URS

STID 1082

March 1, 2002

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

RE: 2001 Third Quarter Groundwater Monitoring and Temporary Closure of UST Vault
Former Sears Retail Center #1058
2633 Telegraph Avenue
Oakland, California
Case I.D. #STID 1082
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 and temporary closure of the UST vault conducted at the above-referenced site during the Third quarter 2001. Quarterly groundwater monitoring will continue within the current scope of work with the addition of two down-gradient monitoring wells which were installed during the first 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
Mr. Tim Lester, Environmental Equalizers

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CASE I.D. # STID 1082
URS JOB NO. 22-00000139.01
FOR SEARS, ROEBUCK & CO.

1.0 INTRODUCTION

This report has been prepared by URS Corporation (URS; formerly as Dames & Moore) on behalf of Sears, Roebuck & Co. (Sears). It presents results of the 2001 Third Quarter Groundwater Monitoring and temporary closure activities for an underground storage tank (UST) vault conducted at the above-referenced Site (Figure 1). The former Sears retail center (Site) is located at 2633 Telegraph Avenue in Oakland, California. The temporary vault closure activities consisted of sampling and analysis of soil within the UST vault, and sealing and securing the vault manway. The groundwater monitoring event consisted of "post purge" groundwater sample collection from one of three monitoring wells (FOMW-1, FOMW-2, FOMW-3) installed on the Site during May 2000. Groundwater from monitoring well FOMW-1 was not sampled due to the presence of separate phase product in the well casing. However, a sample of separate phase product present in the well casing was collected for analysis. Due to Site construction activities, monitoring well FOMW-2 was not accessible for sampling during this quarterly event. The purpose of the groundwater monitoring was to assess groundwater conditions in the vicinity of a slurry-filled 10,000-gallon heating oil UST (Figure 2). The work is being performed under regulatory oversight of the Alameda County Environmental Health Service (ACEHS).

2.0 SITE DESCRIPTION

The Site is bounded by 27th Street to the north, Telegraph Avenue to the east, Sycamore Street to the south, and Northgate Avenue to the west (Figure 2). The property is occupied by a vacant Sears retail store (currently undergoing redevelopment) that was constructed in 1930 and an above-grade parking garage that was constructed in the 1960's. Prior to the construction of the store, single and multi-family residences dating to the turn of the century occupied the Site. The former Sears retail center is three stories tall (approximately 120,000 square feet) with a basement. Sears no longer owns the Site but maintains responsibility for environmental issues related to the slurry-filled 10,000

collection of soil and groundwater grab samples (Figure 2). Soil samples collected from borings EB-19, EB-20, and EB-21 contained detectable concentrations of TPH ranging from 4 mg/kg to 160 mg/kg. All soil samples, excluding EB-20-7, analyzed during the investigation contained ND concentrations of BTEX. Soil sample EB-20-7 contained 0.044 mg/kg of ethylbenzene and ND concentrations of benzene, toluene and total xylenes.

Groundwater grab samples collected by SECOR from borings EB-13, EB-14, EB-15 and EB-18 contained TPH concentrations ranging from ND to 2,300 µg/L. The groundwater grab samples collected from borings EB-13, EB-15 and EB-18 contained ND concentrations of BTEX. Groundwater grab sample EB-14 contained ND concentrations of benzene and toluene, 3.2 µg/L ethylbenzene, and 6.1 µg/L total xylenes.

From October 19 to December 2, 1998, URS and its subcontractor, Foss Environmental, conducted in-place closure activities for the heating-oil UST in accordance with City of Oakland Fire Prevention Bureau, Closure Permit #94-98 (URS, Jan, 2001). The closure activities were conducted after obtaining a closure permit and preparing a site-specific health and safety plan. During the UST closure activities the UST was accessed, evacuated, cleaned and filled with concrete slurry. URS submitted a letter report to the City of Oakland Fire Prevention Bureau dated February 22, 1999 that documents the in-place closure activities. Approximately 2 ½ cubic yards of oily soil was removed from the access shaft, transported offsite, and disposed at an approved facility. Approximately 500 gallons of oily water pumped from the access shaft and vault, and 10,000 gallons of oily water pumped from the UST was transported offsite and disposed at an approved facility.

The City of Oakland Fire Prevention Bureau forwarded the UST closure report to the ACEHS. The ACEHS issued a letter on October 29, 1999 to Sears requesting a site assessment work plan and a list of responsible parties. The letter requested the installation of three groundwater monitoring wells to assess subsurface conditions related to the former UST and dry cleaning facility. Resolution of property ownership issues resulted in Sears assuming the responsibility of assessing conditions solely related to the slurry filled, heating oil UST.

URS installed three groundwater monitoring wells (FOMW-1, FOMW-2, FOMW-3) on the Site in May 2000 (URS, Jan. 2001). The monitoring wells were located adjacent to, and south of the slurry-filled UST (Figure 2). Soil samples collected from the borings contained concentrations of total extractable petroleum hydrocarbons (TEPH) as diesel fuel or bunker oil ranging from ND to 3,200 mg/kg. BTEX and methyl tertiary butyl ether (MTBE) were not detected in any of the soil samples analyzed. Groundwater samples have been collected from the wells on a quarterly basis since June 2000. Analytical results for previous quarterly sampling events are provided on Table 3.

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 TEMPORARY CLOSURE OF UST VAULT

The Site is currently being redeveloped and portions of the former Sears building, including the loading dock area where the UST vault access was located, have been demolished. The slurry-filled UST is contained in a concrete vault estimated to be about 10 feet high and 30 feet long. The UST vault was previously accessible through a manway in the former loading dock area where a 5 feet by 5 feet shaft extended down to the UST. Following demolition of the loading dock in August 2001, the vault access shaft was saw-cut several feet below grade and a steel plate was bolted to the vault shaft. The sealed access shaft was buried several feet below ground surface. An asphalt paved parking area has been constructed in the former loading dock area.

Prior to sealing the vault shaft with the steel plate, a sample was collected August 3, 2001, from soil located on the floor of the vault. Approximately one foot of soil was observed on the floor of the UST vault beneath the slurry filled UST. The soil sample S2-1 was collected with hand auger equipment fitted with extension rods between the T-handle and hand auger bucket. The extension rods enabled the soil at the base of the vault to be sampled without field personnel entering the vault or access shaft. The soil sample location is shown on Figure 2.

The soil sample was submitted to California Department of Health Services (CDHS) accredited laboratory and analyzed for TPH as gasoline, diesel-fuel and Bunker-C by modified EPA 8015, and for volatile organic compounds (VOCs) as benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8021B. Analysis results for the soil sample are summarized in Table 1. Copies of the laboratory report and chain of custody document are provided in Appendix A.

6.0 QUARTERLY GROUNDWATER MONITORING

The 2001 Third Quarter Groundwater Monitoring was performed on September 26, 2001. The monitoring was performed on two of the three groundwater wells (FOMW-1, FOMW-2, and FOMW-3). Well FOMW-2 was covered with construction debris and was not accessible for sampling. The monitoring consisted of groundwater gauging of the two accessible wells, purging and groundwater sampling of one well (FOMW-3), and collection of a separate-phase product sample from one well (FOMW-1). A description of the monitoring procedures is presented below.

6.1 GROUNDWATER GAUGING

Prior to sampling, accessible groundwater monitoring wells were checked for the presence of free product. Separate phase product was observed floating in well FOMW-1 with a measured thickness of 0.01 foot. Product thickness was measured using a Solinst™ product/water interface level indicator. Due to the presence of the separate phase product, groundwater from well FOMW-1 was not purged and sampled. The water level in well FOMW-3 was gauged using a Solinst™ water level indicator. Water/product levels were measured relative to the surveyed top of the monitoring well casing. Product measurement, groundwater depths and elevations are listed in Table 2.

6.2 PURGING AND SAMPLING METHODS

Prior to sample collection, well FOMW-3 were purged of approximately three to five well casing volumes using a using a Grundfos™ RediFlo 2 submersible well pump. Water purged from the well was monitored for field parameters, including temperature, pH, electrical conductivity, turbidity, dissolved oxygen (D.O.), and oxygen reduction potential (O.R.P.). The measured field parameters are listed on Table 2.

The purging of well FOMW-3 was terminated when temperature, pH, and conductivity measurements stabilized. Following the purging and well recovery to at least 80% of original static water levels (or after one hour of recovery), groundwater samples were collected for laboratory

analysis from the discharge tubing of the well pump. The down-hole 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. The polyethylene tubing connected to the pump was changed between each well.

A sample of the separate-phase product was collected from FOMW-1 by lowering a pre-cleaned, disposable polyethylene bailer and partially penetrating the water/product interface. Separate-phase product collected in the bailer was transferred into a 500-milliliter plastic sample container. The product was observed to be black in color and highly viscous.

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 ice chests maintained at a temperature of 4 to 7 degrees centigrade and transported to CDHS accredited laboratory for analysis. Chain-of-custody records were maintained throughout the sampling program.

6.3 LABORATORY ANALYSIS PROGRAM

Groundwater sampled from well FOMW-3, submitted to the CDHS-accredited laboratory, was analyzed for TPH as gasoline, diesel-fuel, Bunker-C, and motor oil by modified EPA 8015, and for volatile organic compounds (VOCs) as benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8020 and 8260B. As part of the attenuation monitoring program, the groundwater sample was also analyzed for dissolved methane by EPA method 3810M, total alkalinity by EPA method 310.1, nitrate and sulfate by EPA method 9056, hydrocarbon degraders by ASTM G-22, and heterotrophic plate count by SM 9215A.

Product sample from well FOMW-1, submitted to the CDHS-accredited laboratory, was analyzed for TPH as gasoline range (C8-C12), diesel fuel range (C13-C23), and oil range (C24-C40) by modified EPA 8015, and for VOCs as BTEX and MTBE by EPA method 8260A.

6.4 WASTE MANAGEMENT

Liquid wastes (well purge water) were collected and stored in 55-gallon DOT-approved drums. Containers were numbered to identify the source of the wastes. The containers were stored onsite and properly disposed following review of the chemical analysis data.

7.0 MONITORING RESULTS

7.1 SHALLOW GROUNDWATER CONDITIONS

Historical groundwater measurements collected since June 2000 indicate that the potentiometric surface beneath the Site has fluctuated from approximately 9 to 11 feet bgs (15 to 18 feet MSL). The water bearing zones are moderately confined, as water levels ascended within drill rods after penetration of the coarser-grained water bearing units during well installation. Water level measurements collected during previous Quarter Groundwater Monitoring indicate groundwater flow is to the southeast with an approximate gradient of 0.015 foot per foot.

Current groundwater elevations beneath the Site have decreased about 1.1 feet since the last monitoring event conducted in June 2001. Groundwater elevations are presented in Table 2 and shown on Figure 2. Groundwater flow direction and gradient could not be accurately calculated with data obtained from the two accessible monitoring wells. A Site map showing the estimated groundwater flow direction, based of previous quarterly data, is provided as Figure 2.

