

Technical Memorandum

To: Chris Mauer, Washington Department of Ecology
From: Janet Knox and Glen Wallace, Pacific Groundwater Group
Re: Scougal Rubber Remedial Action Update (VCP Site NW 1707)
Date: September 20, 2011

This technical memorandum summarizes the remedial actions conducted at Scougal Rubber in between January 2009 and August 2011. Remedial action at the site focuses on reduction of chlorinated solvent concentrations in soil and groundwater. Previous remedial action at the site is described in other documents, particularly including:

- *Scougal Rubber Remedial Action Update (VCP Site NW 1707)* (PGG, 2009).
- *Scougal Rubber Final Remedial Action Plan* (PGG 2007).
- *Independent Remedial Action Report* (Retec, 2002).

The work was performed using generally accepted hydrogeologic practices at this time and in this vicinity, for exclusive application to the Scougal Rubber site and for the exclusive use of Scougal Rubber. This statement is in lieu of other warranties, express or implied.

INTRODUCTION

Scougal Rubber is located in the Georgetown neighborhood of Seattle, Washington at 6239 Corson Avenue (Figure 1). Remedial efforts have been underway at the site for over 20 years and have been successful in significantly reducing contaminant concentrations (Table 1). Confirmation soil samples from areas of known contamination have been non-detect. Source-area groundwater solvent concentrations were below MTCA Method A cleanup levels in the most recent two sampling events.

The Scougal property overlies fine to medium silty sands with scattered, discontinuous silt and gravel stringers. These soils are commonly observed throughout the lower Duwamish area. Depth to groundwater at the site is between 7 and 9 feet. Groundwater flow direction is to the southwest toward the Duwamish River, approximately 0.5 miles away (Retec, 2003). Soil cores collected in 2009 identified a 6- to 12-inch thick silt layer at approximately 16 feet below ground surface (bgs) that appears to be laterally continuous within at least the alleyway area of the site.

Petroleum and chlorinated solvent-impacted soil was identified on the Scougal property in the late 1980s. This discovery led to remedial action at the site including removal of underground storage tanks, hotspot excavation, hydraulic containment, and operation of

an air sparging soil vapor extraction (SVE) system (Retec, 2002). The SVE system was designed to reduce contaminant concentrations in soil and groundwater behind the Scougal main plant and beneath the Machinists Inc. property to the west. The SVE system was operated intermittently from 1994 through 1999.

Operation of the SVE system reduced groundwater concentrations by approximately 90 percent, and had inconsistent effectiveness in soil. In 1994, TCE (1,000 ug/L) and vinyl chloride (1,300 ug/L) concentrations at MW-14 were above cleanup levels. After operation of the SVE system, concentrations of TCE and vinyl chloride had decreased, but groundwater concentrations rebounded each time the system was shut down. The SVE system was effective at reducing contaminant mass, but soil and groundwater concentrations remained above cleanup levels.

Scougal Rubber contacted Pacific Groundwater Group (PGG) in 2005 to develop a plan to further reduce contaminant concentrations to below cleanup levels. PGG performed additional site investigation in 2006 as the basis for further remediation and found concentrations as high as TCE (110 ug/L) and vinyl chloride (33 ug/L) in groundwater.

PGG developed a Final Remedial Action Plan to address residual contamination. With that plan, Scougal Rubber chose to enter the Washington Department of Ecology's Voluntary Cleanup Program to receive Ecology's approval of the cleanup approach and to obtain a No Further Action (NFA) letter once the cleanup goals are achieved.

Upon review of the existing site documents and the Final Remedial Action Plan, Ecology provided approval of the plan. PGG then implemented the planned removal of shallow impacted soil, in-situ chemical oxidation with potassium permanganate, and confirmation sampling (PGG, 2009). All confirmation soil samples within the treatment area were non-detect for chlorinated solvents. Groundwater petroleum compound concentrations were reduced to below cleanup levels. Groundwater chlorinated ethene concentrations were reduced an additional 90 percent to approximately 1 percent of the pre-remediation (1993) levels. However, TCE and vinyl chloride concentrations remained above MTCA Method A cleanup values at the end of 2008. In 2009, PGG developed and implemented a targeted ozone injection system to further reduce concentrations. This system is described in the following sections.

Sampling Methods

Soil and groundwater samples were collected using methods designed to minimize volatilization of organic compounds. Groundwater samples were collected using a peristaltic pump and low flow methods. Soil samples collected by PGG were collected following EPA Method 5035. Soil and groundwater samples were collected into laboratory-provided sample containers and placed in coolers with ice. Chain of custody was maintained for all samples. Ozone distribution was turned off one week prior to groundwater performance sampling events.

OZONE REMEDIATION

PGG designed and observed installation of an ozone remediation system in May-June 2009. A second phase of ozone sparge points was added in June 2010. Ozone was selected to address residual groundwater contamination because of the ability to distribute oxidant to soil and groundwater in areas with difficult access with minimal disturbance to site structures and manufacturing operations. The ozone system installation included (Figures 2 and 3):

- An H2O Engineering model OSU-52 cabinet capable of producing 2.7 pounds of ozone per day at a concentration of 3,570 ppm in a 90% oxygen stream.
- 8 soil injection points screened between 5 and 6.5 feet bgs
- 8 groundwater sparge points screened between 15 and 16.5 feet bgs (keyed to top of silt) with proprietary micro-bubble screens to enhance ozone dispersal.

Ozone sparge points OP-1 through OP-8 were installed on May 11, 2009 using a limited-access geoprobe rig operated by ESN Northwest. Ozone sparge points were installed in sets of two with co-located soil (OP-1S) and groundwater points (OP-1D). A 3- to 6-inch thick silt layer was observed at approximately 16 feet below ground surface in three soil cores collected during installation of the ozone sparge points to document lithologic variation in the aquifer; the silt layer had not been identified during previous investigations¹. The base of the 18-inch ozone sparge screens were set in the silt interval to maximize the depth of ozone distribution without extending below the silt, which would act as a barrier to ozone distribution. Scougal Rubber installed Teflon tubing protected by schedule 40 PVC conduit between wellheads and the ozone cabinet. Ozone distribution to sparge points began on June 15, 2009.

Soil sparge points were included in the ozone system to reach any hot spots that were not identified by previous sampling. Soil samples collected at the conclusion of the permanganate remediation effort were non-detect for chlorinated ethenes. However, continued detection of chlorinated ethenes at MW-14 suggested that residual contamination remained in groundwater.

JUNE 2010 SUPPLEMENTAL OZONE INSTALLATION

PGG installed three additional ozone sparge points in June 2010 to deliver ozone below the silt layer at 16ft below ground surface (bgs)(Figure 2). Well MW-14 is screened across this silt layer and continued detections of TCE and degradation products were hypothesized to be related to either contamination below the silt, or diffusion from the silt layer. The existing configuration of ozone points would have limited effectiveness on chlorinated ethenes in the silt layer. Sparge points OP-9, OP-10, and OP-11 were

¹ The silt layer is located above the screen interval of the air sparge points and could explain the limited performance of the air sparge / soil vapor extraction system operated during the 1990s. The silt layer would have impeded air circulation through the aquifer.

screened between 18.5 and 20 feet bgs, below the silt layer at 16 ft bgs. The additional ozone points began ozone delivery on July 23, 2010. Grab groundwater samples OP-9, OP-10, and OP-11 were collected at 18 feet bgs during installation of the ozone points. Samples were collected using a temporary stainless steel screen and peristaltic pump. Sample results indicated vinyl chloride concentrations below the silt layer between non-detect and 0.7 ug/L (Table 2).

Ozone distribution to sparge points began on June 15, 2009 and was discontinued on August 9, 2011. The ozone infrastructure was left in place pending confirmation monitoring results. During ozone operations through August 2011, between 1,100 and 1,500 lbs of ozone were delivered to groundwater sparge points².

OZONE PERFORMANCE MONITORING

Groundwater samples were collected from MW-14 during ozone treatment to monitor groundwater concentrations as a measure of remediation progress. MW-14 was selected for performance monitoring because it had the highest TCE concentrations, and was located towards the down gradient end of the treatment area (the ozone radius of influence likely extended approximately 15-25ft down gradient of MW-14). Performance monitoring results are included in Table 2.

Pre-treatment groundwater concentrations at MW-14 were 19.0 ug/L. TCE concentrations decreased to below cleanup levels (5 ug/L) by September 2009 (4 ug/L). Vinyl chloride concentrations decreased to below cleanup levels by 2009. However, concentrations subsequently rebounded. Total VOC load continued a general downward trend and all constituents were below cleanup levels by March 2011.

