Environmental Consultants

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SCS ENGINEERS

January 10, 2002 2003?
File No. 04202001.01

Jay Fisher
Principal Capital Management
801 Grand Avenue
Des Moines, IA 50392-1370

Subject: Second Quarter, Summer 2002, Groundwater Monitoring Event at the Former Chevron Gasoline Station Site, Meeker Square, Kent, Washington

Dear Jay:

This letter describes the second round of quarterly groundwater monitoring at the former Chevron gasoline station site at the Meeker Square shopping center in Kent, Washington. The groundwater sampling was conducted on September 9, 2002, and constitutes the summer 2002 monitoring event.

Background

Standard Oil (Chevron) purchased the subject site and constructed a gasoline station in 1960 and 1961. The station had two fuel island canopies, one facing each of the two adjoining streets. The underground storage tanks (USTs) were removed from the site in 1983 when the business closed. Observations made during the soil remediation excavation suggested that the former fuel supply lines were left in place and the UST excavation was filled with building debris after the tanks were removed. Soil in the suspected former UST excavation was stained gray and had an obvious gasoline odor.

Soil sample analytical results indicated that the contaminants were limited to gasoline-range petroleum hydrocarbons and xylenes. Benzene was detected in soils at the site only during an investigation by others conducted in 1998. No benzene was detected in any of the soil samples analyzed during the soil remediation project in April 2002.

In April 2002, soils contaminated above MTCA Method A soil cleanup levels were removed to the extent practical. Limited contamination was inaccessible in the saturated soil at the center of the excavation, below electrical and irrigation utilities in the east portion of the south wall, and below electrical and irrigation utilities in the west portion of the south wall. Oxygen-Release Compound® (ORC) was mixed into the saturated soil in the base of the excavation to enhance the biological degradation of the petroleum hydrocarbon contamination. The Department of Ecology issued a no further action (NFA) designation for the soil on July 29, 2002.

Depending on seasonal variations, the depth to groundwater at the site is approximately 7.5 to 10.5 feet below grade. Water level data from the wells installed during the 1998 investigation indicated a southerly groundwater flow toward West Meeker Street. The Green River is located approximately 0.4 miles farther south.

Groundwater Sampling

Four groundwater monitoring wells are present at the site: one well remains from the 1998 investigation (MW3-GS) and three wells installed after the 2002 soil remediation activities (OW1, OW2, and OW3). Measurements of the depth to groundwater were recorded at each of the four wells at the site to facilitate calculating the groundwater flow direction.

On September 9, 2002, low-flow equipment (specifically, a stainless steel and Teflon bladder pump) was used to purge and sample the wells and produce groundwater samples with minimal turbidity. Groundwater quality parameters (pH, conductivity, dissolved oxygen content, and temperature) were measured during purging to evaluate when the parameters had stabilized and the wells had been sufficiently purged. The parameters were measured using a multi-probe, flow-through cell.

The groundwater samples were collected in laboratory-supplied glassware, placed on ice in a field cooler, and transported to the laboratory with standard chain-of-custody documentation. Severn Trent Laboratory (STL) in Tacoma analyzed the samples for gasoline-range total petroleum hydrocarbons (TPH) and gasoline-constituent BTEX compounds (benzene, toluene, ethylbenzene, and xylenes). STL is accredited by the Department of Ecology for the analyses performed.

Groundwater Results

A summary of the analytical results of the second round of groundwater monitoring is provided below in Table 1. The complete analytical report is attached.

Table 1 Second Quarter (Summer 2002) Groundwater Sample Analytical Results in µg/L (Parts per Billion)

Sample Name	Gasoline-Range TPH	BTEX Compounds			
		Benzene	Toluene	Ethylbenzene	Xylenes
OW1	<100	<0.5	<1	<1	<2
OW2	<100	<0.5	<1	<1	<2
OW3	***5,030***	***114***	3	162	166
MW3-GS	<100	<0.5	<1	<1	<3
MTCA Cleanup Level	800	5	1,000	700	1,000

Bold Indicates the concentration exceeds the MTCA Method A cleanup level.