7.2 LABORATORY ANALYTICAL RESULTS

Chemical analyses results for the groundwater sample collected during this monitoring event are presented in Table 3. Chemical analyses results of the separate-phase product sample collected during this monitoring event are presented in Table 4. The CDHS-accredited laboratory reports and chain-of-custody forms for the groundwater and separate-phase product samples are provided as Appendix B.

The groundwater sample collected from monitoring well FOMW-3 contained 95 µg/L TPH as diesel fuel. The groundwater samples collected from well FOMW-3 did not contain detectable concentrations of TPH-gasoline, TPH-motor oil, or TPH-bunker-C. The groundwater samples collected from well FOMW-3 did not contain detectable concentrations of VOCs, such as BTEX or

MTBE per EPA analysis method 8260B. However, benzene and toluene were detected slightly above reporting limits in sample FOMW-3 by EPA analysis method 8021B. The detected concentrations of benzene and toluene were not confirmed by the 8260B analysis results and are likely "false positives".

The separate-phase product sample collected from monitoring well FOMW-1 contained approximately 50% diesel fuel range hydrocarbons (C13-C213) and 50% oil range hydrocarbons (C24-C40). The separate-phase product sample did not contain detectable concentrations of VOCs as BTEX, MTBE, or other fuel oxygenates.

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." URS's Data Validation Reports are included as Appendix C.

8.0 DISCUSSION

Results of the 2001 Third Quarter Groundwater Monitoring indicate that petroleum hydrocarbons within the diesel fuel range are present in shallow groundwater beneath the Site in the vicinity of the slurry-filled, heating oil UST. VOCs associated with petroleum fuel products such as BTEX and MTBE were not detected in any groundwater samples collected during the five previous sampling events conducted since the quarterly groundwater sampling program was initiated in June 2000. The groundwater samples collected this quarter from well FOMW-3 did not contain detectable concentrations of VOCs as BTEX or MTBE per EPA analysis method 8260B. However, benzene and toluene were detected slightly above reporting limits in the sample collected from FOMW-3 by EPA analysis method 8021B. Since the detected concentrations of benzene and toluene were not confirmed by the 8260B analysis results they are likely "false positives".

Concentrations of dissolved petroleum hydrocarbons in well FOMW-3 have remained relatively stable. Separate-phase product measurements for well FOMW-1 have also remained relatively stable. Results of the physical and biological testing are typical of nonaggressive oxidizing conditions. They also imply that conditions exist for biodegradation of residual petroleum hydrocarbons in the soil and groundwater.

Based on beneficial uses of groundwater in the Site vicinity, and the constituent concentrations detected during this and previous investigations, there appears to be no significant risk of petroleum hydrocarbon exposure to any sensitive receptors in the area. As introduced in the 2000 Second Quarter report, URS plans to further evaluate Site conditions related to the petroleum hydrocarbon

plume and establish closure conditions for the slurry-filled UST in accordance with the Urban Land Redevelopment (URL) Program.

In order to establish Site closure criteria and complete Site characterization, URS submitted a work plan to the ACEHS dated August 23, 2001 for review and approval. Following ACEHS comments to the workplan, URS submitted revisions dated December 18, 2001, for the proposed scope of work. ACEHS approved the revised scope of work in a response letter dated December 20, 2001. The following additional investigative activities were conducted at the Site during the 2002 first quarter:

- Installation of two groundwater monitoring wells downgradient of FOMW-1 to further delineate the petroleum hydrocarbon impacted plume.

- Drilling of two 30-foot depth continuous core soil borings for additional soil characterization on the perimeter of the UST vault.

- Collection of Hydropunch™ groundwater samples from the continuous core borings.

- Drilling one 30-foot depth soil boring for additional soil characterization on the perimeter of the UST vault. Collect soil samples at five-foot intervals from the boring.

- Removing separate phase product from well FOMW-1 on a monthly basis using a vacuum truck fitted with a PVC stinger. Gauging and recording product thickness and/or re-occurrence.

Monitoring well and soil boring locations are shown on Figure 2. A copy of the December 20, 2001 ACEHS correspondence approving the revised workplan is provided in Appendix D.

9.0 SCHEDULE

This report represents the sixth submittal for quarterly groundwater monitoring at the Site. A subsequent groundwater sampling event was conducted during December 2001. The 2001 Fourth Quarter Groundwater Monitoring Report is currently being prepared. Results of the additional site characterization will be presented in the 2002 1rst Quarter Monitoring report. Permanent closure of the UST vault, by filling with slurry, will be conducted following review of this report and approval by the ACEHS. Field work for the 2002 first quarter groundwater monitoring is scheduled to occur in March and will include monitoring wells FOMW-4 and FOMW-5, installed in February

2002.

The Site will be evaluated for closure in accordance with the URL Program guidance document following completion of the additional Site characterization and after additional quarterly monitoring is conducted. Given our current understanding of the petroleum hydrocarbon plume conditions, the Site may conform to the URL Program closure criteria. URS will continue to notify ACEHS personnel of upcoming field activities.

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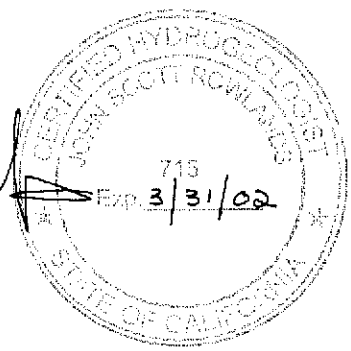
Should you have any questions or comments, please do not hesitate to contact us.

Respectfully Submitted,

URS CORPORATION

Taras B. Kruk, R.G., C.HG.
Project Director

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



10.0 REFERENCES

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TABLE 1
SOIL SAMPLE ANALYSIS RESULTS FOR UST VAULT
SEARS RETAIL STORE NO. 1058
OAKLAND, CALIFORNIA

Sample No.	Sample Date	Notes	LABORATORY ANALYTICAL RESULTS						
			Volatile Organics by GC/MS 8260B					TPH	
			B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	Diesel Range (mg/kg)	Bunker-C Range (mg/kg)
S2-1	8/3/01		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1,700	< 500

Notes:

TPH - Total Petroleum Hydrocarbons
B T E X - Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE - Methyl tertiary-butyl ether
< - Analyte not detected above indicated method detection limit
NA: Not analyzed/Not available.

Table 2
Historical Summary of Groundwater Levels and Parameters
Sears Retail Center Store No. 1058
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)	Temp. (Celcius)	pH	Cond. (uS)	O.R.P. (mV)	Dissolved Oxygen (mg/l)	Ferrous Iron (%)
FOMW-1	6/8/00	1,2	0.00	9.59	27.81	18.22	18.3	6.72	659	13.00	0.28	NA
	10/10/00	SP	0.01	9.91	27.81	17.90	NA	NA	NA	NA	NA	NA
	12/15/00	SP	0.01	9.44	27.81	18.37	NA	NA	NA	NA	NA	NA
	3/27/01	SP	0.01	9.00	27.81	18.81	NA	NA	NA	NA	NA	NA
	6/22/01	--	--	--	--	--	NA	NA	NA	NA	NA	NA
	9/26/01	SP	0.01	10.85	27.81	16.96	NA	NA	NA	NA	NA	NA
FOMW-2	6/8/00	--	0.00	11.14	26.65	15.51	14.7	7.00	673	10.00	2.92	NA
	10/10/00	--	0.00	12.34	26.65	14.31	15.8	7.58	420	0.01	NA	NA
	12/15/00	--	0.00	11.05	26.65	15.60	14.0	7.09	1210	NA	0.15	NA
	3/27/01	--	0.00	10.91	26.65	15.74	15.4	7.62	305	92.00	0.61	NA
	6/22/01	--	0.00	11.30	26.65	15.35	15.3	5.33	340	0.20	0.25	NA
	9/26/01	3	--	--	--	--	--	--	--	--	--	--
FOMW-3	6/8/00	2	0.00	10.48	26.80	16.32	15.0	6.87	689	23.00	0.22	NA
	10/10/00	--	0.00	11.15	26.80	15.65	15.6	7.66	430	39.00	NA	NA
	12/15/00	--	0.00	10.36	26.80	16.44	14.1	7.31	1400	45.00	0.15	NA
	3/27/01	--	0.00	10.12	26.80	16.68	NA	NA	NA	NA	NA	NA
	6/22/01	--	0.00	10.65	26.80	16.15	15.7	5.11	330	0.09	0.50	NA
	9/26/01	--	0.00	11.74	26.80	15.06	17.5	6.81	528	23.80	0.78	NA

Notes:
MSL - Mean Sea Level
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 covered by demolition debris. Could not be accessed.
SP : Separate phase product in well
O.R.P.: Oxygen Reduction Potential (Redox)
NA: Not analyzed/Not available.

TABLE 3
HISTORICAL SUMMARY OF GROUNDWATER MONITORING RESULTS
SEARS RETAIL STORE NO. 1058
OAKLAND, CALIFORNIA

Monitoring Well No.	Sample Date	Notes	LABORATORY ANALYTICAL RESULTS							PHYSICAL PARAMETERS						
			Volatile Organics by GC/MS 8260A					TEPH								
			B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Diesel (ug/L)	Bunker Oil (ug/L)	Nitrate (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Dissolved Methane (ug/ML)	Hydrocarbon Degraders (CFU/ML)	Heterotrophic Plate Count (CFU/ML)
FOMW-1	6/8/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	J 1200	NA	NA	360	230	< 0.01	390	4000
	10/10/00	SP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/15/00	SP	< 0.5	< 0.5	< 0.5	< 1	< 5	260	< 50	NA	NA	NA	NA	NA	NA	NA
	12/15/00	1	< 0.5	< 0.5	< 0.5	< 1	< 5	370	< 50	NA	NA	NA	NA	NA	NA	NA
	3/27/01	SP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/01	SP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/26/01	SP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FOMW-2	6/8/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	< 50	NA	NA	250	150	< 0.01	1	110
	10/10/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	< 50	NA	NA	260	140	< 0.01	170	1600
	12/15/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	< 50	7.8	30	210	190	< 0.01	550	1000
	3/27/01	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	NA	8.4	47	290	130	< 0.01	30	170
	3/27/01	1	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	NA	9.1	47	320	130	< 0.01	40	70
	6/22/01	--	< 1	< 1	< 1	< 1	< 5	< 250	< 250	NA	NA	220	110	< 0.01	4000	400000
	9/26/01	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FOMW-3	6/8/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	J 1200	NA	NA	330	190	< 0.01	440	110000
	6/8/00	1	< 0.5	< 0.5	< 0.5	< 1	< 5	< 50	J 1100	NA	NA	330	180	< 0.01	50	8000
	10/10/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	230	< 50	NA	NA	300	170	< 0.01	800	4000
	12/15/00	--	< 0.5	< 0.5	< 0.5	< 1	< 5	100	< 50	3.2	30	290	190	< 0.01	1200	1800
	3/27/01	--	< 0.5	< 0.5	< 0.5	< 1	< 5	170	NA	3.3	51	420	130	< 0.01	400	300
	6/22/01	--	< 1	< 1	< 1	< 1	< 5	260	< 250	NA	NA	250	150	< 0.01	4000	350000
	9/26/01	--	< 1	< 1	< 1	< 1	< 5	95	< 50	5	55	--	150	0.011	30	170

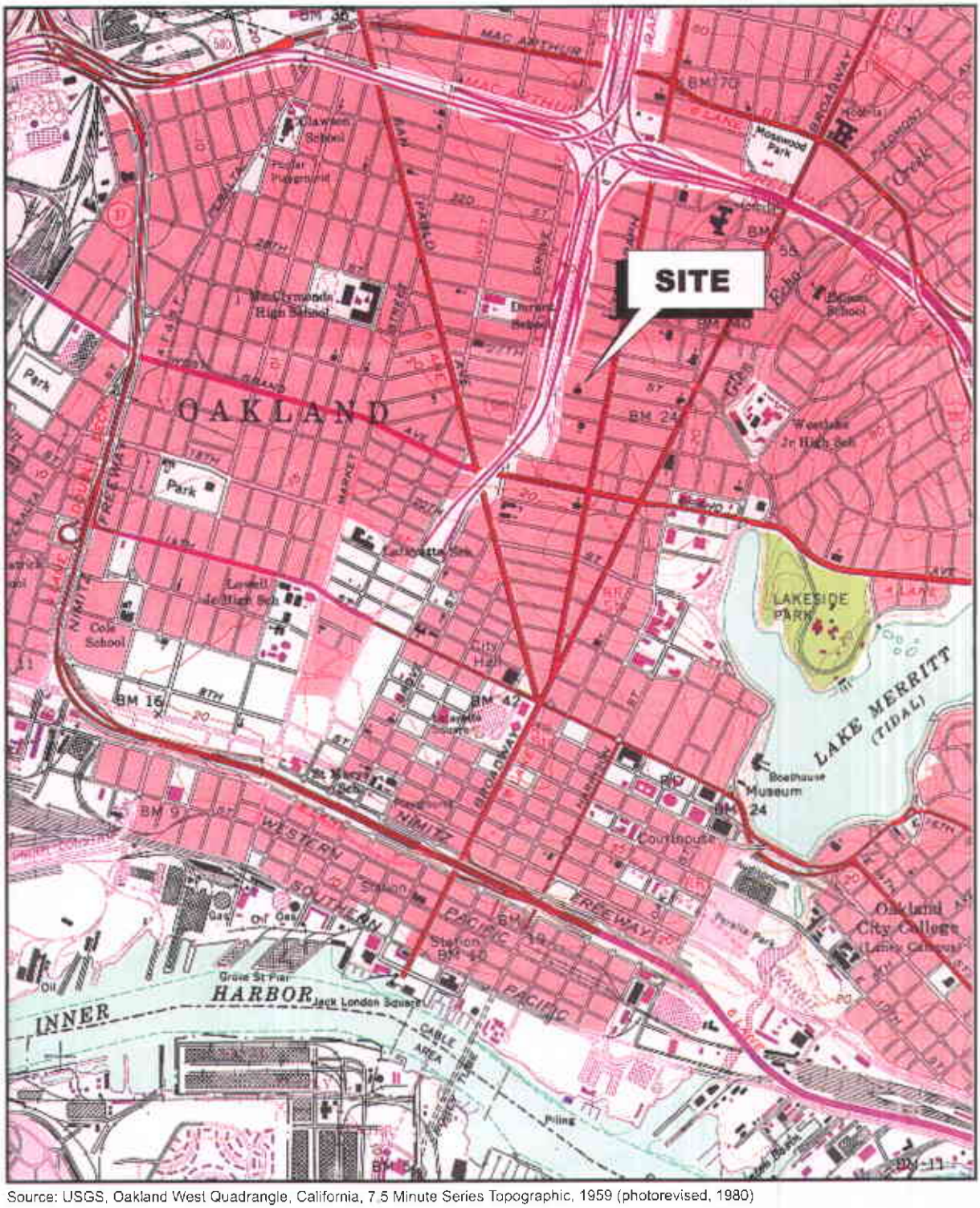
Notes:

TPH - Total extractable petroleum hydrocarbons
B T E X - Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE - Methyl tertiary-butyl ether
TDS = Toal Dissolved Soilds
1: Duplicate sample
2: Well blocked by demolition debris. Could not be accessed.
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.
SP: Separate Phase Product

TABLE 4
SEPARATE PHASE PRODUCT ANALYSIS RESULTS
SEARS RETAIL STORE NO. 1058
OAKLAND, CALIFORNIA

Monitoring Well No.	Sample Date	Notes	LABORATORY ANALYTICAL RESULTS							
			Volatile Organics by GC/MS 8260B					TPH		
			B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	C8-C12 (mg/kg)	C13-C23 (mg/kg)	C24-C40 (mg/kg)
FOMW-1	9/26/01	SP	< 0.002	< 0.002	< 0.002	< 0.004	< 0.005	46,000	393,000	385,000

Notes:
TPH - Total Petroleum Hydrocarbons
B T E X - Benzene, Toluene, Ethylbenzene, Total Xylenes
MTBE - Methyl tertiary-butyl ether
< - Analyte not detected above indicated method detection limit
mg/kg : milligram per kilogram
SP: Separate Phase Product



Source: USGS, Oakland West Quadrangle, California, 7.5 Minute Series Topographic, 1959 (photorevised, 1980)

SITE LOCATION MAP

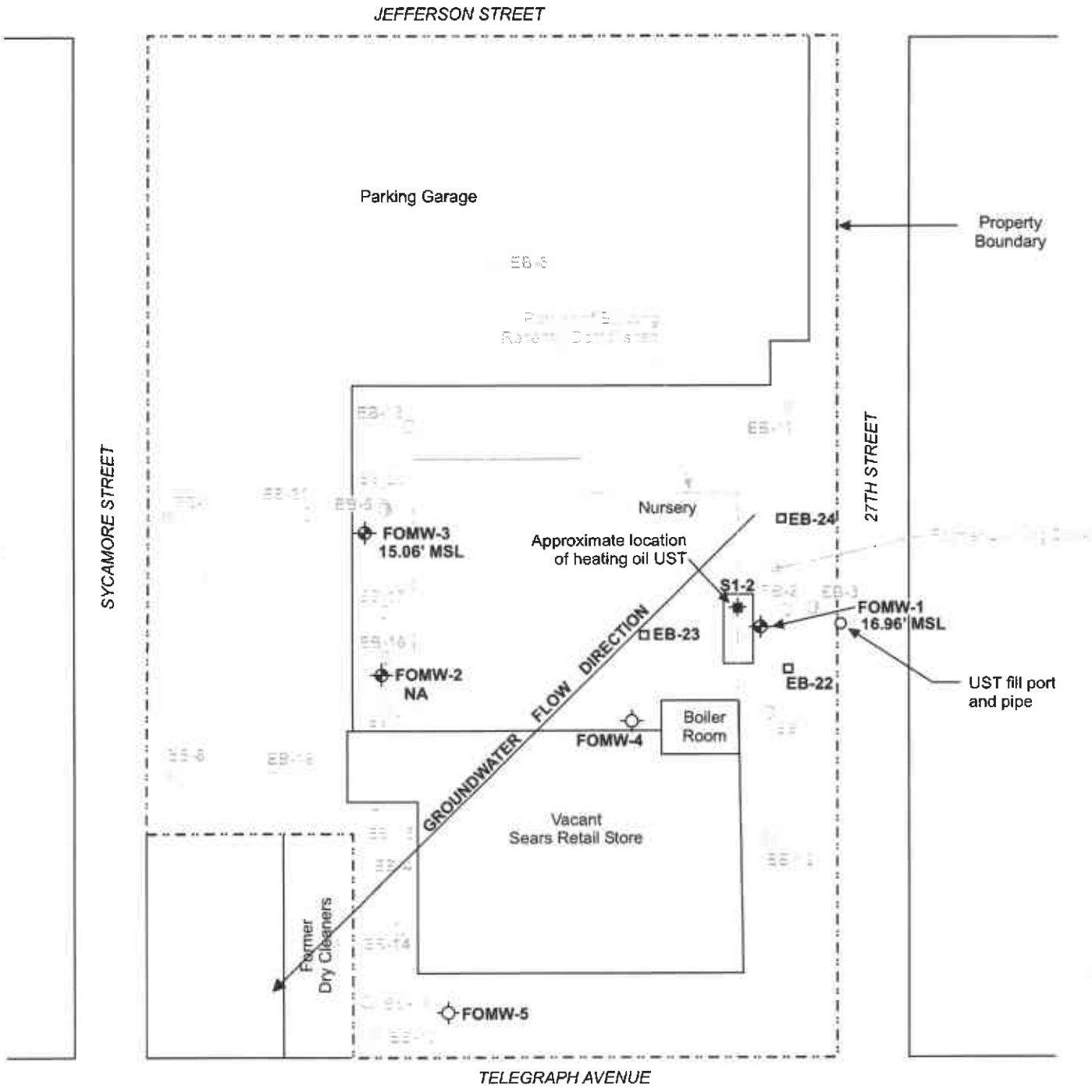
Sears Roebuck & Company
Site Assessment
Oakland, California

March 2002

URS

FIGURE 1

L:/sears oakland/site loc.cdr



LEGEND

- Approximate location of exploratory boring (Lowney, May 1998)
- Approximate location of exploratory boring (Lowney, April 1998)
- Approximate location of exploratory boring (SECOR, November 1998)
- Groundwater monitoring well locations (URS/Dames & Moore)
- Feb. 2002 monitoring well location (Approximate)
- Feb. 2002 soil boring location (Approximate)
- UST Vault Soil Sample Location

N

0 100

Approximate Scale in Feet

NOTES

(1) Groundwater elevations in feet above mean sea level (MSL).
(2) NA = Not Accessible.
(3) Groundwater elevations measured September 26, 2001.

Reference: Lowney Associates (1998)
SECOR (1998)

L:/sears oakland/site plan 1-02.cdr

SITE PLAN

Sears Roebuck & Company
Site Assessment
Oakland, California

March 2002

URS

FIGURE 2

APPENDIX A

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTS FOR SOIL

URS -San Francisco
221 Main Street Suite 600
San Francisco, CA 94105

Attn.: Mr. Chris Sheridan

Project: Sears-Oakland

Dear Mr. Sheridan,

Attached is our report for your samples received on Friday August 3, 2001
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after September 17, 2001 unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

Afsaneh Salimpour

To: URS -San Francisco
Attn.: Chris Sheridan

CASE NARRATIVE

General and Sample Comments

We (STL ChromaLab) received 1 Soil samples, on Aug 3 2001 12:10PM.

Analysis Comments and Flags by QC Batch

Total Extractable Petroleum Hydrocarbons (TEPH)	Soil	QC Batch#: 2001/08/06.01-10

S2-1 Lab#: 2001-08-0063-001

Compound Flag(s)

ndp	Hydrocarbon reported does not match the pattern of our Diesel standard
sd	Surrogate recovery not reportable due to required dilution.

Total Extractable Petroleum Hydrocarbons (TEPH)

URS -San Francisco

221 Main Street Suite 600
San Francisco, CA 94105

Attn: Chris Sheridan

Phone: (415) 896-5858 Fax: (415) 882-9261

Project #:

Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
S2-1	Soil	08/02/2001 10:30	1

To: **URS -San Francisco**
Attn.: Chris Sheridan

Test Method: 8015M
Prep Method: 3550/8015M

Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: **S2-1**
Project: Sears-Oakland
Sampled: 08/02/2001 10:30
Matrix: Soil

Lab Sample ID: **2001-08-0063-001**
Received: 08/03/2001 12:10
Extracted: 08/06/2001 05:53
QC-Batch: 2001/08/06-01.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1700	10	mg/Kg	10.00	08/08/2001 00:30	ndp
Bunker-C	ND	500	mg/Kg	10.00	08/08/2001 00:30	
Surrogate(s)						
o-Terphenyl	NA	60-130	%	10.00	08/08/2001 00:30	sd

To: URS -San Francisco
Attn.: Chris Sheridan

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank **Soil** **QC Batch # 2001/08/06-01.10**

MB: 2001/08/06-01.10-003 Date Extracted: 08/06/2001 05:53

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	08/06/2001 13:20	
Bunker-C	ND	50	mg/Kg	08/06/2001 13:20	
Surrogate(s)					
o-Terphenyl	82.0	60-130	%	08/06/2001 13:20	

To: **URS -San Francisco**
Attn: Chris Sheridan

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2001/08/06-01.10**

LCS: 2001/08/06-01.10-001 Extracted: 08/06/2001 05:53 Analyzed 08/06/2001 11:41
LCSD: 2001/08/06-01.10-002 Extracted: 08/06/2001 05:53 Analyzed 08/06/2001 12:31

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	38.3	39.9	41.7	41.7	91.8	95.7	4.2	60-130	25		
Surrogate(s)											
o-Terphenyl	17.0	17.4	20.0	20.0	85.0	87.0		60-130			

To: **URS -San Francisco**

Attn.: Chris Sheridan

Test Method: 8015M
8021B

Prep Method: 5035

Gas/BTEX Compounds by 8015M/8021

Sample ID:	**S2-1**	Lab Sample ID:	**2001-08-0063-001**
Project:	Sears-Oakland	Received:	08/03/2001 12:10
		Extracted:	08/08/2001 17:43
Sampled:	08/02/2001 10:30	QC-Batch:	2001/08/08-01.01
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	08/08/2001 17:43	
Benzene	ND	0.0050	mg/Kg	1.00	08/08/2001 17:43	
Toluene	ND	0.0050	mg/Kg	1.00	08/08/2001 17:43	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	08/08/2001 17:43	
Xylene(s)	ND	0.0050	mg/Kg	1.00	08/08/2001 17:43	
MTBE	ND	0.0050	mg/Kg	1.00	08/08/2001 17:43	
Surrogate(s)						
Trifluorotoluene	74.7	53-125	%	1.00	08/08/2001 17:43	
4-Bromofluorobenzene-FID	61.8	58-124	%	1.00	08/08/2001 17:43	

To: **URS -San Francisco**

Attn.: Chris Sheridan

Test Method: 8015M
8021B

Prep Method: 5035

Batch QC Report

Gas/BTEX Compounds by 8015M/8021

Method Blank | **Soil** | **QC Batch # 2001/08/08-01.01**

MB: 2001/08/08-01.01-003

Date Extracted: 08/08/2001 08:11

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	08/08/2001 08:11	
Benzene	ND	0.0050	mg/Kg	08/08/2001 08:11	
Toluene	ND	0.0050	mg/Kg	08/08/2001 08:11	
Ethyl benzene	ND	0.0050	mg/Kg	08/08/2001 08:11	
Xylene(s)	ND	0.0050	mg/Kg	08/08/2001 08:11	
MTBE	ND	0.0050	mg/Kg	08/08/2001 08:11	
Surrogate(s)					
Trifluorotoluene	99.7	53-125	%	08/08/2001 08:11	
4-Bromofluorobenzene-FID	93.4	58-124	%	08/08/2001 08:11	

To: **URS -San Francisco**
Attn: Chris Sheridan

Test Method: 8021B
Prep Method: 5035

Batch QC Report

Gas/BTEX Compounds by 8015M/8021

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2001/08/08-01.01**

LCS: 2001/08/08-01.01-004 Extracted: 08/08/2001 08:44 Analyzed 08/08/2001 08:44
LCSD: 2001/08/08-01.01-005 Extracted: 08/08/2001 09:18 Analyzed 08/08/2001 09:18

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	0.0989	0.0984	0.1000	0.1000	98.9	98.4	0.5	77-123	35		
Toluene	0.102	0.100	0.1000	0.1000	102.0	100.0	2.0	78-122	35		
Ethyl benzene	0.102	0.0992	0.1000	0.1000	102.0	99.2	2.8	70-130	35		
Xylene(s)	0.299	0.296	0.300	0.300	99.7	98.7	1.0	75-125	35		
Surrogate(s)											
Trifluorotoluene	515	493	500	500	103.0	98.6		53-125			

To: **URS -San Francisco**
Attn: Chris Sheridan

Test Method: 8015M
Prep Method: 5035

Batch QC Report

Gas/BTEX Compounds by 8015M/8021

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2001/08/08-01.01**

LCS: 2001/08/08-01.01-006 Extracted: 08/08/2001 09:51 Analyzed 08/08/2001 09:51
LCSD: 2001/08/08-01.01-007 Extracted: 08/08/2001 10:25 Analyzed 08/08/2001 10:25

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	0.519	0.507	0.500	0.500	103.8	101.4	2.3	75-125	35		
Surrogate(s)											
4-Bromofluorobenzene-FI	425	419	500	500	85.0	83.8		58-124			

CHAIN OF CUSTODY FORM

Page 1 of 1

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

2001-08-0063
C&T LOGIN # _____

Sampler: Chris Sheridan
Report To: " "
Company: URS
Telephone: 415.243.3815
Fax: 415.882.9261

Project No:
Project Name: Sears - Oakland
Project P.O.:
Turnaround Time: 5 day

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO	HNO_3	ICE	Field Notes
	S2-1	8/2/01 1030	X			1				X	

Analyses

X	TPHg, TPHd, Bunker Oil (8015M)
X	BTEX, MtBE (8020B) w/ 8260B Confirmation

Notes:
P/S fax results to above #

5.8°C

RELINQUISHED BY:		RECEIVED BY:	
Chris Sheridan	DATE/TIME	[illegible]	8/03 9:30 DATE/TIME
[signature] 8/3 12:10	DATE/TIME	Denise Harrington	8/3/01 @ 1210 DATE/TIME
	DATE/TIME		DATE/TIME

Signature

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTS FOR GROUNDWATER AND SEPARATE PHASE PRODUCT

Submission #: 2001-09-0622

Date: October 10, 2001

SEVERN TRENT SERVICES

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana

2020 East 1st St Suite 400
Santa Ana, CA 92705

Scott Rowlands

Project: 22-00000139.01.00003
Sears-Oakland

Attached is our report for your samples received on Wednesday September 26, 2001
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after November 10, 2001 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

Project Manager

Submission #: 2001-09-0622

Date: October 10, 2001

SEVERN TRENT SERVICES

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

CASE NARRATIVE

General and Sample Comments

We (STL ChromaLab) received 3 Water samples, on Sep 26 2001 3:15PM.

Analysis Comments and Flags by QC Batch

Total Extractable Petroleum	Water	QC Batch#: 2001/10/02.08-10

FOMW-3 Lab#: 2001-09-0622-001

Compound Flag(s)

ndp Hydrocarbon reported does not match the pattern of our Diesel standard

Submission #: 2001-09-0622

Total Extractable Petroleum Hydrocarbons (TEPH)

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana	☒ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
FOMW-3	Water	09/26/2001 11:45	1

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Total Extractable Petroleum Hydrocarbons (TEPH)

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 8015M
Prep Method: 3510/8015M

Sample ID:	**FOMW-3**	Lab Sample ID:	2001-09-0622-001
Project:	22-00000139.01.00003 Sears-Oakland	Received:	09/26/2001 15:15
		Extracted:	10/02/2001 16:32
Sampled:	09/26/2001 11:45	QC-Batch:	2001/10/02-08.10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	95	50	ug/L	1.00	10/03/2001 14:44	ndp
Motor Oil	ND	500	ug/L	1.00	10/03/2001 14:44	
Bunker-C	ND	50	ug/L	1.00	10/03/2001 14:44	
Surrogate(s)						
o-Terphenyl	91.5	60-130	%	1.00	10/03/2001 14:44	

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Total Extractable Petroleum Hydrocarbons (TEPH)

Batch QC report

Test Method: 8015M

Prep Method: 3510/8015 M

Method Blank **Water** **QC Batch # 2001/10/02-08.10**

MB: 2001/10/02-08.10-003

Date Extracted: 10/02/2001 16:32

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	10/03/2001 08:40	
Motor Oil	ND	500	ug/L	10/03/2001 08:40	
Bunker-C	ND	50	ug/L	10/03/2001 08:40	
Surrogate(s)					
o-Terphenyl	94.5	60-130	%	10/03/2001 08:40	

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Total Extractable Petroleum Hydrocarbons (TEPH)

Batch QC report

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Test Method: 8015M Prep Method: 3510/8015M

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/10/02-08.10**

LCS: 2001/10/02-08.10-001 Extracted: 10/02/2001 16:32 Analyzed: 10/03/2001 07:21

LCSD: 2001/10/02-08.10-002 Extracted: 10/02/2001 16:32 Analyzed: 10/03/2001 08:01

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Diesel	1270	1230	1250	1250	101.6	98.4	3.2	60-130	25		
Surrogate(s)											
o-Terphenyl	19.3	19.2	20.0	20.0	96.5	96.0		60-130	0		

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Total Extractable Petroleum Hydrocarbons (TEPH)

Legend & Notes

Test Method: 8015M Prep Method: 3510/8015M

Analyte Flags

ndp
Hydrocarbon reported does not match the pattern of our Diesel standard

Submission #: 2001-09-0622

Volatile OrganicCompounds by 8260B

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana	✉ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
EB092601	Water	09/26/2001 12:15	2
TB092601	Water	09/26/2001	3

SEVERN TRENT SERVICES

Volatile OrganicCompounds by 8260B

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 8260B
Prep Method: 5030B

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID:	EB092601	Lab Sample ID:	2001-09-0622-002
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/05/2001 14:42
Sampled:	09/26/2001 12:15	QC-Batch:	2001/10/05-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	10/05/2001 14:42	
Acetone	ND	50	ug/L	1.00	10/05/2001 14:42	
Benzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Bromodichloromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Bromobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Bromochloromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Bromoform	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Bromomethane	ND	5.0	ug/L	1.00	10/05/2001 14:42	
2-Butanone(MEK)	ND	50	ug/L	1.00	10/05/2001 14:42	
n-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
sec-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
tert-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Carbon disulfide	ND	5.0	ug/L	1.00	10/05/2001 14:42	
Carbon tetrachloride	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Chlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Chloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	10/05/2001 14:42	
Chloroform	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Chloromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
2-Chlorotoluene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
4-Chlorotoluene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Dibromochloromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Dibromomethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 14:42	