EAST WAREHOUSE CLEANUP

Review of site activities and previous remedial actions indicated that soil TCE concentrations at the north side of the site north of the East Warehouse building in a narrow alley likely remained above cleanup levels (Retec 2002). Contamination in this area likely resulted from incidental solvent use. RETEC had excavated the upper 1 to 2 feet of soil from selected areas in 1992 (Retec 2002). While PCE was the original contaminant noted for the area, confirmation samples indicated TCE concentrations between 120 and 170 ug/kg (both values J-flagged) remained after excavation. Samples collected by PGG in 2009 confirmed the presence of remaining PCE contamination in soil; groundwater samples were below cleanup levels for PCE and TCE. PGG then implemented a targeted remediation with potassium permanganate that successfully reduced concentrations to below cleanup levels.

Key events in the East Warehouse hot spot area from 2009 to the present include:

² There is some uncertainty in the total ozone delivered due to intermittent system down time during which oxygen was delivered to sparge points without ozone. For safety, when the cabinet detects a problem, ozone production to that point is discontinued.

- PGG collected three soil samples (SR-24, SR-25 and SR-26) from 24-inches below grade on May 11, 2009 (Figure 2). PCE concentrations ranged from non-detect to 380 ug/kg, above site cleanup levels (50 ug/kg) (Table 3).
- PGG collected five groundwater samples (SR-18 through SR-23) downgradient from the East Warehouse on May 1, 2009. TCE concentrations ranged from non-detect to 1.1 ug/L, which was below cleanup levels (Table 2).
- PGG and Scougal Rubber excavated the top 12 inches of soil (clean fill from previous excavation) and replaced it with a 4-inch perforated pipe set in 12 inches of pea gravel. The pea gravel was topped with plastic sheeting and clean fill. 450 gallons of 5-percent potassium permanganate solution were applied to the infiltration system in a single application on .
- Confirmation samples EW-A, EW-B and EW-C, collected on March 9, 2011, were non-detect for all analyzed VOCs with reporting limits at or below applicable cleanup levels (Table 3).

Known soil contamination at the East Warehouse has been addressed and no further action is planned. Soil concentrations have been reduced to below reporting and cleanup levels. Groundwater samples collected at and downgradient of the hotspot were below reporting or cleanup levels.

CURRENT STATUS

All identified soil hotspots in the alleyway and east warehouse areas have had VOC concentrations reduced to non-detect, with reporting limits at or below MTCA Method A cleanup levels. No additional soil remediation is anticipated based on current data.

Groundwater VOC concentrations have been reduced to below MTCA Method A cleanup levels for all chlorinated ethenes. Groundwater petroleum compound concentrations were reduced to below cleanup levels during the permanganate remediation effort. PGG has started a year of quarterly confirmation groundwater monitoring at wells MW-11, MW-12, and MW-14. Results for the September 2011 monitoring event are pending.

Attachments:

Table 1.	Remedial Investigation and Action Timeline
Table 2.	Groundwater Sampling Result Summary
Table 3.	Soil Sampling Result Summary
Figure 1.	Site Map and Ozone Sparge Point Locations
Figure 2.	Schematic Ozone Sparge Point Configurations
Figure 3.	MW-14 VOC Concentration Trends
Figure 4.	East Warehouse Hotspot Sampling and Remediation

References:

Pacific Groundwater Group, 2007. *Final Remedial Action Plan, Scougal Rubber*. January 17, 2007.

Pacific Groundwater Group, 2009. *Letter to Chris Mauer, Washington Department of Ecology, RE: Scougal Rubber Remedial Action Update (VCP Site NW 1707)*. January 22, 2009.

Retec, 2002. *Independent Remedial Action Report*. March 28, 2002. Retec Project Number SRC00-02417-400.

cc: Matt Bowman, Scougal Rubber Corporation

cercla 104(e) technical memo 9-20-11.doc
JK0605.02

APPENDIX 1

ANALYTICAL LAB REPORTS

JANUARY 2009 THROUGH AUGUST 2011

Table 1. Remedial Investigation and Action Timeline

Scougal Rubber Corporation, Seattle, Washington

Date	Location*	Event	Result	Data Location**
1980s	AW, EW	Contamination identified on site	Contamination recognized; finding initiates remedial investigation and cleanup process.	Retec (2002)
1992	AW	UST removal, hotspot excavation	Bulk of contaminant mass removed, soil and groundwater impacts remain.	Retec (2002)
1994-1999	AW	Install and operate air sparge and soil vapor extraction system	Reduces contaminant mass, but soil and groundwater remain above cleanup levels	Retec (2002)
2006	AW	Soil and groundwater sampling	Identifies extent of contamination in alleyway area of Scougal Site; provides baseline for remedial action.	PGG (2006)
2007	AW	Soil hotspot excavation and permanganate application	Reduces soil VOC concentrations to non-detect. Groundwater concentrations reduced by approximately 90%.	PGG (2009)
2008	AW	Confirmation groundwater sampling	Groundwater rebound noted at MW-14 to above cleanup target concentrations	PGG (2009)
2009-2011	AW	Ozone injection system installed in two phases.	Reduces groundwater VOC concentrations to below cleanup levels.	Table 2
2009	EW	Soil and groundwater sampling	Identifies remaining soil hotspot; groundwater concentrations at EW and down gradient below cleanup levels.	Table 3
2010	EW	Permanganate application	Reduces soil VOC concentrations to non-detect.	Table 3

* Location Acronyms: EW- East Warehouse; AW- Alleyway.

** See report text for full report references. Table listings refer to this report.

Table 2. Groundwater Sampling Result Summary

Scougal Rubber Corporation, Seattle, Washington

Sample Location	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
Pre-Permanganate Concentrations					
MW-11	8/3/2006	0.3	9.4	8.7	U 0.2
MW-12	8/3/2006	U 1	0.2	0.4	0.7
MW-13	8/3/2006	U 1	46	11	2.6
MW-14	8/3/2006	4.1	110	26	33
MW-4	8/3/2006	0.2	3.3	U 1	U 0.2
OW-10	8/3/2006	U 1	9.6	18	3.5
Post-Permanganate Concentrations					
MW-11	6/10/2008	U 1	10	3.7	U 0.2
MW-12	6/10/2008	U 1	U 1	U 1	U 0.2
MW-14	6/10/2008	U 1	13	3.7	15
MW-11	9/5/2008	U 1	13	2.9	U 0.2
MW-12	9/5/2008	U 1	U 1	U 1	1
MW-14	9/5/2008	U 1	14	3.4	25
Ozone Install Reconnaissance Samples					
OP-10	6/29/2010	U 1	U 1	U 1	U 0.2
OP-11	6/29/2010	U 1	U 1	U 1	0.51
OP-9	6/29/2010	U 1	U 1	U 1	0.7
Ozone Operational Data					
MW-11	1/23/2009	U 1	12	U 1	U 0.2
MW-12	1/23/2009	U 1	U 1	U 1	U 0.2
MW-14	1/23/2009	1.6	41	1.3	13
MW-14	7/20/2009	0.8	19	5.8	9.2
MW-14	9/23/2009	U 0.2	4	1.7	1.9
MW-14	12/4/2009	0.3	3.7	1.3	0.5
MW-14	1/22/2010	0	1.4	1.8	1
MW-14	3/10/2010	0	2.3	2.3	5.7
MW-14	4/22/2010	U 1	1.6	U 1	U 0.2
MW-11	5/24/2010	U 1	U 1	U 1	U 0.2
MW-12	5/24/2010	U 1	U 1	U 1	U 0.2
MW-14	5/24/2010	U 1	3.1	U 1	1.5
MW-14	9/15/2010	U 1	U 1	U 1	U 0.2
MW-14	10/14/2010	U 1	0.89 J	U 1	1.1
MW-14	3/9/2011	0.39 J	1.6	0.12 J	0.08 J
MW-14	5/6/2011	0.18 J	1.9	0.34 J	0.15 J
MW-14	7/15/2011	U 0.11	0.49 J	U 1	0.1 UJ
East Warehouse Reconnaissance Samples					
SR-18	5/1/2009	U 1	U 1	U 1	U 0.2
SR-19	5/1/2009	U 1	U 1	U 1	U 0.2
SR-20	5/1/2009	U 1	U 1	U 1	U 0.2
SR-21	5/1/2009	U 1	1.1	U 1	U 0.2
SR-22	5/1/2009	U 1	1.1	U 1	U 0.2
SR-23	5/1/2009	U 1	U 1	1.4	U 0.2
MTCA Method A table values		5	5	80	0.2

Bold indicates exceedance of MTCA Method A table value.