The results of the second quarter of groundwater monitoring indicate that gasoline-range TPH and benzene are present in the groundwater at the southeast corner of the site (OW3). The gasoline concentration at OW3 is at a concentration of 5,030 µg/L, which exceeds the MTCA Method A cleanup level of 800 µg/L in groundwater. Benzene was detected in the same sample at a concentration of 114 µg/L, which exceeds the MTCA Method A cleanup level of 5 µg/L in groundwater. The samples from OW1, OW2, and the earlier-installed MW3-GS did not contain detectable concentrations of gasoline-range TPH or gasoline-constituent BTEX compounds.

Groundwater Flow Direction

Two rounds of groundwater elevation measurements recorded in 2000 indicated a southerly groundwater flow direction toward West Meeker Street and the Green River. The groundwater gradient at the site was nearly flat.

Following the soil remediation in the spring of 2002, site restoration was completed coincident with the final efforts of a street-widening project by the City of Kent. The street project included the installation of small trees and new grass along the south edge of the property. Small trees were also installed on the east side of the property. Irrigation plumbing was installed to ensure the survival of the new plants, which had been installed in May and June at the onset of the dry season. Water trucks from the City of Kent made regular trips to the site to water the new trees.

On September 9, 2002, measurements of the depth to groundwater were recorded at the four groundwater monitoring wells at the former Chevron site. Measurement and survey data and the calculated water table elevations are provided in Table 2.

Table 2 Groundwater Elevation Data, Summer 2002

Well ID	Depth to Groundwater	Surveyed Well Elevation	Water Table Elevation
OW1	9.45	99.78	90.33
OW2	9.52	99.82	90.30
OW3	9.09	99.25	90.16
MW3-GS	10.06	100.21	90.15

Based on the groundwater elevation data from the summer 2002 monitoring event, groundwater appears to be mounding beneath the planted strip at the south edge of the property. At the former Chevron site the local groundwater flow direction is northeast from the planting strip on the south end of the site. The gradient from the southwest, due to suspected contribution from the landscape irrigation, was approximately 0.0035 feet per foot. Groundwater level data from the first groundwater monitoring event (June 2002) indicated a southerly groundwater flow direction with a flatter gradient consistent with previous data collected in 2000.

Conclusions

Laboratory analytical results from the second groundwater monitoring event (summer 2002) indicate that gasoline-range TPH is present at the southeast corner of the site (OW3) at a concentration of 5,030 µg/L, which exceeds the MTCA Method A cleanup level of 800 µg/L in groundwater. At the same location, benzene is also present in the groundwater at a concentration of 114 µg/L, which exceeds the MTCA Method A cleanup level of 5 µg/L in groundwater. Groundwater samples from the three other wells at the site did not contain detectable concentrations of gasoline-range TPH or gasoline-constituent BTEX compounds.

The substantial irrigation applied to the planted strips at the south and east edges of the property is suspected of increasing surface water infiltration to such an extent that groundwater is mounding beneath the planting strips. Thus, the irrigation water has created a localized change in the groundwater flow direction, causing the groundwater to flow northeast onto the site from the planted strip at the south property boundary. Groundwater level data from the first groundwater monitoring event (June 2002) indicated a southerly groundwater flow direction consistent with previous data collected in 2000.

While some variability in the contaminant concentrations is noted for the first two monitoring events, additional data are needed to evaluate any apparent trends in the contaminant concentrations. The monitoring plan includes two additional monitoring events for the former Chevron station site at Meeker Square. The next monitoring event was conducted in December 2002 and is reported separately.

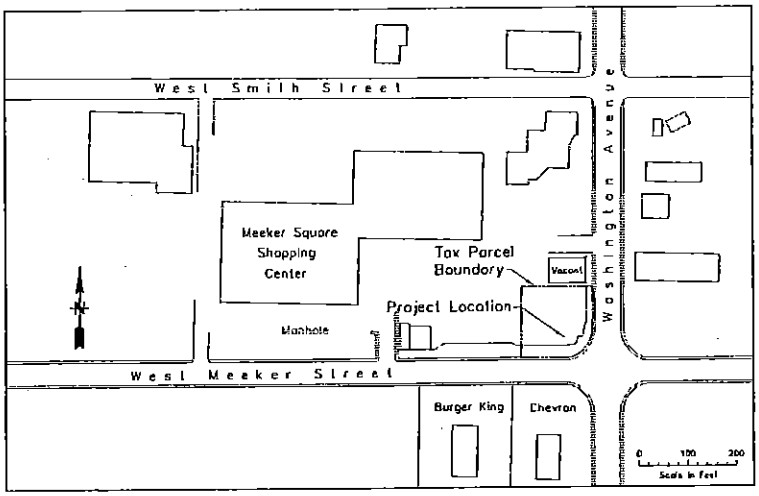
Thank you for the opportunity to provide our services. Please do not hesitate to call if you have any questions.

