



December 12, 2002


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

RE: 2002 Third 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. Gholami

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 Third Quarter 2002. Quarterly groundwater monitoring will continue within the current scope of work during the fourth quarter of 2002. Please feel free to contact Taras Kruk or me at 714.835.6886 if you have questions or comments.

Respectfully Submitted,
URS CORPORATION


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

cc: Mr. Scott DeMuth, Sears Roebuck and Co.
Mr. Ryan Hartley, URS Corporation



2002 THIRD 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
December 12, 2002

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**2002 THIRD QUARTER
GROUNDWATER MONITORING REPORT
SEARS AUTO CENTER #1039
1901-1911 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
CASE I.D. # STID 1630
URS JOB NO. 29863493
FOR SEARS, ROEBUCK & CO.**

1.0 INTRODUCTION

This report has been prepared by URS Corporation on behalf of Sears, Roebuck & Co. (Sears). It presents results of the 2002 Third Quarter Groundwater Monitoring conducted at the above-referenced Site (Figure 1). The Sears Auto Center (Site) is located at 1901-1911 Telegraph Avenue in Oakland, California. The groundwater monitoring event consisted of "post purge" groundwater sample collection from eight of nine monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, and 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). The property is occupied by a Sears Auto Center, a former Chevron Service Station, and a three-story above-grade parking garage.

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 (RWQCB, San Francisco Bay Region, June 1999).

3.0 BACKGROUND

The Site consists of a Sears Auto Center, a multiple level parking structure, and a former Chevron Service Station. The Sears Auto Center is currently in operation; it is a converted former Goodyear Tire Center. The former Chevron Service Station contained three gasoline USTs and a used oil UST. The USTs were removed in January 1988, prior to Sears' ownership of the site.

An agency file review conducted by Environmental Science & Engineering, Inc. (ESE) at ACEHS and RWQCB indicated that gasoline affected soil was reportedly excavated and disposed during the UST removal project (ESE, December 27, 1995). Site data listed on the State Water Resources Control Board (SWRCB) Geotracker web site shows Chevron as the site responsible party. Site data from the Geotracker website including summaries of release information, remediation status, and regulatory history, is provided in Appendix A.

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

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 bases since June 1993. Wells MW-5, MW-6 and MW-7 have been monitored on a periodic basis since June 1994. Historical monitoring data shows that dissolved phase total petroleum hydrocarbons as gasoline-range organics (TPHg) and dissolved phase benzene have been detected in 5 of 9 wells. Available historical groundwater data (since October 1995); including depth to water, groundwater elevation, and hydrocarbon and Volatile Organic Compounds (VOC's) 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 plan to:

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

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

5.0 QUARTERLY GROUNDWATER MONITORING

The 2002 Third Quarter Groundwater Monitoring was performed on September 6, 2002. The monitoring consisted of groundwater gauging of all nine wells, and purging and sampling the following eight wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8 and 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 2002 third 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 oxygen 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 measured field parameters are listed in Table 1.

Groundwater samples were collected from eight selected monitoring wells for laboratory analysis during the 2002 Third 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 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 maintained at a temperature of 4 to 7 degrees centigrade and transported to a Southland Technical Services, Inc., a California Department of Health Services (CDHS) accredited laboratory for analysis. Chain-of-custody records were maintained throughout the sampling program.

5.3 LABORATORY ANALYSIS PROGRAM

All groundwater samples and duplicates were analyzed for TPHg, total petroleum hydrocarbons as diesel fuel range organics (TPHd), and oil range organics (TPHo) by modified EPA Method 8015M. Groundwater samples were also analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), and 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.

5.4 WELL HEAD MAINTANANCE

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. No maintenance was required during this quarter.

5.5 SITE SURVEY

In May 2002, the well field was re-surveyed in respect to MSL datum by Mariscal and Associates, Inc., licensed land surveyors. Based on the new survey data, the historic casing and groundwater elevations for monitoring wells at the Site were not recorded in respect to MSL datum. The elevation difference between the historic top of well casing data and the current survey data is approximately 70 feet (Appendix B).

5.6 WASTE MANAGEMENT

Well purge water was collected and stored in three 55-gallon DOT-approved drums. Containers were numbered to identify the source of the wastes. The containers were stored onsite and properly disposed of by Sears, Roebuck & Co., following review of the chemical analysis data.

6.0 FINDINGS

6.1 SHALLOW GROUNDWATER CONDITIONS

The measured depth to water ranged from 13.18 feet to 17.26 feet bgs or approximately 3.07 feet to 5.84 feet above MSL during the 2002 third quarter. Groundwater elevation has decreased an average of 0.41 since the 2002 second quarter monitoring event. Groundwater depths and elevations are listed in Table 1 and Appendix B. An interpretive groundwater elevation contour map, based on the 2002 third quarter water level measurements, is provided on Figure 3.

Groundwater elevation contours for the site were generated by Kriging (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 0.011 (Figure 3).

6.2 LABORATORY ANALYTICAL RESULTS

TPHg was detected in groundwater samples collected from wells MW-2 and MW-7 with concentrations of 71 micrograms per liter ($\mu\text{g/L}$) and 15,600 $\mu\text{g/L}$, respectively. TPHd and TPHo was not detected (ND) in any of the wells sampled this quarter. Benzene was detected in samples collected from monitoring well MW-7 with a concentration of 11,500 $\mu\text{g/L}$. TBA was detected in samples collected from monitoring well MW-2 at a concentration of 15.7 $\mu\text{g/L}$. 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. Detected concentrations of chlorinated VOCs ranged from 2.7 $\mu\text{g/L}$ to 32.3 $\mu\text{g/L}$.

Chemical analysis results of the 2002 Third 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 2002 third 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 usable, as qualified, for their intended purpose.” A copy of URS’s Data Validation Memos are included in Appendix D.

7.0 DISCUSSION

The 2002 third quarter groundwater monitoring event represents the 28th groundwater sampling event conducted at the Site. Groundwater elevations have decreased approximately 0.41 feet since the last sampling event conducted in June 2002. Groundwater flow direction is towards the east with a gradient of 0.011, which is consistent with previous monitoring events. TPHg and benzene were detected in one of the eight wells sampled with concentrations up to 15,600 µg/L and 11,500 µg/L, respectively. Detectable concentration of TBA was present in one groundwater sample collected this quarter at a concentration of 15.7 µg/L. TPHg and benzene concentrations in well MW-7 have steadily increased during the last several years suggesting that the affected groundwater plume is migrating to the east. The suspected source is the former gasoline USTs and fuel dispensing area of the former Chevron station on the Site.