SEVERN TRENT SERVICES

Volatile OrganicCompounds by 8260B

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 8260B
Prep Method: 5030B

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID:	**EB092601**	Lab Sample ID:	2001-09-0622-002
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/05/2001 14:42
Sampled:	09/26/2001 12:15	QC-Batch:	2001/10/05-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Ethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
2-Hexanone	ND	50	ug/L	1.00	10/05/2001 14:42	
Isopropylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Methylene chloride	ND	5.0	ug/L	1.00	10/05/2001 14:42	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	10/05/2001 14:42	
Naphthalene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
n-Propylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Styrene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Tetrachloroethene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Toluene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Trichloroethene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	10/05/2001 14:42	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Vinyl acetate	ND	25	ug/L	1.00	10/05/2001 14:42	
Vinyl chloride	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Total xylenes	ND	1.0	ug/L	1.00	10/05/2001 14:42	
Surrogate(s)						
4-Bromofluorobenzene	97.3	86-115	%	1.00	10/05/2001 14:42	
1,2-Dichloroethane-d4	107.3	76-114	%	1.00	10/05/2001 14:42	
Toluene-d8	109.3	88-110	%	1.00	10/05/2001 14:42	

SEVERN TRENT SERVICES

Volatile OrganicCompounds by 8260B

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 8260B
Prep Method: 5030B

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

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CA DHS ELAP#1094

Sample ID:	**TB092601**	Lab Sample ID:	2001-09-0622-003
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/05/2001 15:08
Sampled:	09/26/2001	QC-Batch:	2001/10/05-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	10/05/2001 15:08	
Acetone	ND	50	ug/L	1.00	10/05/2001 15:08	
Benzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Bromodichloromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Bromobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Bromochloromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Bromoform	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Bromomethane	ND	5.0	ug/L	1.00	10/05/2001 15:08	
2-Butanone(MEK)	ND	50	ug/L	1.00	10/05/2001 15:08	
n-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
sec-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
tert-Butylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Carbon disulfide	ND	5.0	ug/L	1.00	10/05/2001 15:08	
Carbon tetrachloride	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Chlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Chloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	10/05/2001 15:08	
Chloroform	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Chloromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
2-Chlorotoluene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
4-Chlorotoluene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Dibromochloromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Dibromomethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 15:08	

SEVERN TRENT SERVICES

Volatile OrganicCompounds by 8260B

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 8260B
Prep Method: 5030B

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CA DHS ELAP#1094

Sample ID:	**TB092601**	Lab Sample ID:	2001-09-0622-003
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/05/2001 15:08
Sampled:	09/26/2001	QC-Batch:	2001/10/05-01.09
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Ethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
2-Hexanone	ND	50	ug/L	1.00	10/05/2001 15:08	
Isopropylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Methylene chloride	ND	5.0	ug/L	1.00	10/05/2001 15:08	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	10/05/2001 15:08	
Naphthalene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
n-Propylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Styrene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Tetrachloroethene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Toluene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Trichloroethene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	10/05/2001 15:08	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Vinyl acetate	ND	25	ug/L	1.00	10/05/2001 15:08	
Vinyl chloride	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Total xylenes	ND	1.0	ug/L	1.00	10/05/2001 15:08	
Surrogate(s)						
4-Bromofluorobenzene	106.6	86-115	%	1.00	10/05/2001 15:08	
1,2-Dichloroethane-d4	112.6	76-114	%	1.00	10/05/2001 15:08	
Toluene-d8	109.8	88-110	%	1.00	10/05/2001 15:08	

SEVERN TRENT SERVICES

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CA DHS ELAP#1094

Volatile OrganicCompounds by 8260B

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank **Water** **QC Batch # 2001/10/05-01.09**

MB: 2001/10/05-01.09-005 Date Extracted: 10/05/2001 14:06

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
MTBE	ND	5.0	ug/L	10/05/2001 14:06	
Acetone	ND	50	ug/L	10/05/2001 14:06	
Benzene	ND	1.0	ug/L	10/05/2001 14:06	
Bromodichloromethane	ND	1.0	ug/L	10/05/2001 14:06	
Bromobenzene	ND	1.0	ug/L	10/05/2001 14:06	
Bromochloromethane	ND	1.0	ug/L	10/05/2001 14:06	
Bromoform	ND	1.0	ug/L	10/05/2001 14:06	
Bromomethane	ND	5.0	ug/L	10/05/2001 14:06	
2-Butanone(MEK)	ND	50	ug/L	10/05/2001 14:06	
n-Butylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
sec-Butylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
tert-Butylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
Carbon disulfide	ND	5.0	ug/L	10/05/2001 14:06	
Carbon tetrachloride	ND	1.0	ug/L	10/05/2001 14:06	
Chlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
Chloroethane	ND	1.0	ug/L	10/05/2001 14:06	
2-Chloroethylvinyl ether	ND	5.0	ug/L	10/05/2001 14:06	
Chloroform	ND	1.0	ug/L	10/05/2001 14:06	
Chloromethane	ND	1.0	ug/L	10/05/2001 14:06	
2-Chlorotoluene	ND	1.0	ug/L	10/05/2001 14:06	
4-Chlorotoluene	ND	1.0	ug/L	10/05/2001 14:06	
Dibromochloromethane	ND	1.0	ug/L	10/05/2001 14:06	
1,2-Dichlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,3-Dichlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,4-Dichlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,3-Dichloropropane	ND	1.0	ug/L	10/05/2001 14:06	
2,2-Dichloropropane	ND	1.0	ug/L	10/05/2001 14:06	
1,1-Dichloropropene	ND	1.0	ug/L	10/05/2001 14:06	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	10/05/2001 14:06	
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	10/05/2001 14:06	
Dibromomethane	ND	1.0	ug/L	10/05/2001 14:06	
Dichlorodifluoromethane	ND	1.0	ug/L	10/05/2001 14:06	
1,1-Dichloroethane	ND	1.0	ug/L	10/05/2001 14:06	
1,2-Dichloroethane	ND	1.0	ug/L	10/05/2001 14:06	
1,1-Dichloroethene	ND	1.0	ug/L	10/05/2001 14:06	
cis-1,2-Dichloroethene	ND	1.0	ug/L	10/05/2001 14:06	
trans-1,2-Dichloroethene	ND	1.0	ug/L	10/05/2001 14:06	
1,2-Dichloropropane	ND	1.0	ug/L	10/05/2001 14:06	
cis-1,3-Dichloropropene	ND	1.0	ug/L	10/05/2001 14:06	
trans-1,3-Dichloropropene	ND	1.0	ug/L	10/05/2001 14:06	
Ethylbenzene	ND	1.0	ug/L	10/05/2001 14:06	

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CA DHS ELAP#1094

Volatile OrganicCompounds by 8260B

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank	**Water**	**QC Batch # 2001/10/05-01.09**
MB: 2001/10/05-01.09-005		Date Extracted: 10/05/2001 14:06

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Hexachlorobutadiene	ND	1.0	ug/L	10/05/2001 14:06	
2-Hexanone	ND	50	ug/L	10/05/2001 14:06	
Isopropylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
p-Isopropyltoluene	ND	1.0	ug/L	10/05/2001 14:06	
Methylene chloride	ND	5.0	ug/L	10/05/2001 14:06	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	10/05/2001 14:06	
Naphthalene	ND	1.0	ug/L	10/05/2001 14:06	
n-Propylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
Styrene	ND	1.0	ug/L	10/05/2001 14:06	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	10/05/2001 14:06	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	10/05/2001 14:06	
Tetrachloroethene	ND	1.0	ug/L	10/05/2001 14:06	
Toluene	ND	1.0	ug/L	10/05/2001 14:06	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,1,1-Trichloroethane	ND	1.0	ug/L	10/05/2001 14:06	
1,1,2-Trichloroethane	ND	1.0	ug/L	10/05/2001 14:06	
Trichloroethene	ND	1.0	ug/L	10/05/2001 14:06	
Trichlorofluoromethane	ND	1.0	ug/L	10/05/2001 14:06	
Trichlorotrifluoroethane	ND	5.0	ug/L	10/05/2001 14:06	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	10/05/2001 14:06	
Vinyl acetate	ND	25	ug/L	10/05/2001 14:06	
Vinyl chloride	ND	1.0	ug/L	10/05/2001 14:06	
Total xylenes	ND	1.0	ug/L	10/05/2001 14:06	
Surrogate(s)					
4-Bromofluorobenzene	98.0	86-115	%	10/05/2001 14:06	
1,2-Dichloroethane-d4	113.1	76-114	%	10/05/2001 14:06	
Toluene-d8	104.5	88-110	%	10/05/2001 14:06	

SEVERN TRENT SERVICES

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CA DHS ELAP#1094

Volatile OrganicCompounds by 8260B

Batch QC report

Test Method: 8260B Prep Method: 5030B

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/10/05-01.09**

LCS: 2001/10/05-01.09-002 Extracted: 10/05/2001 12:32 Analyzed: 10/05/2001 12:32

LCSD: 2001/10/05-01.09-003 Extracted: 10/05/2001 13:11 Analyzed: 10/05/2001 13:11

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	48.0	47.7	50.0	50.0	96.0	95.4	0.6	69-129	20		
Chlorobenzene	52.0	51.2	50.0	50.0	104.0	102.4	1.6	81-121	20		
1,1-Dichloroethene	41.2	41.0	50.0	50.0	82.4	82.0	0.5	65-125	20		
Toluene	52.1	51.6	50.0	50.0	104.2	103.2	1.0	70-130	20		
Trichloroethene	51.8	52.4	50.0	50.0	103.6	104.8	1.2	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	529	520	500	500	105.8	104.0		86-115			
1,2-Dichloroethane-d4	488	506	500	500	97.6	101.2		76-114			
Toluene-d8	540	527	500	500	108.0	105.4		88-110			

Submission #: 2001-09-0622

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Alkalinity (Total)

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CA DHS ELAP#1094

URS-Santa Ana	✉ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
FOMW-3	Water	09/26/2001 11:45	1

SEVERN TRENT SERVICES

Alkalinity (Total)

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 310.1
Prep Method: 310.1

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CA DHS ELAP#1094

Sample ID:	**FOMW-3**	Lab Sample ID:	2001-09-0622-001
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/02/2001
Sampled:	09/26/2001 11:45	QC-Batch:	2001/10/02-01.58
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Alkalinity (Total)	150	5.0	mg/L	1.00	10/02/2001	

SEVERN TRENT SERVICES

STL Chromalab
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CA DHS ELAP#1094

Alkalinity (Total)

Batch QC report

Test Method: 310.1 Prep Method: 310.1

Method Blank	**Water**	**QC Batch # 2001/10/02-01.58**
MB: 2001/10/02-01.58-001		Date Extracted: 10/02/2001

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Alkalinity (Total)	ND	5.0	mg/L	10/02/2001	

SEVERN TRENT SERVICES

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CA DHS ELAP#1094

Alkalinity (Total)

Batch QC report

Test Method: 310.1 Prep Method: 310.1

Laboratory Control Spike (LCS/LCSD)		**Water**	**QC Batch # 2001/10/02-01.58**
LCS:	2001/10/02-01.58-002	Extracted: 10/02/2001	Analyzed: 10/02/2001
LCSD:	2001/10/02-01.58-003	Extracted: 10/02/2001	Analyzed: 10/02/2001