Sincerely,

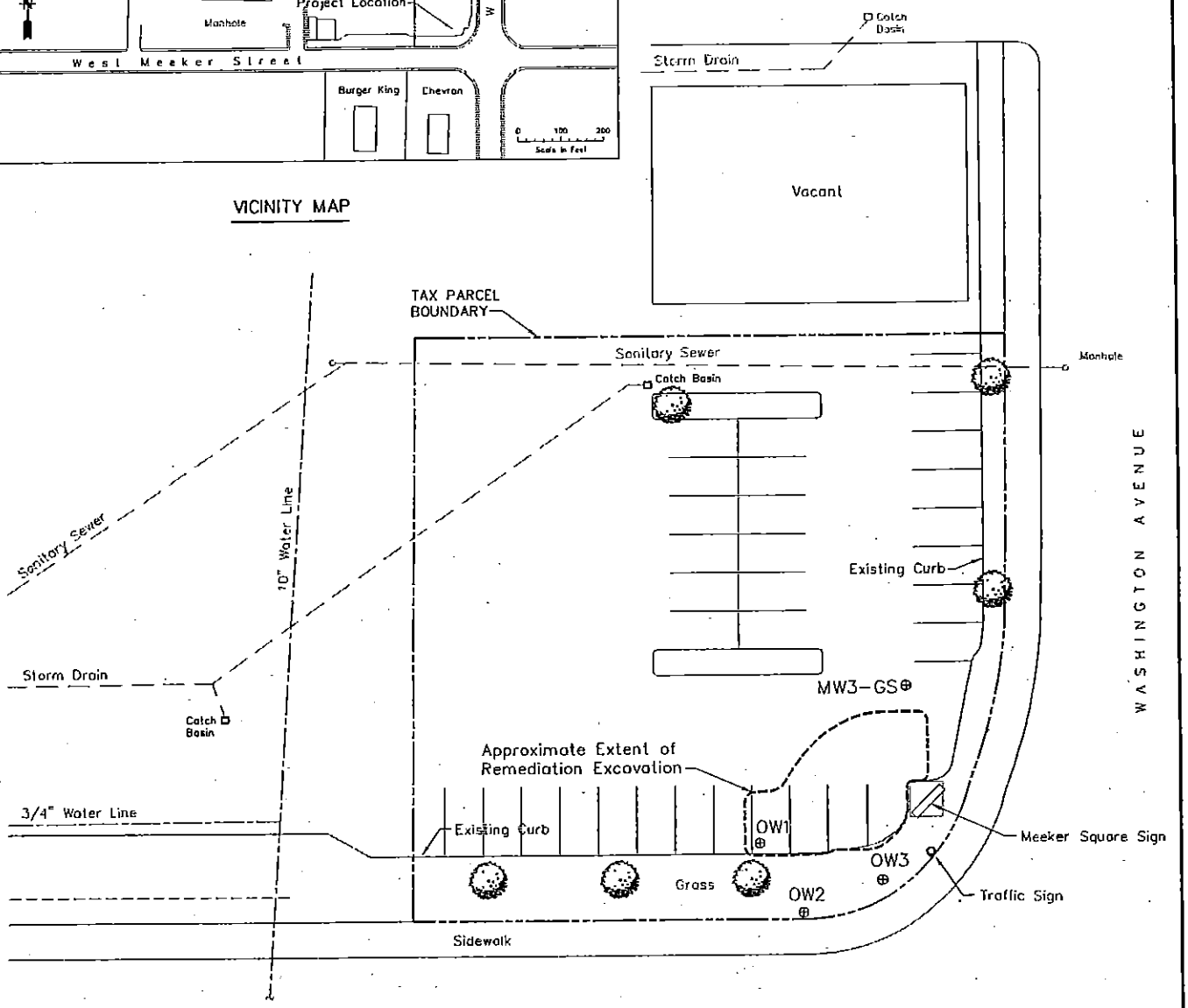
Brian G. Doan
Project Scientist
SCS ENGINEERS