U indicates non-detect at the shown reporting limit.

J indicates an estimated value. J-flag values occur where concentrations are reported between the method detection limit and reporting limit.

All Results ug/L.

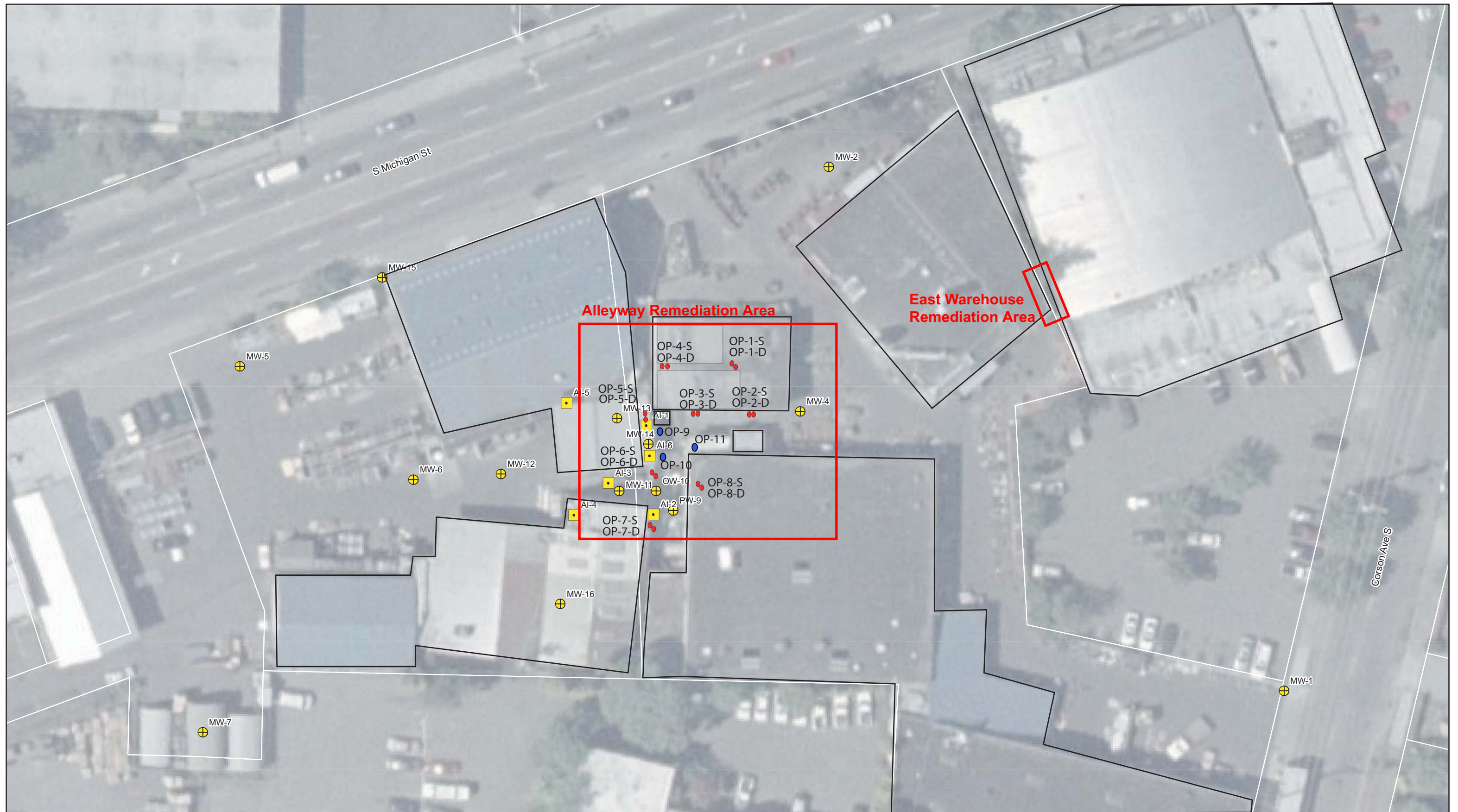
Table 3. Soil Sampling Results Summary

Scougal Rubber Corporation, Seattle, Washington

Sample	Date	Depth feet	Tetrachloroethene mg/kg	Trichloroethene mg/kg	cis-1,2-Dichloroethene mg/kg	Vinyl Chloride mg/kg
East Warehouse Pre-Permanganate						
SR-24	5/11/09	2.25	0.037	U 0.020	U 0.050	U 0.050
SR-25	5/11/09	2.25	0.38	U 0.020	U 0.050	U 0.050
SR-26	5/11/09	2.25	U 0.020	U 0.020	U 0.050	U 0.050
East Warehouse Post-Permanganate						
EW-A	3/9/11	2	U 0.025	U 0.03	U 0.05	U 0.05
EW-B	3/9/11	2	U 0.025	U 0.03	U 0.05	U 0.05
EW-C	3/9/11	2	U 0.025	U 0.03	U 0.05	U 0.05
Supplemental Alleyway Soil Sample						
MW-14A	3/9/11	5.5	U 0.025	U 0.03	U 0.05	U 0.05
MTCA Method A table values			0.05	0.03	8000	0.67

Bold indicates exceedance of MTCA Method A table value.

U indicates non-detect at the shown reporting limit.



Well

- Air Sparging Well
- ⊕ Monitoring Well
- Ozone Sparge Points (June 2009)
- Ozone Sparge Points (June 2010)