Chlorinated VOCs have been detected in both the upgradient well MW-1 and the downgradient well MW-9 during this, and previous, groundwater sampling events. Potential onsite sources of the chlorinated compounds 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 a diameter of approximately 200 feet. URS recommends that two additional groundwater monitoring wells be installed east of the former Chevron service station to provide additional plume definition immediately down-gradient of the suspected source area. The proposed monitoring well locations are shown on Figure 2.

8.0 SCHEDULE

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

- Submittal of Monitoring Well Installation Work Plan: January 2003,
- Quarterly groundwater monitoring of wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8 and MW-9: December 2002,
- Submittal of 2002 Fourth Quarter Groundwater Monitoring Report to ACEHS: January 31, 2003.

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,

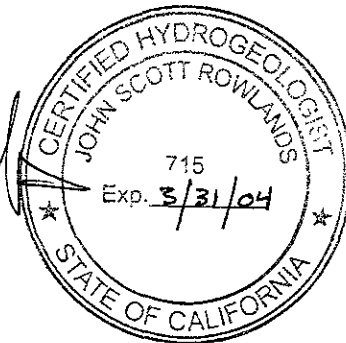
URS CORPORATION

Robert Kovacs

Robert Kovacs
Senior Staff Geologist

J.S. Rowlands

J.S. Rowlands, R.G., C.HG.
Senior Project 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.
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- 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.
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- 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 Draft*, Former Sears Retail Center #1039, 1901- 1911 Telegraph Avenue, Oakland, California, September 30.

TABLES

Table 1
2002 3rd Quarter Groundwater Levels and Parameters
Sears Retail Center Store No. 1039
Oakland, California

Monitoring Well No.	Date Collected	Notes	Sample Date	GROUNDWATER LEVELS				GROUNDWATER SAMPLING FIELD PARAMETERS					
				Product Thickness (ft)	Depth to Groundwater (feet bgs)	Casing Elevation (MSL)	Groundwater Elevation (MSL)	Temp. (Celsius)	pH	Cond (µS/cm)	O.R.P. (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
MW-1	9/6/02	--	9/6/02	NA	15.15	20.99	5.84	20.53	6.23	937	190.5	31.8	0.12
MW-2	9/6/02	--	9/6/02	NA	14.91	20.50	5.59	22.25	6.47	1538	-82.3	1.6	0.00
MW-3	9/6/02	--	9/6/02	NA	16.95	22.29	5.34	22.04	6.25	694	194.5	0.0	0.00
MW-4	9/6/02	--	9/6/02	NA	13.46	18.61	5.15	22.25	6.58	1673	-0.5	0.0	0.00
MW-5	9/6/02	--	9/6/02	NA	13.18	18.76	5.58	22.34	6.77	1745	-124.2	92.7	0.00
MW-6	9/6/02	4	9/6/02	NA	14.69	18.91	4.22	NA	NA	NA	NA	NA	NA
MW-7	9/6/02	--	9/6/02	NA	16.16	20.39	4.23	23.08	6.59	1176	-128.0	6.1	0.00
MW-8	9/6/02	--	9/6/02	NA	17.26	21.12	3.86	22.60	6.46	603	127.2	37.2	2.29
MW-9	9/6/02	--	9/6/02	NA	16.13	19.20	3.07	22.77	6.58	1104	135.4	14.4	0.00

Notes: MSL - Mean Sea Level
 BGS - Below ground surface
 Groundwater Elevation reference to MSL
 Groundwater Elevation = Top of casing elevation - Depth to Water
 1 Sheen observed on water surface
 2 Petroleum odor in groundwater
 3 Well casing damaged
 4 Well not sampled
 SP - Separate phase product in well
 NA - Not analyzed/Not available

µS/cm - microSiemens per centimeter
 mV - millivolt
 mg/L - milligrams per liter
 NTU - nephelometric turbidity units

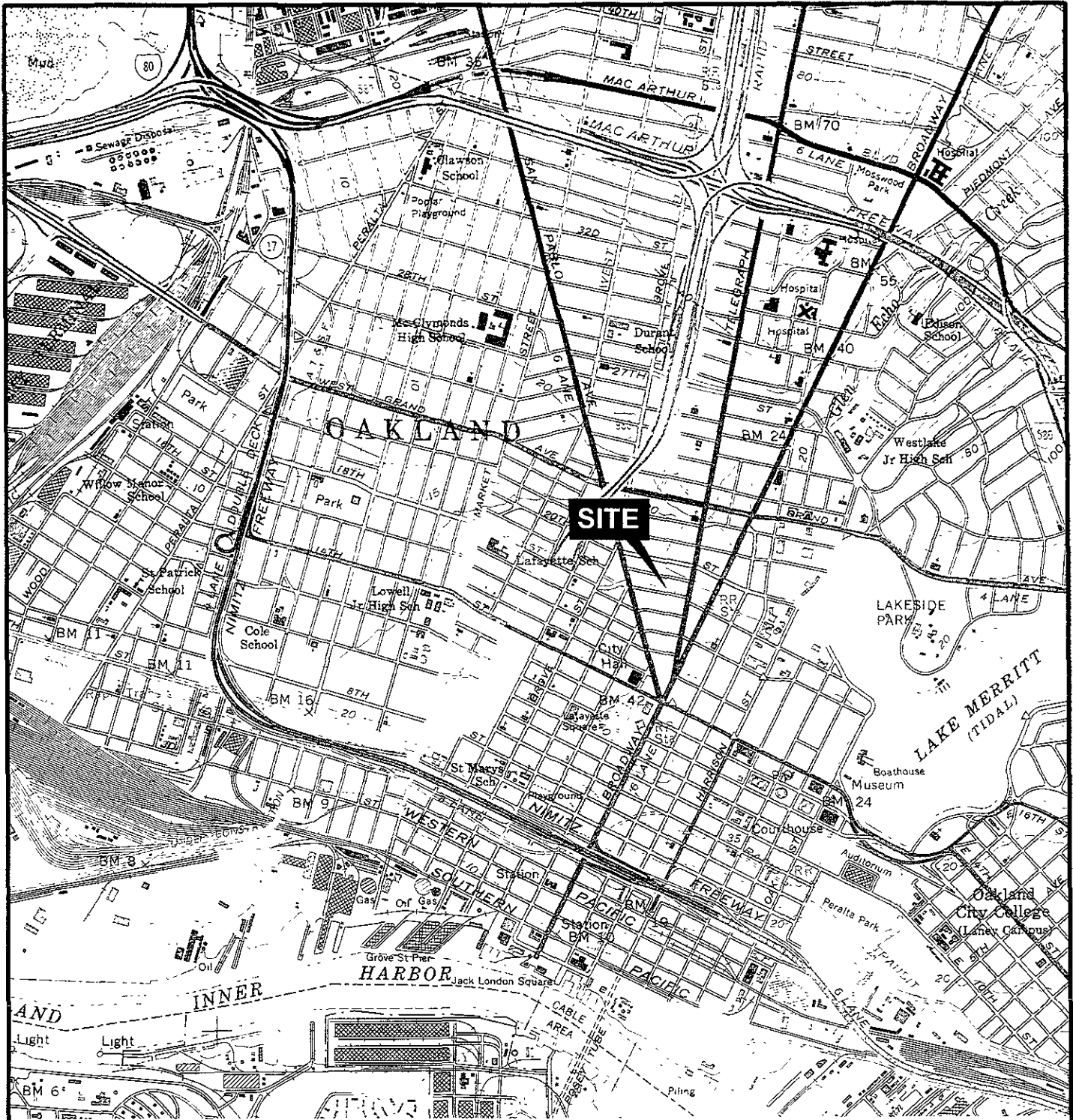
Table 2
2002 3rd Quarter Groundwater Analytical Results
Sears Retail Center Store No. 1039
Oakland, California