Gregory D. Helland, R.G.
Project Director
SCS ENGINEERS

cc: Tim Wirta, Principal Capital Management
Grant Yang, Washington State Department of Ecology



VICINITY MAP



GRAPHIC SCALE

20 0 20

SCALE IN FEET

SCS ENGINEERS STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. 2405 140TH AVE NE, SUITE 107, BELLEVUE, WA 98005 (425) 746-4600	PROJECT NO. 04202001.01	DES BY B.D.	SITE PLAN FORMER GASOLINE STATION SITE MEEKER SQUARE SHOPPING CENTER KENT, WASHINGTON	DATE JAN 2003
	SCALE AS SHOWN	CHK BY G.H.		FIGURE 1
	CAD FILE FIGURE 1	APP BY G.H.		

SEVERN TRENT SERVICES

STL Seattle
5755 8th Street East
Tacoma, WA 98424

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Fax: 253 922 5047
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TRANSMITTAL MEMORANDUM

DATE: September 25, 2002

TO: Greg Helland
SCS Engineers
2405 140th Ave. N. E., Suite 107
Bellevue, WA 98005

PROJECT: Meeker Square Former Gas Station

REPORT NUMBER: 108537

TOTAL NUMBER OF PAGES: 17

Enclosed are the test results for four samples received at STL Seattle on September 10, 2002.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Darla Powell
Project Manager

STL Seattle

Sample Identification:

Lab. No.	Client ID	Date/Time Sampled	Matrix
108537-1	OW1	09-09-02 13:42	Liquid
108537-2	OW2	09-09-02 14:30	Liquid
108537-3	OW3	09-09-02 15:46	Liquid
108537-4	MW3-GS	09-09-02 12:50	Liquid

STL Seattle

Client Name	SCS Engineers
Client ID:	OW1
Lab ID:	108537-01
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	84.4		50	150
Bromofluorobenzene	92.5		50	150

Analyte	**Result (mg/L)**	**PQL**	**Flags**
Gasoline by NWTPH-G	ND	0.1	

STL Seattle

Client Name	SCS Engineers
Client ID:	OW1
Lab ID:	108537-01
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	91.2		78	127
Bromofluorobenzene	111		81	135

Analyte	**Result (mg/L)**	**PQL**	**MDL**	**Flags**
Benzene	ND	0.0005	0.0000935	
Toluene	ND	0.001	0.00008	
Ethylbenzene	ND	0.001	0.0001	
m&p-Xylene	ND	0.001	0.0001	
o-Xylene	ND	0.001	0.00008	

STL Seattle

Client Name	SCS Engineers
Client ID:	OW2
Lab ID:	108537-02
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	89.7		50	150
Bromofluorobenzene	95.6		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline by NWTPH-G	ND	0.1	

STL Seattle

Client Name	SCS Engineers
Client ID:	OW2
Lab ID:	108537-02
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	97.1		78	127
Bromofluorobenzene	116		81	135

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.0005	0.0000935	
Toluene	ND	0.001	0.00008	
Ethylbenzene	ND	0.001	0.0001	
m&p-Xylene	ND	0.001	0.0001	
o-Xylene	ND	0.001	0.00008	

STL Seattle

Client Name	SCS Engineers
Client ID:	OW3
Lab ID:	108537-03
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	10

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	97.8		50	150
Bromofluorobenzene	99		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline by NWTPH-G	5.03	1	

STL Seattle

Client Name	SCS Engineers
Client ID:	OW3
Lab ID:	108537-03
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	10

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Trifluorotoluene	100		78	127
Bromofluorobenzene	102		81	135

Analyte	**Result (mg/L)**	**PQL**	**MDL**	**Flags**
Benzene	0.114	0.005	0.000935	
Toluene	0.00296	0.01	0.0008	J
Ethylbenzene	0.162	0.01	0.001	
m&p-Xylene	0.155	0.01	0.001	
o-Xylene	0.0106	0.01	0.0008	

STL Seattle

Client Name	SCS Engineers
Client ID:	MW3-GS
Lab ID:	108537-04
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	87.9		50	150
Bromofluorobenzene	94.6		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline by NWTPH-G	ND	0.1	

STL Seattle

Client Name	SCS Engineers
Client ID:	MW3-GS
Lab ID:	108537-04
Date Received:	9/10/02
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	95.3		78	127
Bromofluorobenzene	114		81	135