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Alkalinity (Total)	2310	2340	2500	2500	92.4	93.6	1.3	80-120	20		

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

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CA DHS ELAP#1094

URS-Santa Ana	✉ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
FOMW-3	Water	09/26/2001 11:45	1

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

URS-Santa Ana

Attn: Scott Rowlands

Test Method: 8021B
8015M

Prep Method: 5030

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CA DHS ELAP#1094

Sample ID:	**FOMW-3**	Lab Sample ID:	2001-09-0622-001
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/05/2001 23:48
Sampled:	09/26/2001 11:45	QC-Batch:	2001/10/05-V1.03 2001/10/09-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	10/05/2001 23:48	
Benzene	0.72	0.50	ug/L	1.00	10/05/2001 23:48	
Toluene	1.0	0.50	ug/L	1.00	10/05/2001 23:48	
Ethyl benzene	ND	0.50	ug/L	1.00	10/05/2001 23:48	
Xylene(s)	ND	0.50	ug/L	1.00	10/05/2001 23:48	
MTBE	ND	5.0	ug/L	1.00	10/09/2001 20:03	
Surrogate(s)						
Trifluorotoluene	107.0	58-124	%	1.00	10/05/2001 23:48	
4-Bromofluorobenzene-FID	91.1	50-150	%	1.00	10/05/2001 23:48	

SEVERN TRENT SERVICES

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5030

Method Blank | **Water** | **QC Batch # 2001/10/05-V1.03**

MB: 2001/10/05-V1.03-003 | Date Extracted: 10/05/2001 08:20

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/05/2001 08:20	
Benzene	ND	0.5	ug/L	10/05/2001 08:20	
Toluene	ND	0.5	ug/L	10/05/2001 08:20	
Ethyl benzene	ND	0.5	ug/L	10/05/2001 08:20	
Xylene(s)	ND	0.5	ug/L	10/05/2001 08:20	
MTBE	ND	5.0	ug/L	10/05/2001 08:20	
Surrogate(s)					
Trifluorotoluene	98.2	58-124	%	10/05/2001 08:20	
4-Bromofluorobenzene-FID	87.6	50-150	%	10/05/2001 08:20	

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CA DHS ELAP#1094

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5030

Method Blank | **Water** | **QC Batch # 2001/10/09-01.05**

MB: 2001/10/09-01.05-003 | Date Extracted: 10/09/2001 08:18

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/09/2001 08:18	
Benzene	ND	0.5	ug/L	10/09/2001 08:18	
Toluene	ND	0.5	ug/L	10/09/2001 08:18	
Ethyl benzene	ND	0.5	ug/L	10/09/2001 08:18	
Xylene(s)	ND	0.5	ug/L	10/09/2001 08:18	
MTBE	ND	5.0	ug/L	10/09/2001 08:18	
Surrogate(s)					
Trifluorotoluene	86.8	58-124	%	10/09/2001 08:18	
4-Bromofluorobenzene-FID	98.0	50-150	%	10/09/2001 08:18	

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CA DHS ELAP#1094

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5030

Laboratory Control Spike (LCS/LCSD)		**Water**		**QC Batch # 2001/10/05-V1.03**
LCS:	2001/10/05-V1.03-004	Extracted:	10/05/2001 08:50	Analyzed: 10/05/2001 08:50
LCSD:	2001/10/05-V1.03-005	Extracted:	10/05/2001 09:21	Analyzed: 10/05/2001 09:21

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	102	100	100	100	102.0	100.0	2.0	77-123	20		
Toluene	100	98.3	100	100	100.0	98.3	1.7	78-122	20		
Ethyl benzene	102	100	100	100	102.0	100.0	2.0	70-130	20		
Xylene(s)	288	285	300	300	96.0	95.0	1.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	517	508	500	500	103.4	101.6		58-124			

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www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M Prep Method: 5030

Laboratory Control Spike (LCS/LCSD)		**Water**		**QC Batch # 2001/10/05-V1.03**
LCS:	2001/10/05-V1.03-006	Extracted:	10/05/2001 09:52	Analyzed: 10/05/2001 09:52
LCSD:	2001/10/05-V1.03-007	Extracted:	10/05/2001 10:22	Analyzed: 10/05/2001 10:22

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	489	539	500	500	97.8	107.8	9.7	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-	457	503	500	500	91.4	100.6		50-150			

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www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5030

Laboratory Control Spike (LCS/LCSD)		**Water**		**QC Batch # 2001/10/09-01.05**
LCS:	2001/10/09-01.05-004	Extracted:	10/09/2001 08:50	Analyzed: 10/09/2001 08:50
LCSD:	2001/10/09-01.05-005	Extracted:	10/09/2001 09:22	Analyzed: 10/09/2001 09:22

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	90.2	88.0	100.0	100.0	90.2	88.0	2.5	77-123	20		
Toluene	94.4	91.0	100.0	100.0	94.4	91.0	3.7	78-122	20		
Ethyl benzene	95.1	91.3	100.0	100.0	95.1	91.3	4.1	70-130	20		
Xylene(s)	287	278	300	300	95.7	92.7	3.2	75-125	20		
Surrogate(s)											
Trifluorotoluene	439	426	500	500	87.8	85.2		58-124			

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Gases by 3810M

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana	✉ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
FOMW-3	Water	09/26/2001 11:45	1

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Gases by 3810M

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 3810M
Prep Method: 3810

Sample ID:	**FOMW-3**	Lab Sample ID:	2001-09-0622-001
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/02/2001 12:00
Sampled:	09/26/2001 11:45	QC-Batch:	2001/10/02-01.37
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Methane	0.011	0.010	ug/ml	1.00	10/02/2001 17:33	

SEVERN TRENT SERVICES

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
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www.chromalab.com

CA DHS ELAP#1094

Gases by 3810M

Batch QC report

Test Method: 3810M Prep Method: 3810

Method Blank **Water** **QC Batch # 2001/10/02-01.37**

MB: 2001/10/02-01.37-001 Date Extracted: 10/02/2001 12:00

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Methane	ND	0.01	ug/ml	10/02/2001 12:38	

Submission #: 2001-09-0622

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1220 Quarry Lane
Pleasanton, CA 94566

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Fax 925 484 1096
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www.chromalab.com

CA DHS ELAP#1094

Gases by 3810M

Batch QC report

Test Method: 3810M Prep Method: 3810

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/10/02-01.37**

LCS: 2001/10/02-01.37-002 Extracted: 10/02/2001 12:00 Analyzed: 10/02/2001 14:37

LCSD: 2001/10/02-01.37-003 Extracted: 10/02/2001 12:00 Analyzed: 10/02/2001 14:45

Compound	Conc. [ug/ml]		Exp.Conc. [ug/ml]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Methane	0.0795	0.0821	0.0721	0.0721	110.3	113.9	3.2	65-135	35		

Submission #: 2001-09-0622

Misc Anions by Ion Chromatograph

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

URS-Santa Ana	✉ 2020 East 1st St Suite 400 Santa Ana, CA 92705
Attn: Scott Rowlands	Phone: (714) 648-2793 Fax: (714) 667-7147
22-00000139.01.00003	Project: Sears-Oakland

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
FOMW-3	Water	09/26/2001 11:45	1

Submission #: 2001-09-0622

SEVERN TRENT SERVICES

Misc Anions by Ion Chromatograph

URS-Santa Ana
Attn: Scott Rowlands

Test Method: 9056
Prep Method: 9056

STL Chromalab
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID:	**FOMW-3**	Lab Sample ID:	2001-09-0622-001
Project:	22-00000139.01.00003	Received:	09/26/2001 15:15
		Extracted:	10/02/2001
Sampled:	09/26/2001 11:45	QC-Batch:	2001/10/02-01.41
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Nitrate	5.0	1.0	mg/L	1.00	10/02/2001	
Sulfate	55	2.0	mg/L	2.00	10/02/2001	

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www.chromalab.com

CA DHS ELAP#1094

Misc Anions by Ion Chromatograph

Batch QC report

Test Method: 9056 Prep Method: 9056

Method Blank **Water** **QC Batch # 2001/10/02-01.41**

MB: 2001/10/02-01.41-001 Date Extracted: 10/02/2001

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Nitrate	ND	1.0	mg/L	10/02/2001	
Sulfate	ND	1.0	mg/L	10/02/2001	

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www.chromalab.com

CA DHS ELAP#1094

Misc Anions by Ion Chromatograph

Batch QC report

Test Method: 9056 Prep Method: 9056

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/10/02-01.41**

LCS: 2001/10/02-01.41-002 Extracted: 10/02/2001 Analyzed: 10/02/2001

LCSD: 2001/10/02-01.41-003 Extracted: 10/02/2001 Analyzed: 10/02/2001

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Nitrate	20.2	20.2	20.0	20.0	101.0	101.0	0.0	80-120	20		
Sulfate	19.1	19.2	20.0	20.0	95.5	96.0	0.5	80-120	20		

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Pleasanton, CA 94566

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CA DHS ELAP#1094

Misc Anions by Ion Chromatograph

Batch QC Report

Test Method: 9056 Prep Method: 9056

Matrix Spike (MS / MSD)	**Water**		**QC Batch # 2001/10/02-01.41**
Sample ID: **MW-1-0901 >> MS**		Lab ID:	2001-09-0618-001
MS: 2001/10/02-01.41-004	Extracted: 10/02/2001	Analyzed:	10/02/2001
		Dilution:	1
MSD: 2001/10/02-01.41-005	Extracted: 10/02/2001	Analyzed:	10/02/2001
		Dilution:	1

Compound	Conc. [mg/L]			Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Nitrate	20.6	20.6	ND	20.0	20.0	103.	103.0	0.0	80-120	20		
Sulfate	21.5	21.3	1.65	20.0	20.0	99.3	98.3	1.0	80-120	20		

Cyto Culture
ENVIRONMENTAL
BIOTECHNOLOGY
CytoCulture International Inc.
249 Tewksbury Avenue
Pt. Richmond, CA 94801 USA

STL Chromalab
CL Sub No. 2001-09-0622
Project Manager: Afsaneh Salimpour
1220 Quarry Lane, Pleasanton, CA 94566-4756

Reporting Date: October 17, 2001
CytoCulture Lab Login: 01-71
Project Description: Sears- Oakland
Tel. 925/484-1919 Fax. 925/484-1096

SAMPLES: One water sample on ice was received on 10/3/01. The sample was assayed the following business day and stored at 4°C for any future testing. See the attached chain of custody form.

Aerobic Hydrocarbon-Degrading and Total Heterotrophic Bacteria Enumeration Assays

ANALYSIS REQUEST: Bacterial enumeration for aerobic petroleum hydrocarbon-degraders (broad range petroleum hydrocarbons derived from diesel and gasoline) and total heterotrophic plate counts by methods 9215A (HPC) / Standard Methods 9215B modified.

CARBON SOURCE: Sterilized Chevron No. 2 diesel and gasoline were dissolved into agar plates as the sole carbon and energy sources for the growth of hydrocarbon-degrading aerobic bacteria. Heterotrophic plates were made up with standard methods total plate count agar (Difco) containing a wide range of carbon sources derived from yeast extract, tryptone, pancreatic digest of casein and glucose.

PROTOCOLS:

Hydrocarbon Degraders: Sterile agar plates (100 x 15 mm) were prepared with minimal salts medium at pH 6.8 with noble agar and hydrocarbons, without any other carbon sources or nutrients added. Triplicate plates were inoculated with 1.0 ml of each sample, or log dilutions of the sample, at 10^0, 10^{-1}, 10^{-2} and 10^{-3}. Hydrocarbon plates were counted 10 days after incubation at 30 Deg C. The plate count data are reported as colony forming units (cfu) per milliliter (ml). Each bacteria population value represents a statistical average of the plate count data obtained with inoculations for two of the four log dilutions tested.

Heterotrophs: Sterile agar plates (100 x 15 mm) were prepared with minimal salts medium and 2.35% heterotrophic plate count agar at pH 6.8 without any other carbon sources or nutrients added. Plates were inoculated with 1.0 ml of water sample, or log dilutions of the sample, in triplicate at sample dilutions of 10^0, 10^{-1},10^{-2}, and 10^{-3}. The heterotroph plates were counted after 10 days of incubation at 30 Deg. C. The plate count data are reported as colony forming units (cfu) per milliliter (ml) of sample. Each enumeration value represents a statistical average of two of the four log dilutions inoculated in plates.

Aerobic
Hydrocarbon-Degrading and Heterotrophic Bacteria Enumeration Results

CLIENT SAMPLE NUMBER	SAMPLE DATE	HYDROCARBON DEGRADERS (CFU/ML)	TARGET HYDROCARBONS TESTED	TOTAL HETEROTROPHS (CFU/ML)
FOMW-3	9/26/01	3×10^1	Gasoline + diesel	1.7×10^2
Sterile water	10/3/01	zero	Gasoline + diesel	zero
Air control	10/3/01	zero	Gasoline + diesel	zero
Positive control	10/3/01	3.7×10^6	Gasoline + diesel	5.1×10^7

A hydrocarbon-degrading bacteria positive control sample was run concurrently with these samples using a mixed flask culture of bacteria from Northern California contaminated groundwater sites.

CytoCulture is available on a consulting basis to assist in the interpretation of these data and their application to field bioremediation protocols.

Wendy Fulkerson
Laboratory Technician

Randall von Wedel, Ph.D.
Principal Biochemist

C:\cytolab\lab reports\chromalab wtr01-71

[redacted] TRENT SERVICES

STL ChromaLab

Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 484-1096
Email: info@stlchromalab.com

Reference #: 62006

2001-09-0622

Date 9.26.01 Page 1 of 1

From

Proj.Mgr	SCOTT KIRKLAND
Company	URS
Address	2020 E FIRST ST, SUITE 460 SANTA ANA, CA 92705
Sampler (Signature)	
Phone	Fax/Email 714.667.7147

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH (EPA 8015, 8020/8021) ☒ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX (EPA 8020/8021)	TEPH (EPA 8015M) ☐ Silica Gel ☒ Diesel ☒ Motor Oil ☐ Other	Fuel Oxygenates (8260B): ☐ DCA, EDB ☐ Full Oxygenate List ☐ MTBE ☐ BTEX	Purgeable Halocarbons (HVOCs) (EPA 8010/8021)	Volatile Organics GC/MS (VOCs) (EPA 8260A/8260B)	Semivolatiles GC/MS (EPA 8270)	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	☐ Pesticides (EPA 8081) ☐ PCBs (EPA 8082)	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	☐ W.E.T (STLC) ☐ TCLP	Hexavalent Chromium ☐ pH (24h hold time for H_2O)	Spec Cond. ☒ Alkalinity ☐ TSS	Anions: ☐ Cl ☒ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	BTEX, MTBE BY EPA 8020B W/ GC/MS CONFIRMATION	METHANE BY HEADSPACE	H. DEGRADERS ASTM G-22	HAC SM9215A	Number of Containers
SPARGE-3	9.26.01	1145	GW	HCl/NONE	X		X												X	X	X	X	X	X	
[illegible]1	9.26.01	1215	H_2O	HCl						X															
[illegible]1	9.26.01	—	H_2O	HCl						X															

END OF RECORD

Project Info.

Project Name:	SPARGE KIRKLAND
Project#:	[illegible] 1371.01 0003
PO#:	
Credit Card#:	

TAT: Std 5 Day | 72h | 48h | 24h

Report: ☐ Routine ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD

Special Instructions / Comments:

Sample Receipt

# of Containers:	
Head Space:	
Temp:	4.5
Conforms to record:	
Other	

	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature / Time	1515		
Printed Name / Date	SCOTT GOWSKI 9.26.01		
Company	URS		

	1) Received by:	2) Received by:	3) Received by:
Signature / Time			1515
Printed Name / Date			KAWLEY 09/26/01
Company			STL-CL

Rev 05/01

Southland Technical Services, Inc.
Environmental Laboratories

7801 Telegraph Road, Suite L
Montebello, CA 90640

Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

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

Project: Sears Oakland
Project Site: 2633 Telegraph Ave., Oakland
SSample Date: 09-26-2001
Lab Job No.: UR11011

Dear Mr. Rowlands:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-02-2001 and analyzed by the following EPA methods:

EPA 8015M (Total Petroleum Hydrocarbons)
EPA 8260B (BTEX & Oxygenates by GC/MS)

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

The sample(s) arrived in good conditions (i.e., chilled, 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

7801 Telegraph Road, Suite L
Montebello, CA 90640

Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

Client:	URS Corporation	Lab Job No.:	UR11011
Project:	Sears Oakland		
Project Site:	2633 Telegraph Ave., Oakland	Date Sampled	09-26-2001
Matrix:	Waste oil	Date Received:	10-02-2001
Batch No.:	1003-VOSA	Date Analyzed:	10-03-2001

EPA 8260B (BTEX & Oxygenates by GC/MS)
Reporting Units: mg/kg (ppm)

Lab ID / **Sample ID**	Method Blank	UR1101-1 / FOMW-1P					Reporting Limit	MDL
DF	1	1,000						
Benzene	ND	ND					2	0.002
Toluene	ND	ND					2	0.002
Ethylbenzene	ND	ND					2	0.002
Total Xylenes	ND	ND					4	0.004
MTBE	ND	ND					5	0.005
ETBE	ND	ND					5	0.005
DIPE	ND	ND					5	0.005
TAME	ND	ND					5	0.005
T-Butyl Alcohol	ND	ND					20	0.020
SURRO-GATE	**MB %RC**	**%RC**						**Accept Limit%**
Dibromofluoro-methane	94	107						79-126
Toluene-d8	84	90						79-121
Bromofluoro-benzene	97	95						71-131

MDL=Method Detection Limit, DF=Dilution Factor (**DF × MDL = Reporting Limit** for the sample),
ND=Not Detected (at the specified limit).

Southland Technical Services, Inc.
Environmental Laboratories
7801 Telegraph Road, Suite L
Montebello, CA 90640
Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

Client:	URS Corporation	Lab Job No.:	UR11011
Project:	Sears Oakland		
Project Site:	2633 Telegraph Ave., Oakland	Date Sampled	09-26-2001
Matrix:	Waste oil	Date Received:	10-02-2001
Batch No. for TPH- Gasoline:	CJ03-GS1	Date Analyzed:	10-03-2001
Batch No. for TPH-Diesel:	EJ04-DS1	Date Analyzed:	10-04-2001

EPA 8015M (Total Petroleum Hydrocarbons)
Reporting Unit: mg/kg (ppm)

Sample ID	Lab ID	Gasoline Range TPH (C8-C12)	Diesel Range TPH (C13-C23)	Oil Range TPH (C24-C40)	Surrogate Recovery%
Reporting Limit		10	10	50	Spike Conc. 50 ppm
Method Blank		ND	ND	ND	82
FOMW-1P	UR1011-1	46,000	393,000	385,000	302*

* Analyte interference.

ND: Not Detected (at the specified limit)

Southland Technical Services, Inc.
Environmental Laboratories
7801 Telegraph Road, Suite L
Montebello, CA 90640
Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

EPA 8015M (TPH)
Batch QA/QC Report

Client: URS Corporation
Project: Sears Oakland
Matrix: Waste oil
Batch No.: CJ03-GS1

Lab Job No.: UR11011
Lab Sample ID: ST1003-1
Date Analyzed: 10-03-2001

I. MS/MSD Report
Unit: ppb

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-G	ND	1,000	1,180	983	118.0	98.3	18.2	30	70-130

II. LCS Result
Unit: ppb

Analyte	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
TPH-G	936	1000	93.6	80-120

ND: Not Detected (at the specified limit).

Southland Technical Services, Inc.
Environmental Laboratories
7601 Telegraph Road, Suite L
Montebello, CA 90640
Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

EPA 8260B
Batch QA/QC Report

Client:	URS Corporation	Lab Job No.:	UR11011
Project:	Sears Oakland		
Matrix:	Waste oil	Lab Sample ID:	R1015-1
Batch No:	1003-VOSA	Date Analyzed:	10-03-2001

I. MS/MSD Report
Unit: ppb

Compound	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
1,1-Dichloroethene	ND	20	18.0	18.7	90.0	93.5	3.8	30	70-130
Benzene	ND	20	18.0	20.0	90.0	100.0	10.5	30	70-130
Trichloro-ethene	ND	20	18.9	20.6	94.5	103.0	8.6	30	70-130
Toluene	ND	20	19.7	20.2	98.5	101.0	2.5	30	70-130
Chlorobenzene	ND	20	18.7	19.2	93.5	96.0	2.6	30	70-130

II. LCS Result
Unit: ppb

Compound	LCS Report Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	20.0	20	100.0	80-120
Benzene	21.8	20	109.0	80-120
Trichloro-ethene	21.3	20	106.5	80-120
Toluene	22.0	20	110.0	80-120
Chlorobenzene	20.9	20	104.5	80-120

ND: Not Detected (at the specified limit)

Southland Technical Services, Inc.
Environmental Laboratories
7801 Telegraph Road, Suite L
Montebello, CA 90640
Phone (323) 888-0728
Fax (323) 888-1509

10-09-2001

EPA 8015M (TPH)
Batch QA/QC Report

Client:	URS Corporation	Lab Job No.:	UR11011
Project:	Sears Oakland		
Matrix:	Waste oil	Lab Sample ID:	ST1004-1
Batch No.:	EJ04-DS1	Date Analyzed:	10-04-2001

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	200	209	215	104.5	107.5	2.8	30	70-130

II. LCS Result
Unit: ppm

Analyte	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
TPH-d	206	200	103.0	80-120

ND: Not Detected (at the specified limit).

SOUTHLAND TECHNICAL SERVICES, INC.

Page 1 of 1

CHAIN OF CUSTODY RECORD

Lab Job Number UR1011

Client: URS

Address: 2020 East First Street, Ste 400

Report Attention: J S Rowland | Phone: 714 648 2793 | Fax: | Sampled by: Stan Golaski

Project Name/No.: Sears-Oakland | Project Site: 2633 Telegraph Ave, Oakland

Client Sample ID	Lab Sample ID	Sample Collect Date	Sample Collect Time	Matrix Type	Sample Preseve	No., type* & size of container	602/8021 (BTEX,MTBE)	8015M (Gasoline)	8015M (Diesel)	8260B (VOCs)	8260B (Oxygenates) +BTEX	8260B (MTBE Confirm.)	Hydrocarbon Scan					Remarks
FOMW-1P	UR1011-1	9/26/01		Product	NO	500 mL Plastic					X		X					

T.A.T. Requested
- ☐ Rush 8 12 24 hours
- ☐ 2-3 days ☒ Normal

Sample Condition
- ☐ Chilled ☐ Intact
- ☐ Sample seals

Relinquished by	Company	Date	Time	Received by	Company
J S Rowland	URS	10/2/01	10:50 AM	[signature]	STS

Container types: M=Metal Tube, A=Air Bag, (P)=Plastic bottle, G=Glass bottle, V=VOA vial

Southland Tech. Services, Inc.
7801 Telegraph Road, Suite L & K
Montebello, CA 90640
Tel: (323) 888-0728
Fax: (323) 888-1509

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.
Distribution: WHITE with report, PINK to courier.

APPENDIX C

URS DATA VALIDATION REPORTS

Level III Data Validation Summary

PROJECT: Sears Oakland
LABORATORY: Severn Trent Laboratories, Inc. (STL) - ChromaLab
MATRIX: Groundwater
LAB PROJECT #: 2001-12-0142
SAMPLES: See table below

Field ID	QC Designations	Lab ID	Gasoline, BTEX, and MTBE	Diesel and Motor Oil	H-Degrader and HPC	Alkalinity	Nitrate and Sulfate
FOMW-3		2001-12-0142-001	X	X	X	X	X

Gasoline range quantitated is C_5-C_{13}.
Diesel range quantitated is C_9-C_{24}.
Motor Oil range quantitated is C_{24}-C_{36}.
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.
MTBE = Methyl tertiary butyl ether.
H-Degrader = Hydrogen degrader.
HPC = Hetertrophic plate count.
STL is certified by California Department of Health Services (Certificate Number 1094)

DATA REVIEW MATRIX

QC Parameter	Gasoline, BTEX, and MTBE EPA 5030/ 8015M/8021B(1)	Diesel and Motor Oil EPA 3510/ 8015M	H-Degrader and HPC ASTM G-22/ SM9215A/ SM9215B(3)	Alkalinity EPA 310.1	Nitrate and Sulfate EPA 9056
Chain-of-custody (COC)	✓ (2)	✓	✓	✓	✓
Sample Receipt	✓	✓	✓	✓	✓
Holding Times	✓	✓	✓	✓	✓
Method Blank	✓	✓	✓	✓	✓
Surrogate Recovery	✓	✓	NA	NA	NA
Laboratory Control Sample	✓	✓	✓	✓	✓
Matrix Spike	✓	✓	NA	NA	✓
Duplicate or Spike Duplicate	✓	✓	NA	NA	✓
Field Duplicate	NC	NC	NC	NC	NC
Trip Blank/Equipment Blank	NC/NC	NC/NC	NC/NC	NC/NC	NC/NC

✓ = Quality control evaluation criteria met.
Laboratory control samples were prepared in duplicate.
NA = Not Applicable or Not Analyzed NC = None Collected

Notes:

1. The case narrative indicated that the hydrocarbons reported in the sample did not match the diesel or gasoline standards.
2. According to the COC documentation, the analyses of BTEX and MTBE by method 8020B was requested for sample FOMW-3. However, the laboratory performed method 8021B on this sample, which is the intended method.
3. Analysis subcontracted to Cyto Culture International, Inc.

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 obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples. Some samples were diluted due to the presence of target

analytes. In such cases, the reporting limits are elevated. However, usability is not affected when the target analyte is reported as present.

Analyte	Detection Limits Obtained
Gasoline	50
Diesel	50
Motor Oil	500
Benzene (8021B/8015M)	0.5
Toluene (8021B/8015M)	0.5
Ethylbenzene (8021B/8015M)	0.5
Xylenes (8021B/8015M)	0.5
MTBE (8021B/8015M)	5
Alkalinity	5000
Nitrate	1000
Sulfate	1000

Aqueous units are micrograms per liter (ug/l).

Level III Data Validation Summary

PROJECT: Sears Oakland (2)
LABORATORY: Severn Trent Laboratories, Inc. (STL) - ChromaLab
MATRIX: Soil
LAB PROJECT #: 2001-08-0063
SAMPLES: See table below

Field ID	QC Designations	Lab ID	TEPH	Gasoline, BTEX, and MTBE
S2-1		2001-08-0063-001	X	X

TEPH = Total extractable petroleum hydrocarbons. Consists of Diesel and Bunker-C.
Gasoline range quantitated is C_8-C_{12}. Diesel range quantitated is C_{13}-C_{23}.
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.
STS is certified by California Department of Health Services (Certificate Number 1986).

DATA REVIEW MATRIX

QC Parameter	TEPH EPA 3550/8015M(1)	Gasoline, BTEX, and MTBE EPA 5035/8015M/8021B
Chain-of-custody (COC) (1)	NP	NP
Sample Receipt	✓	✓
Holding Times	✓	✓
Method Blank	✓	✓
Surrogate Recovery	NR (2)	✓
Laboratory Control Sample	✓	✓
Matrix Spike	NR	NR
Duplicate or Spike Duplicate	NR	NR
Field Duplicate	NC	NC
Trip Blank/Equipment Blank	NA/NA	NA/NA

✓ = Quality control evaluation criteria met.
Laboratory control samples were prepared in duplicate.
NA = Not Applicable or Not Analyzed NR = None Reported or Not Requested NP = Not Provided (for review) NC = Not Collected

Notes:
1. The case narrative indicated that the hydrocarbons reported in the sample did not match the diesel standard.
2. The surrogate recovery for the TEPH analysis was not reported due to the required dilution.

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 without qualification. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
Diesel	1
Bunker-C	50
Gasoline	1
Benzene	0.005
Toluene	0.005
Ethylbenzene	0.005
Xylenes	0.005
MTBE	0.005

Aqueous units are milligrams per kilogram (mg/kg).

The samples required dilution for the 8015M (TEPH) analysis in order to quantitate detected target analtyes. For this sample, there is also a nondetect Bunker-C result with an elevated reporting limit. The data user must evaluate the utility of nondetect Bunker-C results with elevated reporting limits.

Level III Data Validation Summary

PROJECT: Sears Oakland (1)
LABORATORY: Southland Tech. Services, Inc. (STS)
MATRIX: Waste Oil
LAB PROJECT #: UR11011
SAMPLES: See table below

Field ID	QC Designations	Lab ID	Fuel Oxygenates and BTEX	Gasoline Range TPH	Diesel Range TPH	Oil Range TPH
FOMW-1P		UR1011-1	X	X	X	X

Gasoline range quantitated is C_8-C_{12}. Diesel range quantitated is C_{13}-C_{23}.
Oil range quantitated is C_{24}-C_{40}. TPH = Total petroleum hydrocarbons.
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.
STS is certified by California Department of Health Services (Certificate Number 1986).

DATA REVIEW MATRIX

QC Parameter	Fuel Oxygenates and BTEX EPA 5030/8015M/8260B	Gasoline Range TPH EPA 5030/8015M	Diesel Range TPH EPA 5030/8015M	Oil Range TPH EPA 5030/8015M
Chain-of-custody (COC)	✓	✓	✓	✓
Sample Receipt	✓	✓	✓	✓
Holding Times	✓	✓	✓	✓
Method Blank	✓	✓	✓	✓
Surrogate Recovery	✓	(1)	(1)	(1)
Laboratory Control Sample	✓	✓	✓	✓
Matrix Spike	✓ (2)	✓ (2)	✓ (2)	✓ (2)
Duplicate or Spike Duplicate	NR	NR	NR	NR
Field Duplicate	NC	NC	NC	NC
Trip Blank/Equipment Blank	NA/NA	NA/NA	NA/NA	NA/NA

✓ = Quality control evaluation criteria met.
Laboratory control samples were prepared in duplicate.
NA = Not Applicable or Not Analyzed NR = None Reported or Not Requested NP = Not Provided NC = Not Collected

Notes:

1. The surrogate recovery result for the Gasoline, Diesel, and Oil Range TPHs was high. Based on the high concentrations of target analytes in the sample, the high surrogate recovery result can be attributed to co-elution. Data qualification was not issued based on the surrogate recovery result for these analytes.
2. MS/MSD was conducted on a non-site related sample; therefore, the MS/MSD results obtained may not be fully representative of the accuracy and precision of the analysis on the site-specific sample matrix.

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 without qualification. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
Gasoline Range TPH	10
Diesel Range TPH	10
Oil Range TPH	50
Benzene	2
Toluene	2
Ethylbenzene	2
Xylenes	4
MTBE	5
TBA	20
Other Oxygenates	5

Aqueous units are milligrams per kilogram (mg/kg).
TBA = Tert-butyl alcohol.

The sample required dilution for the both the 8260B and 8015M analyses due to the high concentration of non-target and target analytes (TPHs). For this sample, the results from the 8260B analysis were all nondetect with elevated reporting limits. The data user must evaluate the utility of the nondetect BTEX and Fuel Oxygenates results with elevated reporting limits.

APPENDIX D

DECEMBER 20, 2001 ACEHS CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

STID 1082

December 20, 2001

Scott M. DeMuth
Sears Roebuck & Company
Department 824C, Building A2-281A
Hoffman Estates, IL 60179

Re: Former Sears Retail Center, (Heating Oil) 2633 Telegraph Ave., Oakland, CA 94612

Dear Mr. Scott M. DeMuth:

I am in receipt of "Revision to Additional Site Assessment and Groundwater Monitoring Well Installation Work Plan", dated December 18, 2001 submitted by Mr. Scott Rowlands of URS Corporation regarding the above referenced site.

As you are aware this document was presented in response to my concerns, which I made in my previous correspondence concerning the proposed work plan submitted by Mr. Rowlands.

Per this proposal and in response to the August 28, 2001 correspondence from this office, you have made the following proposal:

1. Installment of two down-gradient monitoring wells as depicted on the figure 2 within this workplan.

2. Installment of two 30-foot depth continuous core soil borings as depicted on figure 2.

3. Collection of hydropunch samples and analysis from the above borings.

4. Collection of an additional 30-foot soil boring and sampling at five-foot intervals and per depiction within figure 2.

Per our discussion the additional soil samples will also be performed down-gradient of former source as well due to the fact that the area down-gradient of the former UST has not been properly characterized by any previous investigation.

Groundwater flow gradient has been previously calculated to be southeasterly.

Please continue with performance of the quarterly monitoring along with use of some viable "interim remedial action" in order to remove the separate phase product as much as practical from FOMW-1 well as discussed previously.

I concur with the above proposal as indicated within this document.

Should you have any questions, please do not hesitate to call me at (510) 567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Mr. J.S. Rowlands, URS Corporation, 2020 East First Street, Suite 400, Santa Ana, CA 92705
files