Monitoring Well No.	Sample Date	Notes	LABORATORY ANALYTICAL RESULTS																
			8015M			Volatile Organics by GC/MS 8260B													
			TPHg (µg/L)	TPHd (µg/L)	TPHo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)	PCE (µg/L)	TCE (µg/L)	1,2-DCA (µg/L)	cis-1,2-DCE (µg/L)	1,1-DCE (µg/L)
MW-1	9/6/02	--	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	32.3	< 2.5	< 5.0	< 5.0	< 5.0
MW-2	9/6/02	--	71	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	15.7	< 2.5	2.7	9.7	< 5.0	< 5.0
MW-3	9/6/02	--	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	28.0	9.3	< 5.0	< 5.0	< 5.0
MW-4	9/6/02	--	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0
MW-5	9/6/02	--	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0
MW-6	9/6/02	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	9/6/02	--	15,600	< 500	< 2000	11,500	< 1.0	< 1.0	515	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0
MW-7	9/6/02	1	17,400	< 500	< 2000	11,300	< 1.0	< 1.0	510	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	< 2.5	< 2.5	< 5.0	< 5.0	< 5.0
MW-8	9/6/02	4	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	4.5	< 2.5	< 5.0	< 5.0	< 5.0
MW-9	9/6/02	--	< 50	< 500	< 2000	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10.0	28.1	10.6	24.2	< 5.0	< 5.0

Notes:
1: Duplicate sample
2: Petroleum odor in groundwater
3: Well casing is damaged
4: Well not Sampled
J - Bunker-C detections were quantitated against the diesel standard and flagged as estimated concentrations
< - Analyte not detected above indicated method detection limit
NA: Not analyzed/Not available

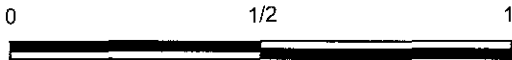
BTEX = Volatile aromatic constituents Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020/8021B or 8260B
TPHg = Total Petroleum Hydrocarbons as gasoline range hydrocarbons by EPA Method 8015 (modified)
TPHd = Total Petroleum Hydrocarbons as diesel range hydrocarbons by EPA Method 8015 (modified)
TRPo = Total Petroleum Hydrocarbons as oil range 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 - Trichloroethane
1,2-DCA - 1,2-Dichloroethane
cis-1,2-DCE - CIS-1,2-Dichloroethene
1,1-DCE - 1,1 Dichloroethene

FIGURES



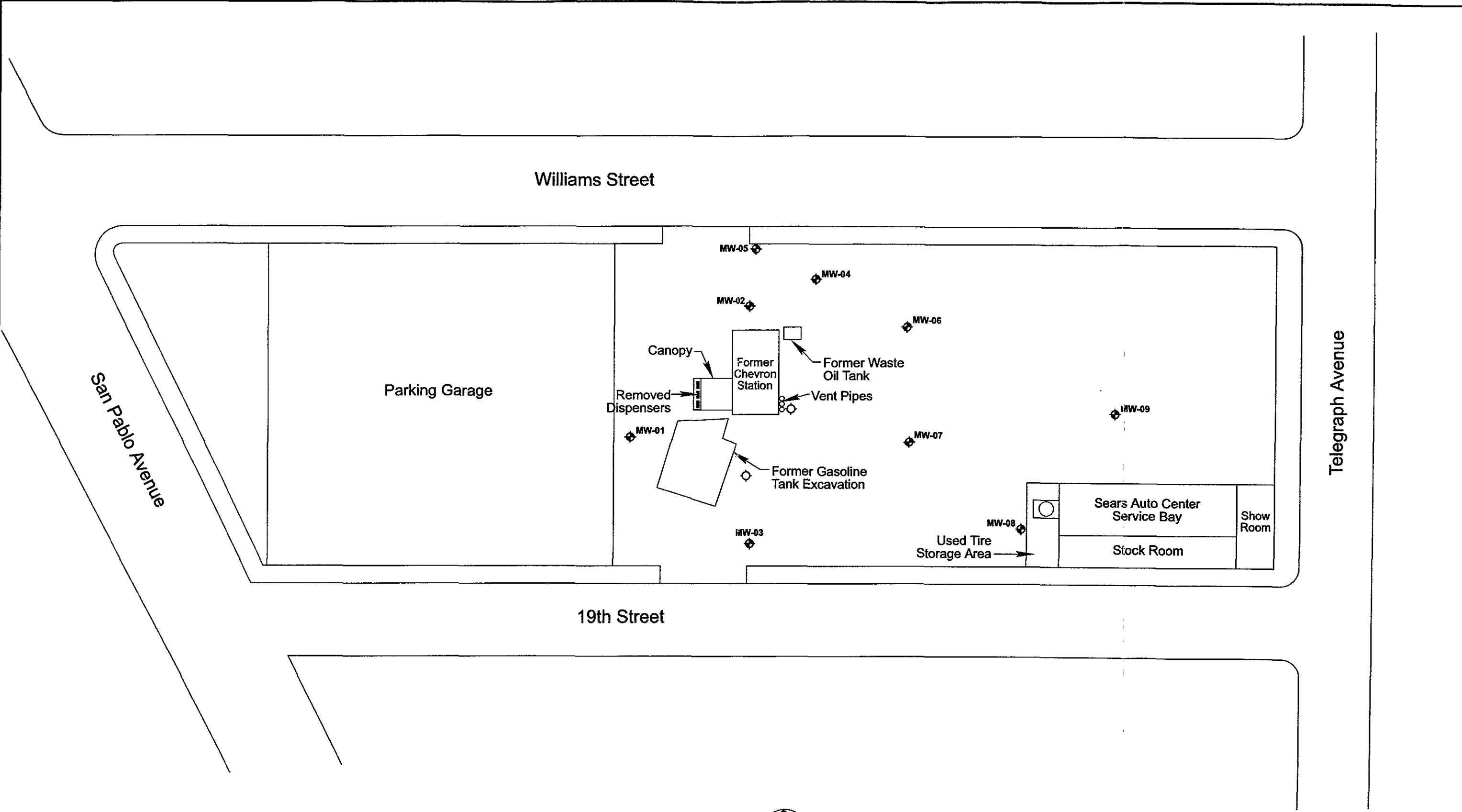
REFERENCE: USGS 7.5 Minute Series Oakland West, CA Quad, 1959, Photorevised 1980

FIGURE 1
VICINITY MAP
 SEARS AUTO CENTER #1039
 1901-1911 TELEGRAPH AVENUE
 OAKLAND, CALIFORNIA
 For Sears, Roebuck & Co.



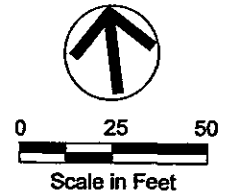
Scale in Miles

URS



EXPLANATION

- MW-15 **MONITORING WELL LOCATION**
- ◊ **PROPOSED MONITORING WELL LOCATION**



PLOT PLAN	
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Project No.: 29863493	Figure 2
Date: DECEMBER 2002	

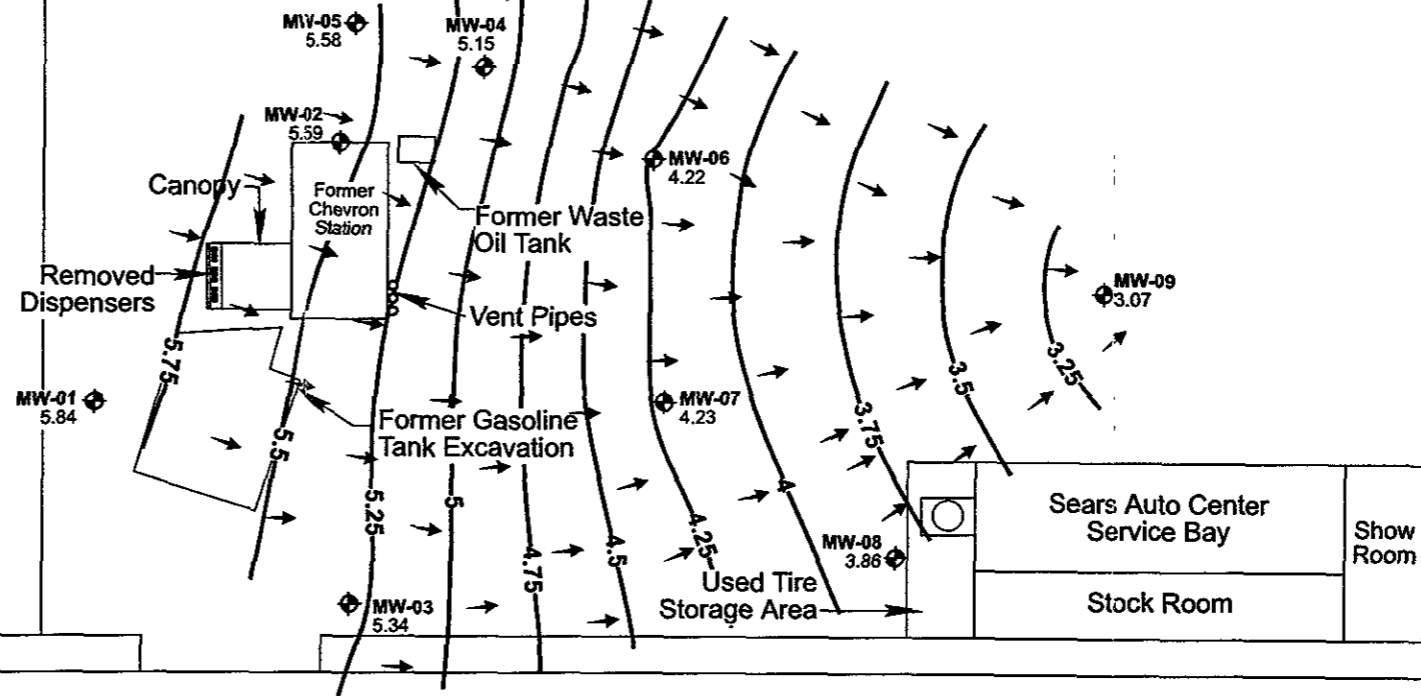
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Williams Street

San Pablo Avenue

Telegraph Avenue

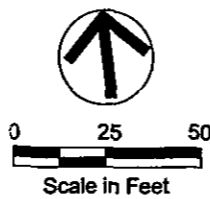
Parking Garage



19th Street

EXPLANATION

- MW-15 MONITORING WELL LOCATION
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- 5.84 GROUNDWATER ELEVATION



GROUNDWATER GRADIENT MAP (SEPTEMBER 2002)	
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Project No.: 29863493	Figure 3
Date: DECEMBER 2002	

L:\Sears Oakland\GW gradient map sept 02 oakland.mxd 10/02

Williams Street

Telegraph Avenue

San Pablo Avenue

Parking Garage

MW-05
<50

MW-04
<50

MW-02
71

MW-06
NA

MW-09
<50

Canopy
Removed
Dispensers

Former
Chevron
Station

Former
Waste
Oil Tank
Vent Pipes

MW-01
<50

Former Gasoline
Tank Excavation

MW-07
15,600

Sears Auto Center
Service Bay

Show
Room

Used Tire
Storage Area

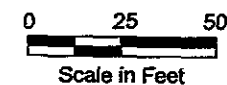
MW-08
<50

MW-03
<50

19th Street

EXPLANATION

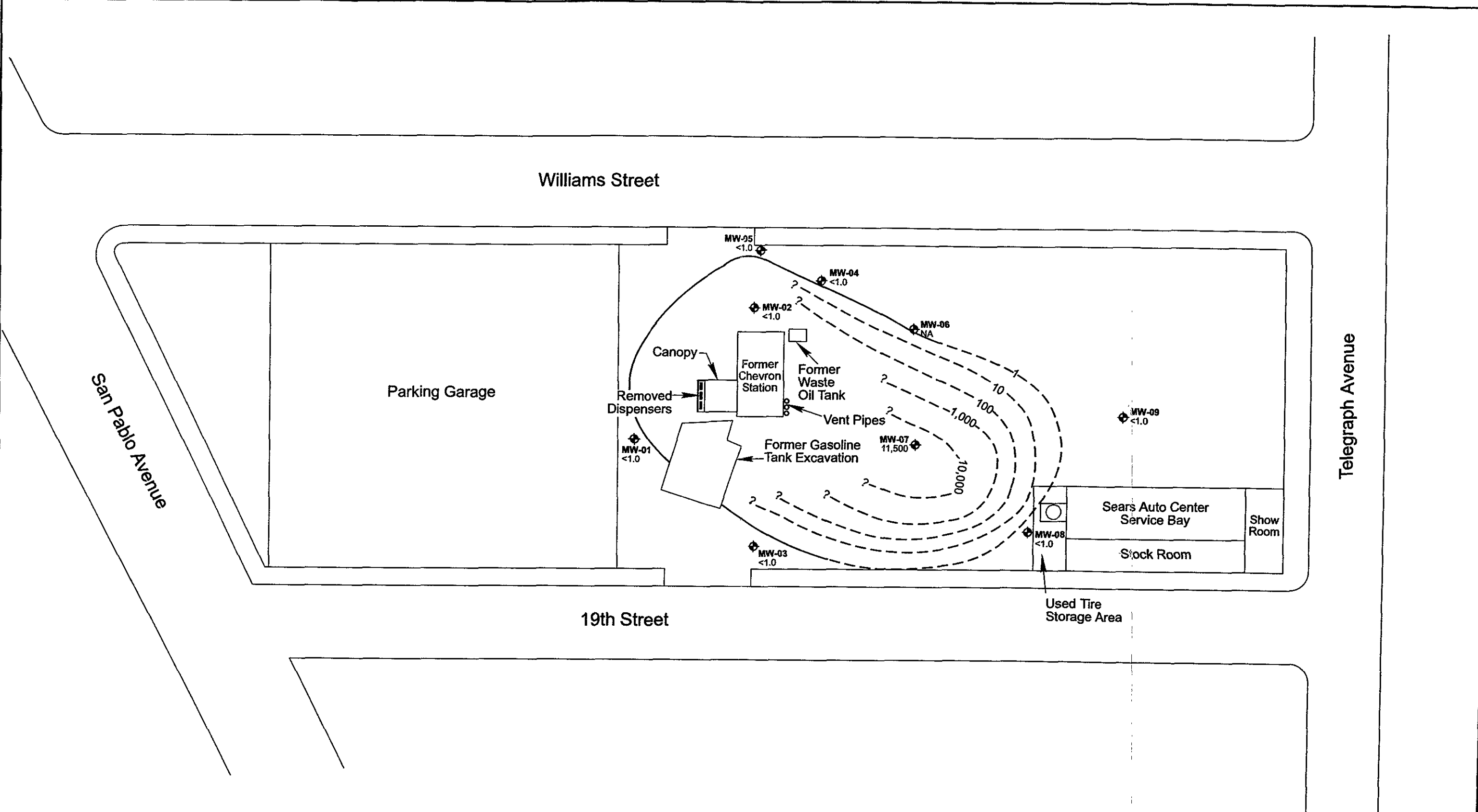
- MW-02
15,600 MONITORING WELL LOCATION WITH TPHg CONCENTRATION IN $\mu\text{g/L}$
- 100-- TPHg CONCENTRATION



**TPHg ISOCONCENTRATION
CONTOUR PLOT PLAN MAP
(SEPTEMBER 2002)**

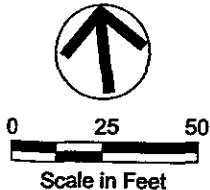
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Project No.: 29863493	Figure 4
Date: DECEMBER 2002	

L:\Sears Oakland\TPHG iso 02 sepr oakland.fn10 10/02



EXPLANATION

-  MW-07
11,500 MONITORING WELL LOCATION WITH BENZENE CONCENTRATION IN µg/L
-  10 -- BENZENE CONCENTRATION



BENZENE ISOCONCENTRATION CONTOUR MAP (SEPTEMBER 2002)	
Project: SEARS AUTO CENTER #1039, 1901-1911 TELEGRAPH AVE., OAKLAND, CA	
Project No.: 29863493	Figure 5
Date: DECEMBER 2002	

L:\sears oakland\benzene iso sept 02 oakland.fh10 10/02

APPENDIX A

SWRCB GEOTRACKER SITE DATA

Leaking Underground Fuel Tank Report

CHEVRON (OAKLAND)
1911 TELEGRAPH AVE
OAKLAND , CA 94612
([Show this Site on Map](#))

Regional Board - Case #: 01-0336
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
Local Agency (lead agency) - Case #: 1630
ALAMEDA COUNTY LOP - (UNK)

Choose a Report To View**Site Info:**

- [Regulatory History](#)
- [Locational Information](#)
- [Analytical Data](#)

Leak Info:

- [Detailed Release Information](#)
- [Remediation on Site](#)

Additional Info:

- 0 Monitoring Wells For This LUFT Site
- 0 Public Water Well(s) Estimated to be Within 1/2 Mile of this LUFT Site

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

Detailed Release Information		
CHEVRON (OAKLAND) 1911 TELEGRAPH AVE OAKLAND , CA 94612 (Show this Site on Map)	Regional Board - Case #: 01-0336 SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) 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	
Description: STAT 8 FROM LOP. CLOSURE DATE MISSING.		
SUBSTANCES RELEASED:		
Begin Date	Substance	Quantity
UNKNOWN	WASTE OIL	

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

Remediation On Site		
CHEVRON (OAKLAND) 1911 TELEGRAPH AVE OAKLAND , CA 94612 (Show this Site on Map)	<u>Regional Board - Case #: 01-0336</u> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <u>Local Agency (lead agency) - Case #: 1630</u> 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](#)

Regulatory History

CHEVRON (OAKLAND)
1911 TELEGRAPH AVE
OAKLAND , CA 94612
([Show this Site on Map](#))

Regional Board - Case #: 01-0336
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
Local Agency (lead agency) - Case #: 1630
ALAMEDA COUNTY LOP - (UNK)

<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](#)

Locational Information		
CHEVRON (OAKLAND) 1911 TELEGRAPH AVE OAKLAND , CA 94612 (Show this Site on Map)	Regional Board - Case #: 01-0336 SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) Local Agency (lead agency) - Case #: 1630 ALAMEDA COUNTY LOP - (UNK)	
<u>Physical Location:</u>		
<u>Global ID</u> T0600100308	<u>Latitude</u> 37.80913	<u>Longitude</u> -122.269338
<u>Geographic Data Details:</u>		
<u>Datum</u> North American Datum 1983	<u>Survey Method</u> Geocoded	
<u>Projection</u> Geographic Projection	<u>Estimated Accuracy</u> 376.24 feet	
<u>Source of Data</u> ETAK Geocoding Class 1 Block Match - Street Segment Exact Address Match		

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

APPENDIX B

HISTORICAL GROUNDWATER MONITORING RESULTS

APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS



Southland Technical Services, Inc.
Environmental Laboratories

09-20-2002

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

Project: 29863493/Sears Oakland 1039
Project Site: 1901 Telegraph Ave., Oakland, CA
Sample Date: 09-06-2002
Lab Job No.: UR209047

Dear Mr. Rowlands:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 09-08-2002 and analyzed by the following EPA methods:

EPA 8015M (Gasoline)
EPA 8015M (Diesel & Oil)
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

09-20-2002

Client: URS Corporation
 Project: 29863493/Sears Oakland 1039
 Project Site: 1901 Telegraph Ave., Oakland, CA
 Matrix: Water
 Batch No.: A112-GW1/for Gasoline
 Batch No.: E111-DW1/for Diesel & Oil

Lab Job No.: UR209047
 Date Sampled: 09-06-2002
 Date Received: 09-08-2002
 Date Analyzed: 09-12-2002
 Date Analyzed: 09-11-2002

EPA 8015M (Gasoline, Diesel & Oil)
Reporting Unit: $\mu\text{g/L}$ (ppb)

Date of Analysis for TPH (Gasoline)		09-12-02	09-12-02	09-12-02	09-12-02	09-12-02
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
Date of Analysis for TPH (D & O)		09-11-02	09-11-02	09-11-02	09-11-02	09-11-02
Date of Extraction for TPH (D & O)		09-11-02	09-11-02	09-11-02	09-11-02	09-11-02
Preparation Method for TPH (D & O)		3510C	3510C	3510C	3510C	3510C
LAB SAMPLE I.D.			UR209047-1	UR209047-2	UR209047-3	UR209047-4
CLIENT SAMPLE I.D.			MW-1	MW-2	MW-3	MW-4
Analyte	MDL	MB				
TPH-Gasoline (C4 - C12)	50	ND	ND	71	ND	ND
TPH-Diesel (C13 - C23)	500	ND	ND	ND	ND	ND
TPH-Oil (C24 - C40)	2000	ND	ND	ND	ND	ND
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	125	130	85	127
Diethyl Phthalate (for TPH-D & O)	5 ppm	70-130	116	100	89	91

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

09-20-2002

Client: URS Corporation
 Project: 29863493/Sears Oakland 1039
 Project Site: 1901 Telegraph Ave., Oakland, CA
 Matrix: Water
 Batch No.: AI12-GW1/for Gasoline
 Batch No.: EI11-DW1/for Diesel & Oil

Lab Job No.: UR209047
 Date Sampled: 09-06-2002
 Date Received: 09-08-2002
 Date Analyzed: 09-12-2002
 Date Analyzed: 09-11-2002

EPA 8015M (Gasoline, Diesel & Oil)
Reporting Unit: $\mu\text{g/L}$ (ppb)

Date of Analysis for TPH (Gasoline)		09-12-02	09-12-02	09-12-02	09-12-02	09-12-02
Preparation Method for TPH (Gasoline)		5030	5030	5030	5030	5030
Date of Analysis for TPH (D & O)		09-11-02	09-11-02	09-11-02	09-11-02	09-11-02
Date of Extraction for TPH (D & O)		09-11-02	09-11-02	09-11-02	09-11-02	09-11-02
Preparation Method for TPH (D & O)		3510C	3510C	3510C	3510C	3510C
LAB SAMPLE I.D.		UR209047-5	UR209047-6	UR209047-7	UR209047-8	UR209047-9
CLIENT SAMPLE I.D.		MW-5	MW-7	MW-8	MW-9	DUP-1
Analyte	MDL					
TPH-Gasoline (C4 - C12)	50	ND	15,600	ND	ND	17,400
TPH-Diesel (C13 - C23)	500	ND	ND	ND	ND	ND
TPH-Oil (C24 - C40)	2000	ND	ND	ND	ND	ND
Surrogate	Spk Conc.	ACP%	%RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	130	124	77	108
Dioctyl Phthalate (for TPH-D & O)	5 ppm	70-130	89	90	87	87

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

09-20-2002

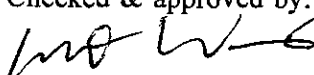
Client: URS Corporation
Project: 29863493/Sears Oakland 1039
Project Site: 1901 Telegraph Ave., Oakland, CA
Matrix: Water
Batch No.: AI12-GW1/for Gasoline

Lab Job No.: UR209047
Date Sampled: 09-06-2002
Date Received: 09-08-2002
Date Analyzed: 09-12-2002

EPA 8015M (Gasoline, Diesel & Oil)
Reporting Unit: µg/L (ppb)

Date of Analysis for TPH (Gasoline)		09-12-02	09-12-02	09-12-02		
Preparation Method for TPH (Gasoline)		5030	5030	5030		
Date of Analysis for TPH (D & O)		09-11-02				
Date of Extraction for TPH (D & O)		09-11-02				
Preparation Method for TPH (D & O)		3510C				
LAB SAMPLE ID.			UR209047-10	UR209047-11		
CLIENT SAMPLE ID.			EB-1	TB		
Analyte	MDL	MB				
TPH-Gasoline (C4 - C12)	50	ND	ND	ND		
TPH-Diesel (C13 - C23)	500	ND	NA	NA		
TPH-Oil (C24 - C40)	2000	ND	NA	NA		
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	
BFB (for TPH-Gasoline)	20 ppb	70-130	125	81	106	
Diethyl Phthalate (for TPH-D & O)	5 ppm	70-130	116			

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
Project: 29863493/Sears Oakland 1039

Lab Job No.: UR209047
Matrix: Water

Date Reported: 09-20-2002
Date Sampled: 09-06-2002

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

Date ANALYZED		09-14-02	09-14-02	09-14-02	09-14-02	09-14-02	09-14-02
PREPARATION METHOD		5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	1	1	1	1	1
LAB SAMPLE LD.			UR209047-1	UR209047-2	UR209047-3	UR209047-4	UR209047-5
CLIENT SAMPLE LD.			MW-1	MW-2	MW-3	MW-4	MW-5
COMPOUND	MDL	MB					
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Iodomethane	5	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND
Bromochloromethane	5	ND	ND	ND	ND	ND	ND
Chloroform	5	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	ND	ND	9.7	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Trichloroethene	2.5	ND	ND	2.7	9.3	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND
Dibromomethane	5	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	5	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND
Bromobenzene	5	ND	ND	ND	ND	ND	ND
Toluene	1	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.5	ND	32.3	ND	28.0	ND	ND
1,2-Dibromoethane(EDB)	5	ND	ND	ND	ND	ND	ND



Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation
Project: 29863493/Sears Oakland 1039

Lab Job No.: UR209047
Matrix: Water

Date Reported: 09-20-2002
Date Sampled: 09-06-2002

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	
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	
1,1,1,2-Tetrachloroethan	5	ND	ND	ND	ND	ND	ND	
Ethylbenzene	1	ND	ND	ND	ND	ND	ND	
Total Xylenes	2	ND	ND	ND	ND	ND	ND	
Styrene	5	ND	ND	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethan	5	ND	ND	ND	ND	ND	ND	
1,2,3-Trichloropropane	5	ND	ND	ND	ND	ND	ND	
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	
2-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	
4-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	
Sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	
1,2-Dibromo-3-Chloropropane	5	ND	ND	ND	ND	ND	ND	
Hexachlorobutadiene	5	ND	ND	ND	ND	ND	ND	
Naphthalene	5	ND	ND	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	
Acetone	25	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	25	ND	ND	ND	ND	ND	ND	
Carbon disulfide	25	ND	ND	ND	ND	ND	ND	
4-Methyl-2-pentanone	25	ND	ND	ND	ND	ND	ND	
2-Hexanone	25	ND	ND	ND	ND	ND	ND	
Vinyl Acetate	25	ND	ND	ND	ND	ND	ND	
MTBE	2	ND	ND	ND	ND	ND	ND	
ETBE	2	ND	ND	ND	ND	ND	ND	
DIPE	2	ND	ND	ND	ND	ND	ND	
TAME	2	ND	ND	ND	ND	ND	ND	
t-Butyl Alcohol	10	ND	ND	15.7	ND	ND	ND	
SURROGATE	SPK Conc.	%RC	%RC	%RC	%RC	%RC	%RC	Accept Limit%
Dibromofluoro-methane	25	82	89	80	94	99	94	79-126
Toluene-d8	25	99	93	81	86	88	86	79-121
Bromofluoro-benzene	25	86	90	98	95	93	90	71-131

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL). * Result from a higher dilution analysis.



Southland Technical Services, Inc.

Environmental Laboratories

Client: URS Corporation
Project: 29863493/Sears Oakland 1039

Lab Job No.: UR209047
Matrix: Water

Date Reported: 09-20-2002
Date Sampled: 09-06-2002

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

Date ANALYZED		09-14-02	09-14-02	09-14-02	09-14-02	09-14-02	09-14-02	09-14-02
PREPARATION METHOD		5030	5030	5030	5030	5030	5030	5030
DILUTION FACTOR		1	50	1	1	50	1	1
LAB SAMPLE ID.			UR209047-6	UR209047-7	UR209047-8	UR209047-9	UR209047-10	UR209047-11
CLIENT SAMPLE ID.			MW-7	MW-8	MW-9	DUP-1	EB-1	TB
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	24.2	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	11,500	ND	ND	11,300	ND	ND
Trichloroethene	2.5	ND	ND	ND	10.6	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	4.5	28.1	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/Sears Oakland 1039

Lab Job No.: UR209047
Matrix: Water

Date Reported: 09-20-2002
Date Sampled: 09-06-2002

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
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	515	ND	ND	510	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	SPK Conc.	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Dibromofluoro-methane	25	82	94	98	98	97	98	98
Toluene-d8	25	99	116	80	87	87	89	89
Bromofluoro-benzene	25	86	92	89	92	94	90	90

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below DF × MDL). * Result from a higher dilution analysis.



Southland Technical Services, Inc.
Environmental Laboratories

09-20-2002

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

Client: URS Corporation
Project: 29863493/Sears Oakland 1039
Matrix: Water
Batch No.: EI11-DW1

Lab Job No.: UR209047
Lab Sample ID: UR209047-2
Date Analyzed: 09-11-2002

**I. MS/MSD Report
Unit: ppm**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-d	ND	20	19.5	19.6	97.5	98.0	0.5	30	70-130

**II. LCS Result
Unit: ppm**

Analyte	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
TPH-d	22.5	20	112.5	80-120

ND: Not Detected (at the specified limit).



Southland Technical Services, Inc.
Environmental Laboratories

09-20-2002

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

Client: URS Corporation
Project: 29863493/Sears Oakland 1039
Matrix: Water
Batch No.: AI12-GW1

Lab Job No.: UR209047
Lab Sample ID: UR209047-5
Date Analyzed: 09-12-2002

**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	1,020	908	102.0	90.8	11.6	30	70-130

**II LCS Result
Unit: ppb**

Analyte	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
TPH-G	950	1000	95.0	80-120

ND: Not Detected (at the specified limit).



Southland Technical Services, Inc.
Environmental Laboratories

09-20-2002

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

Client: URS Corporation
Project: 29863493/Sears Oakland 1039
Matrix: Water
Batch No: 0913-VOAW2

Lab Job No.: UR209047
Sample ID: UR209047-4
Date Analyzed: 09-14-2002

**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	19.2	15.0	96.0	75.0	24.6	30	70-130
Benzene	ND	20	20.4	17.0	102.0	85.0	18.2	30	70-130
Trichloro-ethene	ND	20	16.0	14.2	80.0	71.0	11.9	30	70-130
Toluene	ND	20	16.8	14.3	84.0	71.5	16.1	30	70-130
Chlorobenzene	ND	20	19.5	16.5	97.5	82.5	16.7	30	70-130

**II. LCS Result
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	21.0	20.0	105.0	80-120
Benzene	22.1	20.0	110.5	80-120
Trichloro-ethene	17.5	20.0	87.5	80-120
Toluene	17.8	20.0	89.0	80-120
Chlorobenzene	20.2	20.0	101.0	80-120

ND: Not Detected.

CHAIN OF CUSTODY RECORD

Lab Job Number UR209047

Client: <u>VCS CORPORATION</u>						Analyses Requested										T.A.T. Requested <input type="checkbox"/> Rush 8 12 24 hours <input type="checkbox"/> 2-3 days <input checked="" type="checkbox"/> Normal						
Address <u>2020 E. 1ST STREET SANTA ANA CA 92705</u>						602/8021 (BTEX, MTBE)	8015M (Gasoline)	8015M (Diesel)	8260B (VOCs)	8260B (Oxygenates, BTEX)	8260B (MTBE Confirm.)	TPH _g (8015M)	VOC (8260B)	TPH _h TPH _o (8015M)	Sample Condition <input checked="" type="checkbox"/> Chilled <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Sample seals							
Report Attention <u>SCOTT ROWLANDS</u>		Phone <u>(714) 835 6886</u>		Fax <u>(714) 667 7147</u>											Sampled by <u>Robert Kovacs</u>		Project Name/No. <u>29863493</u>		Project Site <u>OAKLAND 1901 TELEGRAPH AVE</u>		Remarks	
SEARS/OAKLAND 1039																						
Client Sample ID	Lab Sample ID	Sample Collect		Matrix Type	Sample Preserve	No., type* & size of container																
		Date	Time																			
MW-1	UR209047-1	9-6	815	W	HCl	3V VOA							X	X								
MW-1			815		NONE	1G									X							
MW-3	-3		910		HCl	3V							X	X								
MW-3			910		NONE	1G									X							
MW-4	-4		1005		HCl	3V							X	X								
MW-4			1005		NONE	1G									X							
MW-5	-5		1110		HCl	3V							X	X								
MW-5			1110		NONE	1G									X							
MW-8	-7		1200		HCl	3V							X	X								
MW-8			1200		NONE	1G									X							
MW-9	-8		1245		HCl	3V							X	X								
MW-9			1245		NONE	1G									X							
MW-2	-2		1355		HCl	3V							X	X								
MW-2			1355		NONE	1G									X							
MW-7	-6		1450		HCl	3V							X	X								
MW-7		✓	1450	✓	NONE	1G									X							
Relinquished by <u>Robert Kovacs</u> Company <u>VCS</u>		Date <u>9-6</u>	Time <u>1600</u>	Received by <u>[Signature]</u> Company <u>STS</u>		Container types: M=Metal Tube A=Air Bag P=Plastic bottle G=Glass bottle V=VOA vial																
Relinquished by _____ Company _____		Date _____	Time _____	Received by _____ Company _____																		

CHAIN OF CUSTODY RECORD

Lab Job Number UR209047

Client: <u>URS CORPORATION</u>							Analyses Requested							T.A.T. Requested <input type="checkbox"/> Rush 8 12 24 hours <input type="checkbox"/> 2-3 days <input checked="" type="checkbox"/> Normal			
Address <u>2020 E 1ST STREET SANTA ANA CA 92705</u>							602/8021 (BTEX,MTBE)	8015M (Gasoline)	8015M (Diesel)	8260B (VOCs)	8260B (Oxygenates, BTEX)	8260B (MTBE Confirm.)	TPHs (8015M)	VOC (8260B)	TPHd TPHo (8015M)	Sample Condition <input checked="" type="checkbox"/> Chilled <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Sample seals	
Report Attention <u>SCOTT ROWLAND</u>	Phone <u>(714) 8356886</u>	Fax <u>(714) 6673144</u>	Sampled by <u>Robert Kovacs</u>													Remarks	
Project Name/No. <u>2986349</u>	Project Site <u>JEARS OAKLAND 1039 1901 TELEGRAPH AVE, OAKLAND</u>																
Client Sample ID	Lab Sample ID	Sample Collect		Matrix Type	Sample Preserve	No.,type* & size of container										Remarks	
		Date	Time														
DUP-1	UR209047-9	9-6	1500	W	HCl	3v							X	X			
DUP-1			1500		WNE	1G											X
EB-1	-10		1520		HCl	3V							X	X			
TB	-11		N/A		HCl	2v							X	X			
Relinquished by <u>Robert Kovacs</u>		Company <u>URS</u>		Date <u>9-6</u>	Time <u>1600</u>	Received by <u>Young</u>		Company <u>STS</u>		Container types: M=Metal Tube A=Air Bag P=Plastic bottle G=Glass bottle V=VOA vial							
Relinquished by		Company		Date	Time	Received by		Company									

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 #: UR209047
SAMPLES: See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	TPH-Diesel, TPH-Oil	VOCs (including Fuel Oxygenates)
MW-1		UR209047-1	X	X	X
MW-3		UR209047-3	X	X	X
MW-4		UR209047-4	X	X	X
MW-5		UR209047-5	X	X	X
MW-8		UR209047-7	X	X	X
MW-9		UR209047-8	X	X	X
MW-2		UR209047-2	X	X	X
MW-7		UR209047-6	X	X	X
Dup-1	Field duplicate of MW-7	UR209047-9	X	X	X
EB-1	Equipment blank	UR209047-10	X		X
TB	Trip Blank	UR209047-11	X		X

Date Sampled: 9/6/02

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

TPH-Oil= Total petroleum hydrocarbons – 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 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	TPH-Diesel, and TPH-Oil EPA3510C/8015M	VOCs EPA5030/8260B
Chain-of-custody (COC)	✓	✓	✓
Sample Receipt	✓	✓	✓
Holding Times	✓	✓	✓
Method Blank	✓	✓	✓
Surrogate Recovery	✓	✓	✓
Laboratory Control Sample	✓	✓	✓
Matrix Spike	✓(1)	✓(2)	✓(3)
Duplicate or Spike Duplicate	✓(1)	✓(2)	✓(3)
Field Duplicate	✓	✓	✓
Equipment Blank	✓	NA	✓
Trip Blank	✓	NA	✓

✓ = Quality control evaluation criteria met.

NA = Not Applicable or Not Analyzed

Notes:

- MS/MSD was conducted on sample MW-5. The results were within acceptance criterion.
- MS/MSD was conducted on sample MW-2. The results were within acceptance criterion.
- 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-Diesel	500
TPH-Oil	2000
TPH-Gasoline	50
VOCs	1 to 25
MTBE	2
TBA	10
Other Oxygenates	2

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

Samples MW-7, and Dup-1 required dilution for the 8260B analysis due to the high concentration of non-target and target analytes (Gasoline, and Benzene). For these samples, the results from the 8260B analysis with the exception of Benzene were all non-detect with elevated reporting limits. The data user must evaluate the utility of the non-detect VOC results with elevated reporting limits.