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.0005	0.0000935	
Toluene	ND	0.001	0.00008	
Ethylbenzene	ND	0.001	0.0001	
m&p-Xylene	ND	0.001	0.0001	
o-Xylene	ND	0.001	0.00008	

STL Seattle

Lab ID:	Method Blank - GB3224
Date Received:	-
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	87.9		50	150
Bromofluorobenzene	93.2		50	150

Analyte	Result (mg/L)	PQL	Flags
Gasoline by NWTPH-G	ND	0.1	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	GB3224
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
QC Batch ID:	GB3224

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Gasoline by NWTPH-G	0	1.25	1.12	89.6	1.1	88.4	-1.3	

STL Seattle

Duplicate Report

Client Sample ID:	OW1
Lab ID:	108537-01
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
QC Batch ID:	GB3224

Volatile Petroleum Products by WSDOE Method NWTPH-Gx Modified

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Gasoline by NWTPH-G	0	0	NC	

STL Seattle

Lab ID:	Method Blank - GB3224
Date Received:	-
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
% Solids	-
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Trifluorotoluene	95.1		78	127
Bromofluorobenzene	113		81	135

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.0005	0.0000935	
Toluene	ND	0.001	0.00008	
Ethylbenzene	ND	0.001	0.0001	
m&p-Xylene	ND	0.001	0.0001	
o-Xylene	ND	0.001	0.00008	

STL Seattle

Blank Spike/Blank Spike Duplicate Report

Lab ID:	GB3224
Date Prepared:	9/20/02
Date Analyzed:	9/21/02
QC Batch ID:	GB3224

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Benzene	0	0.025	0.0253	101	0.0251	101	0	
Toluene	0	0.025	0.0255	102	0.0253	101	-0.99	
Ethylbenzene	0	0.025	0.0238	95.1	0.0237	94.8	-0.32	
m&p-Xylene	0	0.05	0.0514	103	0.0512	102	-0.98	
o-Xylene	0	0.025	0.0248	99.3	0.0247	98.8	-0.5	

STL Seattle
5755 8th Street East
Tacoma, WA 98424

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)ATA QUALIFIERS AND ABBREVIATIONS

31: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

32: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).

21: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.

22: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.

M: GC/MS confirmation was performed. The result derived from the original analysis was reported.

D: The reported result for this analyte was calculated based on a secondary dilution factor.

E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.

I: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

MCL: Maximum Contaminant Level

MDL: Method Detection Limit

N: See analytical narrative.

ND: Not Detected

PQL: Practical Quantitation Limit

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.

X2: Contaminant does not appear to be "typical" product.

X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.

X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.

X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

X5: Matrix spike recovery was not determined due to the required dilution.

X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.

X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.

X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.

X8: Surrogate recovery was not determined due to the required dilution.

X9: Surrogate recovery outside advisory QC limits due to matrix interference.

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

TRENT SERVICES **Severn Trent Laboratories, Inc.**

STL-8274 (0102)

Client: GES Engineers	Project Manager: Greg Holland	Date: 9-10-02	Chain of Custody Number: 005496
Address: 2405 140th Ave NE #107	Telephone Number (Area Code)/Fax Number: 425-746-4600 425-746-6747	Lab Number:	Page 1 of 1
City: Bellevue / State: WA / Zip Code: 98005	Site Contact: Brian Doan	Lab Contact:	Analysis (Attach list if more space is needed)
Project Name and Location (State): Alice Kay Square Former Gas Station	Carrier/Waybill Number:		Special Instructions/ Conditions of Receipt
Contract/Purchase Order/Quote No.			

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: NWTPH-Gas	w/ BTEX
OW-1	9-9-02	1342		X						X			X	X
OW-2	"	1430		"						"			"	"
OW-3	"	1546		"						"			"	"
MW-2-GS	"	1250		"						"			"	"

Cooler: ☐ Yes ☐ No Cooler Temp: _____

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Brian Doan	9-10-02	11:20	1. Received By: Jim Palmquist STL	9-10-02	11:20
2. Relinquished By: Jim Palmquist STL	9-10-02	15:15	2. Received By: [signature]	9-10-02	15:15
3. Relinquished By:	Date	Time	3. Received By:	Date	Time

Comments: Use MTCA Method A cleanup limits. Sample OW3 had gasoline odor.

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy