	Reporting Limit
Method Blank		ND	0.05
MW-1	UR312061-1	0.32	0.05
MW-2	UR312061-2	1.53	0.05
MW-3	UR312061-3	0.32	0.05
MW-4	UR312061-4	1.29	0.05
MW-5	UR312061-5	1.70	0.05
MW-6	UR312061-6	0.32	0.05
MW-7	UR312061-7	1.73	0.05
MW-8	UR312061-8	0.24	0.05
MW-9	UR312061-9	0.13	0.05

ND: Not Detected (Below MDL)

Checked & approved by:

Roger Wang, Ph.D.
Laboratory Director.



Southland Technical Services, Inc.
Environmental Laboratories

12-19-2003

Client: URS Corporation
Project: 29863493.03034/Sears Oakland 1039
Project Site: 1901 Telegraph Ave., Oakland, CA
Matrix: Water
Batch No.: AL09-GW1

Lab Job No.: UR312061
Date Sampled: 12-04-2003
Date Received: 12-08-2003
Date Analyzed: 12-09-2003

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


Date of Analysis for TPH (Gasoline)		12-09-03	12-09-03	12-09-03	12-09-03	12-09-03
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
LAB SAMPLE LD.			UR312061-1	UR312061-2	UR312061-3	UR312061-4
CLIENT SAMPLE LD.			MW-1	MW-2	MW-3	MW-4
Analyte	MDL	MB				
TPH-Gasoline (C4 - C12)	50	ND	ND	174	ND	ND
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	71	105	103	108

Date of Analysis for TPH (Gasoline)		12-09-03	12-09-03	12-09-03	12-09-03	12-09-03
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
LAB SAMPLE LD.		UR312061-5	UR312061-6	UR312061-7	UR312061-8	UR312061-9
CLIENT SAMPLE LD.		MW-5	MW-6	MW-7	MW-8	MW-9
Analyte	MDL					
TPH-Gasoline (C4 - C12)	50	ND	ND	23,400	ND	ND
Surrogate	Spk Conc.	ACP%	%RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	102	106	97	105

Date of Analysis for TPH (Gasoline)		12-09-03	12-09-03	12-09-03	12-09-03	
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	
LAB SAMPLE LD.			UR312061-10	UR312061-11	UR312061-12	
CLIENT SAMPLE LD.			DUP-1	EB-1	Trip Blank	
Analyte	MDL	MB				
TPH-Gasoline (C4 - C12)	50	ND	24,000	ND	ND	
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	71	102	107	104

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

Checked & approved by:


Roger Wang, Ph.D.
Laboratory Director.



Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation

Lab Job No.: UR312061

Date Reported: 12-19-2003

Project: 29863493.03034/Sears Oakland 1039 Matrix: Water

Date Sampled: 12-04-2003

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

Date ANALYZED		12-09-03	12-09-03	12-09-03	12-09-03	12-09-03	12-09-03	12-09-03
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	1	1	1	1	1	1
LAB SAMPLE I.D.			UR312061-1	UR312061-2	UR312061-3	UR312061-4	UR312061-5	UR312061-6
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	5	ND	ND	5.7	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	5.2	ND	2.5	ND	ND
Trichloroethene	2.5	ND	4.8	4.4	13.2	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	26.7	ND	25.9	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: 29863493.03034/Sears Oakland 1039

Lab Job No.: UR312061
Matrix: Water

Date Reported: 12-19-2003
Date Sampled: 12-04-2003

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-Tetrachloroethan	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-Tetrachloroethan	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
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	98	100	97	96	93	90	111
Toluene-d8	79-121	80	88	83	89	87	91	80
Bromofluoro-benzene	71-131	93	87	89	82	89	81	87

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL).
Note: Surrogate spike concentration: 25 ppb for all compounds.



Southland Technical Services, Inc.
Environmental Laboratories

Client: URS Corporation

Lab Job No.: UR312061

Date Reported: 12-19-2003

Project: 29863493.03034/Sears Oakland 1039 Matrix: Water

Date Sampled: 12-04-2003

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

Date ANALYZED		12-09-03	12-09-03	12-09-03	12-09-03	12-09-03	12-09-03	12-09-03
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	100	1	1	100	1	1
LAB SAMPLE I.D.			UR312061-7	UR312061-8	UR312061-9	UR312061-10	UR312061-11	UR312061-12
CLIENT SAMPLE I.D.			MW-7	MW-8	MW-9	DUP-1	EB-1	Trip Blank
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	5	ND	ND	ND	13.0	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	15,700	ND	ND	15,900	ND	ND
Trichloroethene	2.5	ND	ND	ND	12.0	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	3.3	25.3	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.: UR312061

Date Reported: 12-19-2003

Project: 29863493.03034/Sears Oakland 1039 Matrix: Water

Date Sampled: 12-04-2003

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	Trip Blank
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethan	5	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1	ND	443	ND	ND	469	ND	ND
Total Xylenes	2	ND	428	ND	ND	424	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethan	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
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	98	71	103	97	94	96	104
Toluene-d4	79-121	80	86	86	93	87	91	83
Bromofluoro-benzene	71-131	93	80	90	87	91	85	86

MB=Method Blank; MDL=Method Detection Limit, ND=Not Detected (below DF × MDL).
 Note: Surrogate spike concentration: 25 ppb for all compounds.



12-19-2003

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

Client: URS Corporation
Project: 29863493.03034/Sears Oakland 1039
Matrix: Water
Batch No.: AL09-GW1

Lab Job No.: UR312061
Lab Sample ID: UR312061-6
Date Analyzed: 12-09-2003

**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	1000	1,030	1,020	103.0	102.0	1.0	30	70-130

**II. LCS Result
Unit: ppb**

Analyte	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
TPH-G	1,010	1000	101.0	80-120

ND: Not Detected (at the specified limit).



Southland Technical Services, Inc.
Environmental Laboratories

12-19-2003

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

Client: URS Corporation
Project: 29863493.03034/Sears Oakland 1039
Matrix: Water
Batch No: 1209-VOCW

Lab Job No.: UR312061
Sample ID: UR312057-4
Date Analyzed: 12-09-0903

**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	24.4	20.7	122.0	103.5	16.4	30	70-130
Benzene	ND	20	23.3	19.5	116.5	97.5	17.8	30	70-130
Trichloro-ethene	ND	20	20.7	19.7	103.5	98.5	5.0	30	70-130
Toluene	ND	20	20.6	17.3	103.0	86.5	17.4	30	70-130
Chlorobenzene	ND	20	23.1	17.6	115.5	88.0	27.0	30	70-130

**II. LCS Result
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	53.4	50.0	106.8	80-120
Benzene	52.9	50.0	105.8	80-120
Trichloro-ethene	49.3	50.0	98.6	80-120
Toluene	50.2	50.0	100.4	80-120
Chlorobenzene	51.9	50.0	103.8	80-120

ND: Not Detected.



Southland Technical Services, Inc.
Environmental Laboratories

12-17-2003

**Ferrous Iron
QA/QC Report**

Client: URS Corporation
Project: 29863493.03034/Sears Oakland 1039
Matrix: Water

Lab Job No.: UR312061
Lab Sample ID: Blank
Date Analyzed: 12-09-2003

**MS/MSD Report
Unit: ppm**

Analyte	Sample Conc.	True Value	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Fe ²⁺ Colori-metry	ND	1.0	1.00	1.02	100.0	102.0	2.0	30	70-130

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

Date: 12/04/03

CHAIN OF CUSTODY RECORD

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UR 312061

Data Requested in GISKey Format

Lab Name:		URS Project/PO Number:		Requested Analyses:										Special Instructions:				
STS		29863493.03034																
Client Name/Project Name/Location:		GeoTracker Information:																
SEARS OAKLAND #1039																		
URS Project Manager:		EOF Reporting Y N Global ID:																
SCOTT ROWLANDS																		
Sampler Name and Signature:		COELT Log Number:																
S. TURNER																		
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:	TPH ₉ (8015M)	VOL (8260B)	Fe ²⁺									HOLD
MW-01	12/4/03	1312	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									UR 312061-1
MW-02	12/4/03	1546	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-2
MW-03	12/4/03	1118	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-3
MW-04	12/4/03	1227	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-4
MW-05	12/4/03	0935	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-5
MW-06	12/4/03	0857	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-6
MW-07	12/4/03	1647	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-7
MW-08	12/4/03	1023	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-8
MW-09	12/4/03	1405	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X	X									-9
DUP-01	12/4/03	1658	Y N	HCl	S G Acetate SS. Brass Jar Encore ml Amb. Plas. Glass (VOA)	3	X	X										-10

Relinquished by: *[Signature]* Date: _____
 Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: _____

Received By: *[Signature]* Date/Time: 12/8/03 2:30PM
 Received By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

Turnaround Time: (Check)
 Same Day: _____ 72 Hour: _____
 24 Hour: _____ 5 Day: _____
 48 Hour: _____ Standard:

Lab Use Only
 Cooler Temperature: 4°C
 *Record upon arrival
URS

URS CORPORATION

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

Date: 12/01/03

CHAIN OF CUSTODY RECORD

Page 2 of 2

Data Requested in GISKey Format

UR 312061

Lab Name:		URS Project/PO Number:		Requested Analyses:										Special Instructions:	
STS		29863493.03034													
Client Name/Project Name/Location:		GeoTracker Information:													
SEAS OAKLAND #1039															
URS Project Manager:		EDF Reporting Y N Global ID:													
SCOTT ROWLANDS															
Sampler Name and Signature:		COELT Log Number:													
S. TURNER															
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont:	TDH ₂ (80154)	UOC (82608)							HOLD
ER-01	12/4/03	1538	Y N	HCl G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass (VOA)	3	X	X							UR 312061-11
TRIP BLANK	12/4/03		Y N	G G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass (VOA)	1									-12
TRIP BLANK	12/4/03		Y N	G G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass (VOA)	1									-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-
			Y N	L G	Acetate SS. Brass Jar Encore ____ml Amb. Plas. Glass VOA										-

Relinquished by:	Date:	Received By:	Date/Time:	Turnaround Time: (Check)	Lab Use Only Cooler Temperature*: <u>4°C</u> *Record upon arrival URS
<i>[Signature]</i>		<i>[Signature]</i>	12/08/03 2:30PM	Same Day: _____ 72 Hour: _____	
Relinquished by:	Date:	Received By:	Date/Time:	24 Hour: _____ 5 Day: _____	
Relinquished by:	Date:	Received By:	Date/Time:	48 Hour: _____ Standard: <input checked="" type="checkbox"/>	

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 #: UR312061
SAMPLES: See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	VOCs (including Fuel Oxygenates)	Ferrous Iron
MW-1		UR312061-1	X	X	X
MW-2		UR312061-2	X	X	X
MW-3		UR312061-3	X	X	X
MW-4		UR312061-4	X	X	X
MW-5		UR312061-5	X	X	X
MW-6		UR312061-6	X	X	X
MW-7		UR312061-7	X	X	X
MW-8		UR312061-8	X	X	X
MW-9		UR312061-9	X	X	X
Dup-1	Field duplicate of MW-7	UR312061-10	X	X	X
EB-1	Equipment blank	UR312061-11	X	X	
Trip Blank	Trip blank	UR312061-12	X	X	

Date Sampled: 12/4/03

TPH-Gasoline= Total petroleum hydrocarbon – gasoline range (C4-C12), TPH-Diesel= Total petroleum hydrocarbon – diesel range (C13-C23)

TPH-Oil= Total petroleum hydrocarbon – oil range (C24-C40) 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 tertiary butyl ether (MTBE).

STS is certified by California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP Certificate Number 1986).

DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline EPA5030/8015M	VOCs EPA5030/8260B	Ferrous Iron
Chain-of-custody (COC)	✓	✓	✓
Sample Receipt	✓	✓	✓
Holding Times	✓	✓	✓(3)
Method Blank	✓	✓	✓
Surrogate Recovery	✓	✓	NA
Laboratory Control Sample	✓	✓	NA
Matrix Spike	✓(1)	✓(2)	✓(2)
Duplicate or Spike Duplicate	✓(1)	✓(2)	✓(2)
Field Duplicate	✓	✓	NA
Trip Blank	✓	✓	NA
Equipment Blank	✓	✓	NA

✓ = Quality control evaluation criteria met

NA = Not Applicable or not analyzed

Notes:

- MS/MSD was conducted on sample MW-6. The results were within acceptance criterion.
- MS/MSD was conducted on a non-project sample. Matrix effects cannot be determined.
- Due to the instability of ferrous iron, it should be run as soon as possible after sampling. Samples were analyzed five days after sampling so results are qualified as estimated (J) for potential low bias.
- The sample narrative mistakenly states that samples were analyzed for EPA 8015M (Diesel & Oil). This analysis was neither requested nor conducted on these samples.

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
Ferrous Iron	50
TPH-Gasoline	50
VOCs	1 to 25
Ethanol	500
MTBE	2
TBA	10
Other Oxygenates	2

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

Samples did not require dilution for the requested analyses.