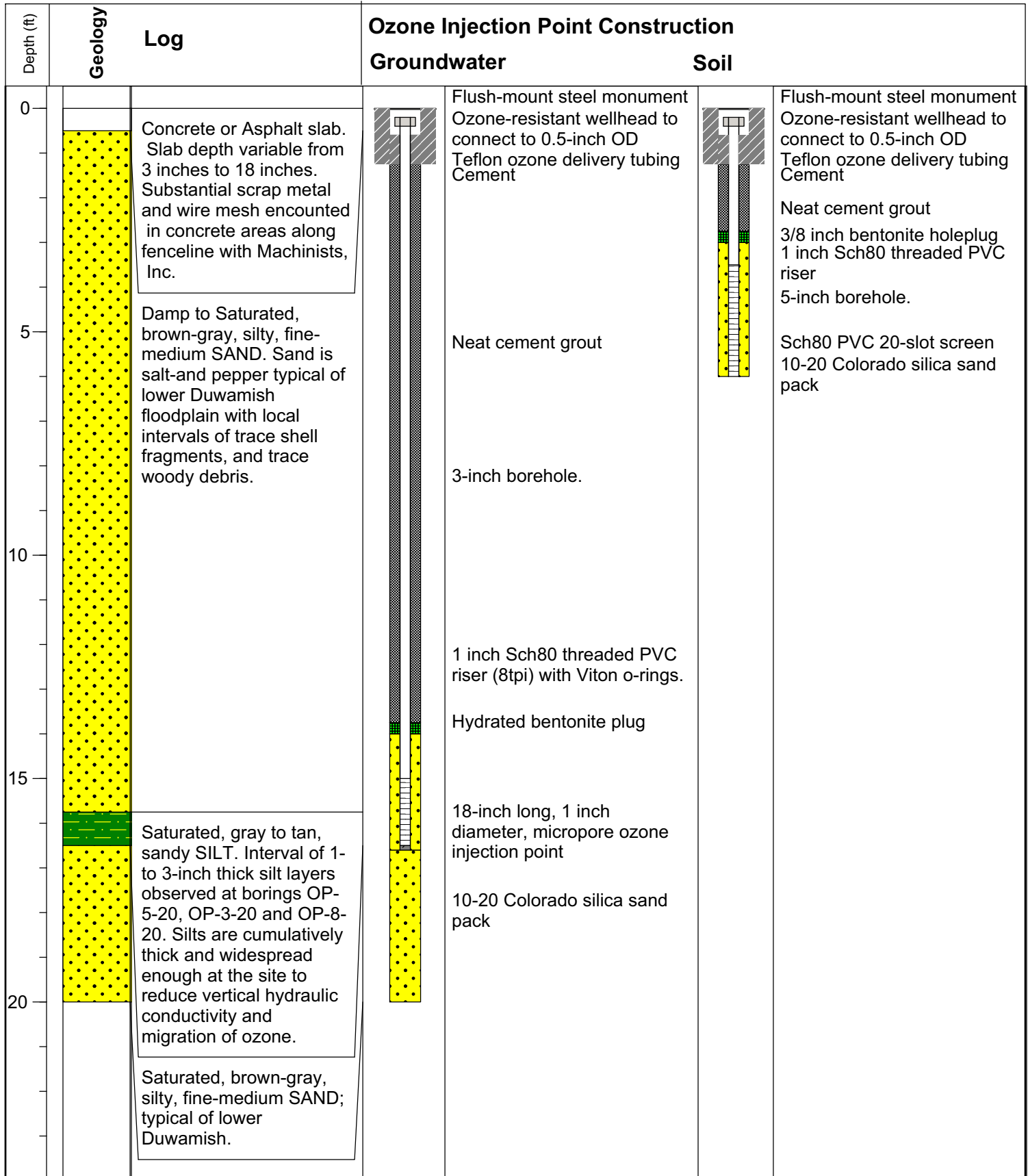


Figure 1. Site Map and Ozone Sparge Point Locations

Scougal Rubber Corporation
Seattle, Washington

JK0605 / 2-27-09





Project Name: Scougal Rubber
 Drilling Method: Modified LAR Geoprobe
 Driller: Scott
 Firm: ESN Northwest
 Consulting Firm: Pacific Groundwater Group
 Logged by: Glen Wallace
 Location: Scougal Rubber

Well Name: OP-8-S; OP-8-D
 Ecology ID: Various
 MP Elevation: Not Surveyed
 Datum: Not Surveyed
 Installed: 5/13/2009
 DTW: approx 6.5 ft bgs

Figure 2. Schematic Ozone Sparge Point Configurations

Scougal Rubber Corporation
 Seattle, Washington
 JK0605, 5/2009



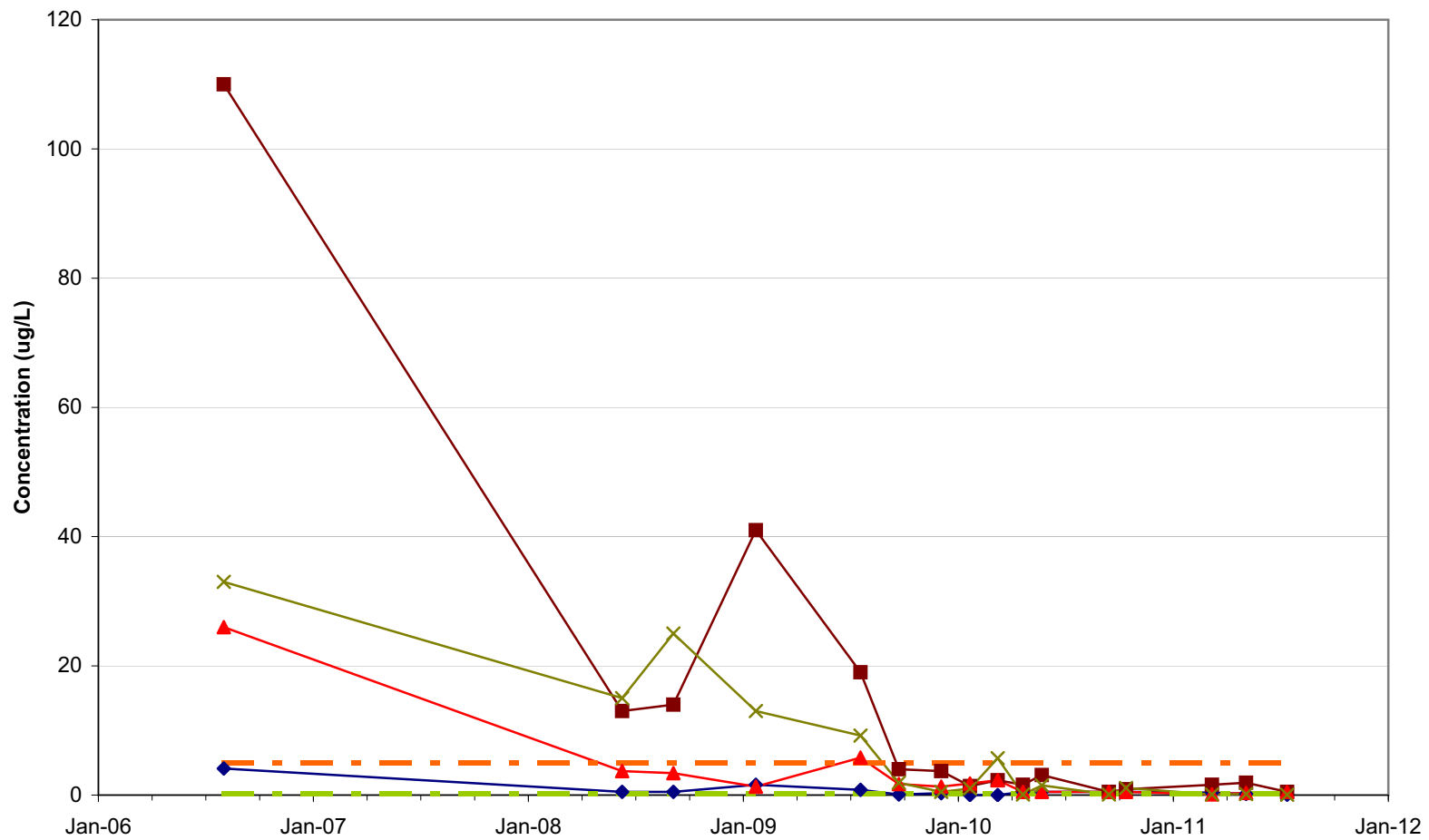
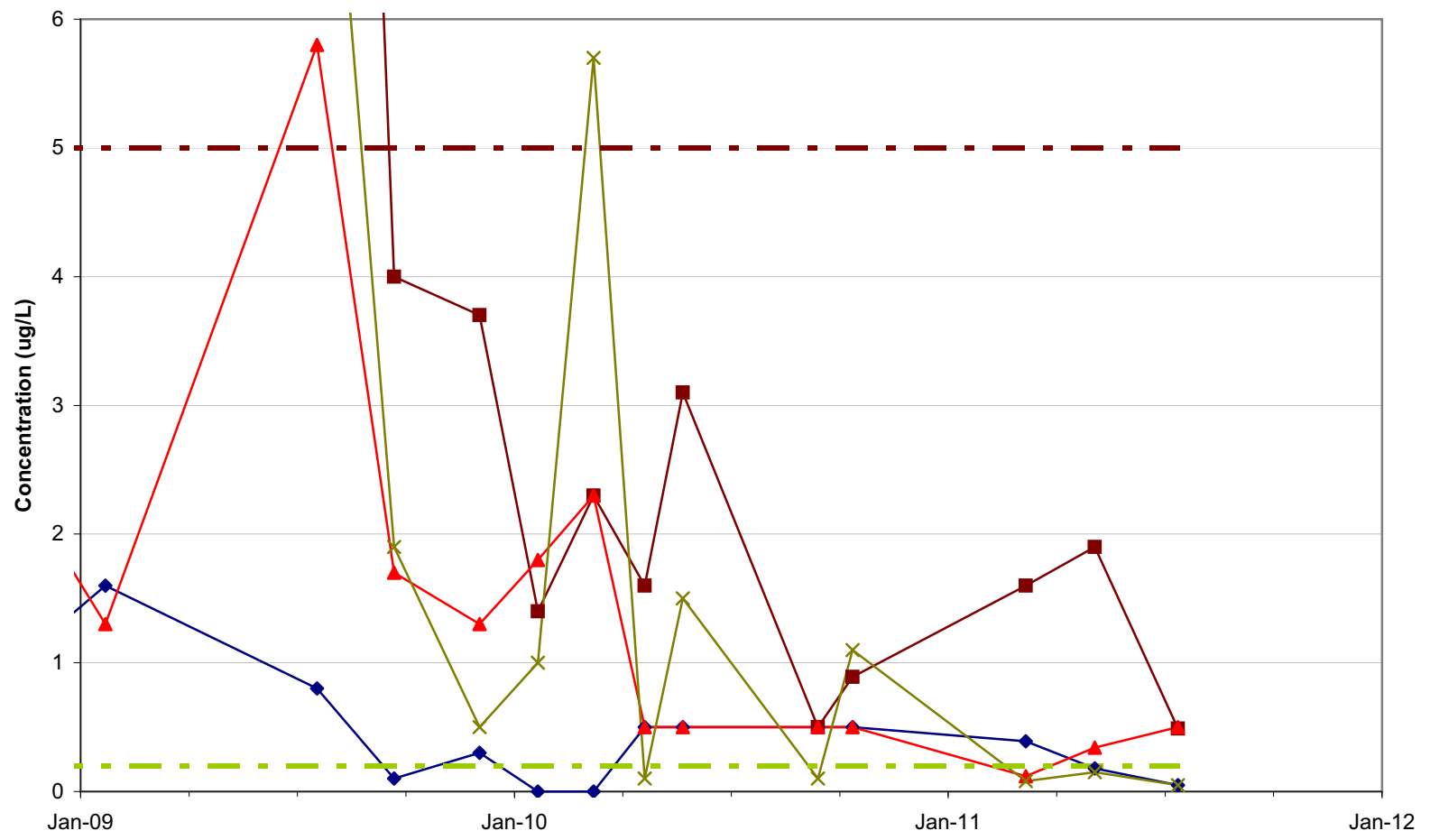


Figure 3a. MW-14 Concentration Trends

Scougal Rubber Corporation
Seattle, Washington





- ◆ Tetrachloroethene
- Trichloroethene
- ▲ cis-1,2-Dichloroethene
- × Vinyl Chloride
- MTCA A: VC 0.2 ug/L
- MTCA A: TCE 5 ug/L

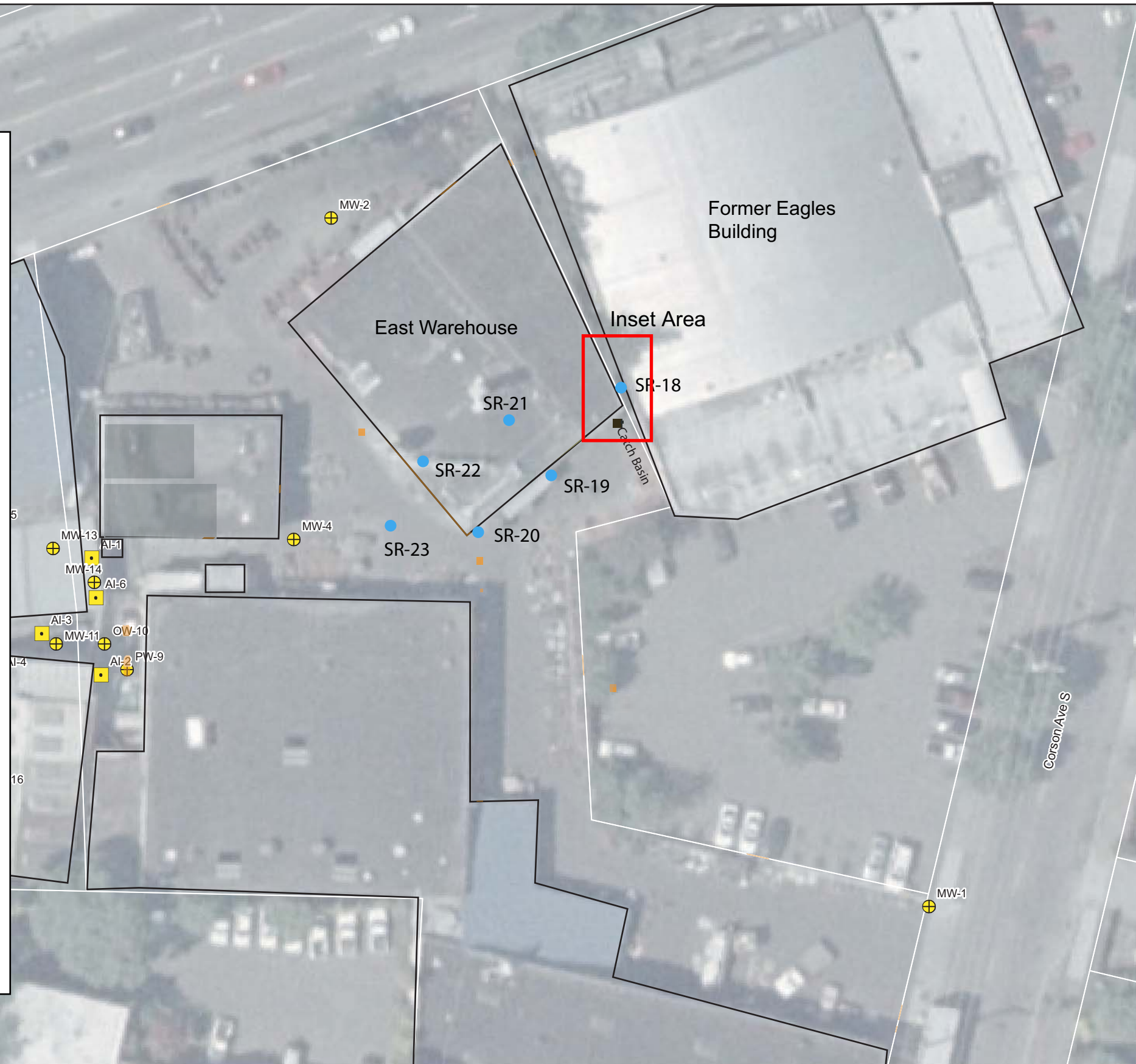
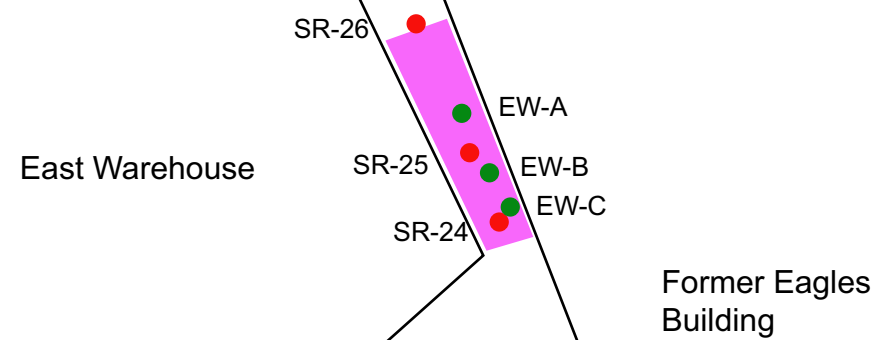
Figure 3b. MW-14 Concentration Trends
 Scougal Rubber Corporation
 Seattle, Washington



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East Warehouse Hotspot Sampling and Permanganate Application

- Permanganate Treatment Area (2010)
- PGG Investigation Soil Sample (2009)
- PGG Confirmation Soil Sample (2011)



Well

- Air Sparging Well
- Monitoring Well
- Groundwater Sampling Location

0 Feet 100



Figure 4. East Warehouse Hotspot Sampling and Remediation
 Scougal Rubber Corporation
 Seattle, Washington

JK0605 / 4-29-09



APPENDIX 1

ANALYTICAL LAB REPORTS

JANUARY 2009 THROUGH AUGUST 2011

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

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May 17, 2011

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included is the amended report from the testing of material submitted on May 6, 2011 from the Scougal Rubber JK0605, F&BI 105081 project. Per your request, several analytes were reported down to the method detection limit.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0511R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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May 11, 2011

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included are the results from the testing of material submitted on May 6, 2011 from the Scougal Rubber JK0605, F&BI 105081 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0511R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 6, 2011 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 105081 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
105081-01	MW-14

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-14	Client: Pacific Groundwater Group
Date Received: 05/06/11	Project: Scougal Rubber JK0605, F&BI 105081
Date Extracted: 05/07/11	Lab ID: 105081-01
Date Analyzed: 05/07/11	Data File: 050711.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	0.18 j
Vinyl chloride	0.15 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	0.34 j	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.9	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber JK0605, F&BI 105081
Date Extracted:	05/07/11	Lab ID:	01-802 mb
Date Analyzed:	05/07/11	Data File:	050706.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<0.12 j
Vinyl chloride	<0.07 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<0.19 j	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/11

Date Received: 05/06/11

Project: Scougal Rubber JK0605, F&BI 105081

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 105077-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	118	10-172
Chloromethane	ug/L (ppb)	50	<10	94	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	87	36-166
Bromomethane	ug/L (ppb)	50	<1	105	47-169
Chloroethane	ug/L (ppb)	50	<1	101	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	102	44-165
Acetone	ug/L (ppb)	250	<10	105	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	83	60-136
Methylene chloride	ug/L (ppb)	50	<5	77	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	111	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	100	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	109	71-127
Chloroform	ug/L (ppb)	50	<1	107	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	106	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	110	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	109	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	113	56-152
Benzene	ug/L (ppb)	50	<0.35	109	76-125
Trichloroethene	ug/L (ppb)	50	<1	106	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	107	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	107	61-150
Dibromomethane	ug/L (ppb)	50	<1	108	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	115	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	72-132
Toluene	ug/L (ppb)	50	<1	106	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	106	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	106	68-131
2-Hexanone	ug/L (ppb)	250	<10	122	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	106	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	104	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	108	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	109	69-134
Chlorobenzene	ug/L (ppb)	50	<1	108	77-122
Ethylbenzene	ug/L (ppb)	50	<1	113	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	73-137
m,p-Xylene	ug/L (ppb)	100	<2	110	69-135
o-Xylene	ug/L (ppb)	50	<1	109	68-137
Styrene	ug/L (ppb)	50	<1	113	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	115	65-142
Bromoform	ug/L (ppb)	50	<1	109	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	105	58-144
Bromobenzene	ug/L (ppb)	50	<1	99	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	102	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	99	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	100	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	97	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	100	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	102	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	104	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	104	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	106	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	104	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	103	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	105	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	86	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	90	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	80	60-143
Naphthalene	ug/L (ppb)	50	<1	96	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	88	69-148

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/11

Date Received: 05/06/11

Project: Scougal Rubber JK0605, F&BI 105081

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	117	118	25-158	1
Chloromethane	ug/L (ppb)	50	99	98	45-156	1
Vinyl chloride	ug/L (ppb)	50	85	85	50-154	0
Bromomethane	ug/L (ppb)	50	109	111	55-143	2
Chloroethane	ug/L (ppb)	50	114	107	58-146	6
Trichlorofluoromethane	ug/L (ppb)	50	101	102	50-150	1
Acetone	ug/L (ppb)	250	101	101	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	84	84	67-136	0
Methylene chloride	ug/L (ppb)	50	74	74	39-148	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	108	109	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	100	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	101	102	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	110	112	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	106	109	80-123	3
Chloroform	ug/L (ppb)	50	104	105	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	104	104	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	109	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	94	100	83-130	6
1,1-Dichloropropene	ug/L (ppb)	50	108	108	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	111	113	75-158	2
Benzene	ug/L (ppb)	50	107	108	69-134	1
Trichloroethene	ug/L (ppb)	50	104	106	80-120	2
1,2-Dichloropropane	ug/L (ppb)	50	105	106	77-123	1
Bromodichloromethane	ug/L (ppb)	50	104	106	81-133	2
Dibromomethane	ug/L (ppb)	50	105	107	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	110	112	70-140	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	107	110	82-132	3
Toluene	ug/L (ppb)	50	104	106	72-122	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	107	107	80-136	0
1,1,1,2-Trichloroethane	ug/L (ppb)	50	103	103	75-124	0
2-Hexanone	ug/L (ppb)	250	119	121	64-152	2
1,3-Dichloropropane	ug/L (ppb)	50	105	105	76-126	0
Tetrachloroethene	ug/L (ppb)	50	103	104	76-121	1
Dibromochloromethane	ug/L (ppb)	50	106	108	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	106	108	82-125	2
Chlorobenzene	ug/L (ppb)	50	106	107	83-114	1
Ethylbenzene	ug/L (ppb)	50	112	113	77-124	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	105	106	84-127	1
m,p-Xylene	ug/L (ppb)	100	109	111	83-125	2
o-Xylene	ug/L (ppb)	50	107	108	86-121	1
Styrene	ug/L (ppb)	50	111	114	85-127	3
Isopropylbenzene	ug/L (ppb)	50	113	115	87-122	2
Bromoform	ug/L (ppb)	50	108	109	74-136	1
n-Propylbenzene	ug/L (ppb)	50	105	105	74-126	0
Bromobenzene	ug/L (ppb)	50	98	97	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	102	103	80-126	1
1,1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	98	98	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	98	99	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	97	96	77-127	1
4-Chlorotoluene	ug/L (ppb)	50	100	100	78-128	0
tert-Butylbenzene	ug/L (ppb)	50	102	102	85-127	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	104	104	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	105	106	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	108	109	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	103	105	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	102	103	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	104	104	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	85	84	57-141	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	92	92	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	84	84	53-141	0
Naphthalene	ug/L (ppb)	50	96	97	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	89	91	65-136	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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October 29, 2010

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included are the results from the testing of material submitted on October 14, 2010 from the Scougal Rubber JK0605, F&BI 010156 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG1029R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 14, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 010156 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
010156-01	MW-14

Several 8260C compounds exceeded the acceptance criteria in the matrix spike samples. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	10/14/10	Project:	Scougal Rubber JK0605
Date Extracted:	10/25/10	Lab ID:	010156-01
Date Analyzed:	10/25/10	Data File:	102530.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	63	127
Toluene-d8	100	65	127
4-Bromofluorobenzene	97	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	1.1	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	0.89 j	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber JK0605
Date Extracted:	10/25/10	Lab ID:	001703 mb
Date Analyzed:	10/25/10	Data File:	102508.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	63	127
Toluene-d8	101	65	127
4-Bromofluorobenzene	101	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.14 j	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<0.24 j	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/10

Date Received: 10/14/10

Project: Scougal Rubber JK0605, F&BI 010156

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 010195-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	107	28-164
Chloromethane	ug/L (ppb)	50	<10	84	26-167
Vinyl chloride	ug/L (ppb)	50	<0.2	102	37-171
Bromomethane	ug/L (ppb)	50	<1	101	24-165
Chloroethane	ug/L (ppb)	50	<1	108	10-172
Trichlorofluoromethane	ug/L (ppb)	50	<1	102	30-199
Acetone	ug/L (ppb)	250	<10	156	19-168
1,1-Dichloroethene	ug/L (ppb)	50	<1	83	35-149
Methylene chloride	ug/L (ppb)	50	<5	79	61-124
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	126	49-139
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	85	65-128
1,1-Dichloroethane	ug/L (ppb)	50	<1	85	67-127
2,2-Dichloropropane	ug/L (ppb)	50	<1	71	23-163
cis-1,2-Dichloroethene	ug/L (ppb)	50	1.2	94	65-139
Chloroform	ug/L (ppb)	50	<1	86	71-127
2-Butanone (MEK)	ug/L (ppb)	250	<10	185 vo	47-162
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	87	68-132
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	88	63-135
1,1-Dichloropropene	ug/L (ppb)	50	<1	93	65-127
Carbon tetrachloride	ug/L (ppb)	50	<1	90	55-139
Benzene	ug/L (ppb)	50	0.36	89	62-144
Trichloroethene	ug/L (ppb)	50	<1	87	68-134
1,2-Dichloropropane	ug/L (ppb)	50	11	89 b	73-130
Bromodichloromethane	ug/L (ppb)	50	<1	91	65-135
Dibromomethane	ug/L (ppb)	50	<1	95	65-135
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	182 vo	56-143
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	90	55-146
Toluene	ug/L (ppb)	50	<1	86	68-131
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	88	63-147
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	91	63-143
2-Hexanone	ug/L (ppb)	250	<10	194 vo	51-149
1,3-Dichloropropane	ug/L (ppb)	50	<1	94	72-126
Tetrachloroethene	ug/L (ppb)	50	<1	82	64-132
Dibromochloromethane	ug/L (ppb)	50	<1	96	65-135
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	77-127
Chlorobenzene	ug/L (ppb)	50	<1	83	72-118
Ethylbenzene	ug/L (ppb)	50	<1	88	51-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	91	72-129
m,p-Xylene	ug/L (ppb)	100	<2	90	72-137
o-Xylene	ug/L (ppb)	50	<1	95	67-133
Styrene	ug/L (ppb)	50	<1	91	73-126
Isopropylbenzene	ug/L (ppb)	50	<1	94	65-135
Bromoform	ug/L (ppb)	50	<1	111	60-136
n-Propylbenzene	ug/L (ppb)	50	<1	89	66-133
Bromobenzene	ug/L (ppb)	50	<1	87	70-129
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	91	72-130
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	65-137
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	111	66-135
2-Chlorotoluene	ug/L (ppb)	50	<1	89	62-131
4-Chlorotoluene	ug/L (ppb)	50	<1	89	62-132
tert-Butylbenzene	ug/L (ppb)	50	<1	95	64-135
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	91	69-139
sec-Butylbenzene	ug/L (ppb)	50	<1	90	64-134
p-Isopropyltoluene	ug/L (ppb)	50	<1	93	69-134
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	83	65-126
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	83	65-121
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	87	64-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	161 vo	54-133
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	93	63-141
Hexachlorobutadiene	ug/L (ppb)	50	<1	80	53-140
Naphthalene	ug/L (ppb)	50	<1	144	40-166
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	101	55-148

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/10

Date Received: 10/14/10

Project: Scougal Rubber JK0605, F&BI 010156

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	85	84	27-138	1
Chloromethane	ug/L (ppb)	50	91	89	49-125	2
Vinyl chloride	ug/L (ppb)	50	89	86	53-131	3
Bromomethane	ug/L (ppb)	50	87	89	62-148	2
Chloroethane	ug/L (ppb)	50	91	89	30-176	2
Trichlorofluoromethane	ug/L (ppb)	50	82	80	65-172	2
Acetone	ug/L (ppb)	250	96	92	32-177	4
1,1-Dichloroethene	ug/L (ppb)	50	92	91	68-131	1
Methylene chloride	ug/L (ppb)	50	90	88	17-177	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	102	102	54-156	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	99	71-128	0
1,1-Dichloroethane	ug/L (ppb)	50	97	95	74-118	2
2,2-Dichloropropane	ug/L (ppb)	50	110	107	65-150	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	106	105	74-126	1
Chloroform	ug/L (ppb)	50	94	93	76-118	1
2-Butanone (MEK)	ug/L (ppb)	250	103	104	52-152	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	90	77-118	1
1,1,1-Trichloroethane	ug/L (ppb)	50	97	94	77-123	3
1,1-Dichloropropene	ug/L (ppb)	50	107	105	75-122	2
Carbon tetrachloride	ug/L (ppb)	50	100	98	76-126	2
Benzene	ug/L (ppb)	50	100	99	77-121	1
Trichloroethene	ug/L (ppb)	50	99	99	74-119	0
1,2-Dichloropropane	ug/L (ppb)	50	101	101	77-121	0
Bromodichloromethane	ug/L (ppb)	50	101	100	77-129	1
Dibromomethane	ug/L (ppb)	50	100	99	79-121	1
4-Methyl-2-pentanone	ug/L (ppb)	250	107	106	65-135	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	109	108	79-129	1
Toluene	ug/L (ppb)	50	100	100	81-113	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	105	105	90-128	0
1,1,2-Trichloroethane	ug/L (ppb)	50	98	97	89-113	1
2-Hexanone	ug/L (ppb)	250	104	103	58-160	1
1,3-Dichloropropane	ug/L (ppb)	50	102	101	89-113	1
Tetrachloroethene	ug/L (ppb)	50	101	101	85-121	0
Dibromochloromethane	ug/L (ppb)	50	106	105	89-128	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	103	102	88-122	1
Chlorobenzene	ug/L (ppb)	50	96	95	86-118	1
Ethylbenzene	ug/L (ppb)	50	99	99	83-116	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	101	100	86-124	1
m,p-Xylene	ug/L (ppb)	100	103	103	84-120	0
o-Xylene	ug/L (ppb)	50	108	108	83-120	0
Styrene	ug/L (ppb)	50	106	106	87-119	0
Isopropylbenzene	ug/L (ppb)	50	106	106	83-120	0
Bromoform	ug/L (ppb)	50	110	110	77-119	0
n-Propylbenzene	ug/L (ppb)	50	105	105	83-118	0
Bromobenzene	ug/L (ppb)	50	101	101	88-117	0
1,3,5-Trimethylbenzene	ug/L (ppb)	50	105	105	85-121	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	98	97	83-115	1
1,2,3-Trichloropropane	ug/L (ppb)	50	94	93	83-114	1
2-Chlorotoluene	ug/L (ppb)	50	103	103	81-116	0
4-Chlorotoluene	ug/L (ppb)	50	104	103	83-117	1
tert-Butylbenzene	ug/L (ppb)	50	108	107	84-118	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	106	105	86-119	1
sec-Butylbenzene	ug/L (ppb)	50	105	104	84-121	1
p-Isopropyltoluene	ug/L (ppb)	50	109	109	85-118	0
1,3-Dichlorobenzene	ug/L (ppb)	50	100	99	85-118	1
1,4-Dichlorobenzene	ug/L (ppb)	50	97	97	85-119	0
1,2-Dichlorobenzene	ug/L (ppb)	50	100	100	81-117	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	103	102	62-136	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	106	106	75-129	0
Hexachlorobutadiene	ug/L (ppb)	50	102	102	72-138	0
Naphthalene	ug/L (ppb)	50	113	112	66-135	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	106	105	70-133	1

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

010156

SAMPLE CHAIN OF CUSTODY ME 10/14/10

V2

SAMPLERS (signature)

PROJECT NAME/NO. Scougal Rubber JK0605

PO # JK0605

REMARKS Please analyze 8260, ~~8260~~ & Report Values between MDL's 24

Page # 1 of 1
TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Send Report To Glen Wallace (elen@pgrw.com)
Company Pacific Groundwater Group
Address 2377 Eastlake Ave E
City, State, ZIP Seattle, WA 98102
Phone # 206.329.0141 Fax # 206.329.6968

ANALYSES REQUESTED
Fe, Vc, TCE

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED						Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS			
MW-14	01 AD	10/14/10	10:10	WATER	5				X					Please Fly Below

Samples received at 5 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Glen Wallace</i>	Glen Wallace	PGC	10/14/10	1245
<i>Mohan Phau</i>	Mohan Phau	FeBT	10/14/10	1430
Received by:				
Relinquished by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
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Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 30, 2010

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Ms. Wallace:

Included are the results from the testing of material submitted on September 15, 2010 from the Scougal Rubber JK0605, F&BI 009140 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0930R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 15, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
009140-01	MW-14

The 8260C compound 2,2 dichloropropane failed below the acceptance criteria in the matrix spike sample. The laboratory control samples met the acceptance criteria, therefore the data is likely due to sample matrix effect.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	09/15/10	Project:	Scougal Rubber JK0605
Date Extracted:	09/23/10	Lab ID:	009140-01
Date Analyzed:	09/24/10	Data File:	092360.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	63	127
Toluene-d8	99	60	129
4-Bromofluorobenzene	103	51	145

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber JK0605
Date Extracted:	09/23/10	Lab ID:	001533 mb
Date Analyzed:	09/24/10	Data File:	092332.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	96	60	129
4-Bromofluorobenzene	105	51	145

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/10

Date Received: 09/15/10

Project: Scougal Rubber JK0605, F&BI 009140

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 009139-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	103	10-172
Chloromethane	ug/L (ppb)	50	<10	103	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	105	36-166
Bromomethane	ug/L (ppb)	50	<1	97	47-169
Chloroethane	ug/L (ppb)	50	<1	101	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	110	44-165
Acetone	ug/L (ppb)	250	<10	94	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	101	60-136
Methylene chloride	ug/L (ppb)	50	<5	92	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	101	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	36 vo	43-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	102	71-127
Chloroform	ug/L (ppb)	50	<1	99	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	100	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	102	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	103	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	106	56-152
Benzene	ug/L (ppb)	50	<0.35	101	76-123
Trichloroethene	ug/L (ppb)	50	<1	100	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	97	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	103	61-150
Dibromomethane	ug/L (ppb)	50	<1	99	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	103	10-134
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	85	74-134
Toluene	ug/L (ppb)	50	<1	98	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	90	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	95	68-131
2-Hexanone	ug/L (ppb)	250	<10	106	10-142
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	93	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	105	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	69-134
Chlorobenzene	ug/L (ppb)	50	<1	97	77-122
Ethylbenzene	ug/L (ppb)	50	<1	102	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	102	73-137
m,p-Xylene	ug/L (ppb)	100	<2	103	69-135
o-Xylene	ug/L (ppb)	50	<1	108	68-137
Styrene	ug/L (ppb)	50	<1	106	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	110	65-142
Bromoform	ug/L (ppb)	50	<1	109	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	101	58-144
Bromobenzene	ug/L (ppb)	50	<1	98	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	103	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	92	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	90	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	101	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	101	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	105	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	104	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	102	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	104	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	96	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	94	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	96	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	89	60-143
Naphthalene	ug/L (ppb)	50	<1	100	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	94	70-143

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/10

Date Received: 09/15/10

Project: Scougal Rubber JK0605, F&BI 009140

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	89	87	25-158	2
Chloromethane	ug/L (ppb)	50	101	98	45-156	3
Vinyl chloride	ug/L (ppb)	50	102	100	50-154	2
Bromomethane	ug/L (ppb)	50	94	93	55-143	1
Chloroethane	ug/L (ppb)	50	91	88	58-146	3
Trichlorofluoromethane	ug/L (ppb)	50	93	93	50-150	0
Acetone	ug/L (ppb)	250	90	90	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	101	99	67-136	2
Methylene chloride	ug/L (ppb)	50	87	86	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	104	103	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	98	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	98	98	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	76	73	58-153	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	107	80-123	0
Chloroform	ug/L (ppb)	50	97	96	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	102	101	57-149	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	92	91	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	98	97	83-130	1
1,1-Dichloropropene	ug/L (ppb)	50	107	106	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	98	96	75-158	2
Benzene	ug/L (ppb)	50	104	103	72-127	1
Trichloroethene	ug/L (ppb)	50	99	99	80-120	0
1,2-Dichloropropane	ug/L (ppb)	50	103	102	77-123	1
Bromodichloromethane	ug/L (ppb)	50	101	100	81-133	1
Dibromomethane	ug/L (ppb)	50	99	98	82-125	1
4-Methyl-2-pentanone	ug/L (ppb)	250	102	100	70-140	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	105	103	82-132	2
Toluene	ug/L (ppb)	50	104	102	72-122	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	104	102	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	101	100	75-124	1
2-Hexanone	ug/L (ppb)	250	105	104	64-152	1
1,3-Dichloropropane	ug/L (ppb)	50	105	104	76-126	1
Tetrachloroethene	ug/L (ppb)	50	98	98	76-121	0
Dibromochloromethane	ug/L (ppb)	50	109	107	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	105	104	82-125	1
Chlorobenzene	ug/L (ppb)	50	100	99	83-114	1
Ethylbenzene	ug/L (ppb)	50	105	103	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	102	101	84-127	1
m,p-Xylene	ug/L (ppb)	100	106	106	83-125	0
o-Xylene	ug/L (ppb)	50	112	111	86-121	1
Styrene	ug/L (ppb)	50	110	109	85-127	1
Isopropylbenzene	ug/L (ppb)	50	111	110	87-122	1
Bromoform	ug/L (ppb)	50	109	108	74-136	1
n-Propylbenzene	ug/L (ppb)	50	108	107	74-126	1
Bromobenzene	ug/L (ppb)	50	105	104	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	110	109	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	99	99	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	95	94	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	107	107	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	108	108	78-128	0
tert-Butylbenzene	ug/L (ppb)	50	112	110	85-122	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	110	109	82-125	1
sec-Butylbenzene	ug/L (ppb)	50	109	108	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	112	111	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	102	101	85-116	1
1,4-Dichlorobenzene	ug/L (ppb)	50	100	100	84-121	0
1,2-Dichlorobenzene	ug/L (ppb)	50	105	104	85-116	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	99	97	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	102	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	98	97	53-141	1
Naphthalene	ug/L (ppb)	50	105	103	64-133	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	98	96	65-136	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

DRAFT

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: OP-9	Client: Pacific Groundwater Group
Date Received: 06/29/10	Project: Scougal Rubber, F&BI 006368
Date Extracted: 06/30/10	Lab ID: 006368-02
Date Analyzed: 06/30/10	Data File: 063009.D
Matrix: Soil	Instrument: GCMS4
Units: mg/kg (ppm)	Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	117	62	142
Toluene-d8	111	55	145
4-Bromofluorobenzene	116	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: OP-11
 Date Received: 06/29/10
 Date Extracted: 06/30/10
 Date Analyzed: 06/30/10
 Matrix: Soil
 Units: mg/kg (ppm)

Client: Pacific Groundwater Group
 Project: Scougal Rubber, F&BI 006368
 Lab ID: 006368-04
 Data File: 063010.D
 Instrument: GCMS4
 Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	123	62	142
Toluene-d8	118	55	145
4-Bromofluorobenzene	127	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank	Client: Pacific Groundwater Group
Date Received: Not Applicable	Project: Scougal Rubber, F&BI 006368
Date Extracted: 06/30/10	Lab ID: 00913 mb
Date Analyzed: 06/30/10	Data File: 063008.D
Matrix: Soil	Instrument: GCMS4
Units: mg/kg (ppm)	Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: OP-10
 Date Received: 06/29/10
 Date Extracted: 06/30/10
 Date Analyzed: 06/30/10
 Matrix: Water
 Units: ug/L (ppb)

Client: Pacific Groundwater Group
 Project: Scougal Rubber, F&BI 006368
 Lab ID: 006368-01
 Data File: 063013.D
 Instrument: GCMS5
 Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	63	127
Toluene-d8	100	65	127
4-Bromofluorobenzene	110	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: OP-9	Client: Pacific Groundwater Group
Date Received: 06/29/10	Project: Scougal Rubber, F&BI 006368
Date Extracted: 06/30/10	Lab ID: 006368-03
Date Analyzed: 06/30/10	Data File: 063014.D
Matrix: Water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	63	127
Toluene-d8	100	65	127
4-Bromofluorobenzene	111	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	0.70	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	11	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: OP-11
 Date Received: 06/29/10
 Date Extracted: 06/30/10
 Date Analyzed: 06/30/10
 Matrix: Water
 Units: ug/L (ppb)

Client: Pacific Groundwater Group
 Project: Scougal Rubber, F&BI 006368
 Lab ID: 006368-05
 Data File: 063015.D
 Instrument: GCMS5
 Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	102	65	127
4-Bromofluorobenzene	114	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	0.51	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	18	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank	Client: Pacific Groundwater Group
Date Received: Not Applicable	Project: Scougal Rubber, F&BI 006368
Date Extracted: 06/30/10	Lab ID: 00914 mb
Date Analyzed: 06/30/10	Data File: 063007.D
Matrix: Water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	63	127
Toluene-d8	99	65	127
4-Bromofluorobenzene	110	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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June 8, 2010

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included are the results from the testing of material submitted on May 25, 2010 from the Scougal Rubber JK0605, F&BI 005221 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0608R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 25, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 005221 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
005221-01	MW-11
005221-02	MW-12
005221-03	MW-14

The 8260C calibration standard did not pass the acceptance criteria for 2,2-dichloropropane for samples MW-11 and MW-12. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	05/25/10	Project:	Scougal Rubber JK0605, F&BI 005221
Date Extracted:	05/25/10	Lab ID:	005221-01
Date Analyzed:	05/26/10	Data File:	052551.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	63	127
Toluene-d8	99	65	127
4-Bromofluorobenzene	103	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1 ca	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-12	Client: Pacific Groundwater Group
Date Received: 05/25/10	Project: Scougal Rubber JK0605, F&BI 005221
Date Extracted: 05/25/10	Lab ID: 005221-02
Date Analyzed: 05/26/10	Data File: 052552.D
Matrix: Water	Instrument: GCMS5
Units: ug/L (ppb)	Operator: VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	63	127
Toluene-d8	99	65	127
4-Bromofluorobenzene	105	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1 ca	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	05/25/10	Project:	Scougal Rubber JK0605, F&BI 005221
Date Extracted:	05/28/10	Lab ID:	005221-03
Date Analyzed:	05/28/10	Data File:	052821.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	63	127
Toluene-d8	98	65	127
4-Bromofluorobenzene	97	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	1.5	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	1.1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber JK0605, F&BI 005221
Date Extracted:	05/28/10	Lab ID:	00708 mb
Date Analyzed:	05/28/10	Data File:	052807.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	63	127
Toluene-d8	98	65	127
4-Bromofluorobenzene	98	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber JK0605, F&BI 005221
Date Extracted:	05/25/10	Lab ID:	00704 mb
Date Analyzed:	05/26/10	Data File:	052529.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	63	127
Toluene-d8	98	65	127
4-Bromofluorobenzene	104	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/10

Date Received: 05/25/10

Project: Scougal Rubber JK0605, F&BI 005221

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 005221-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	95	28-164
Chloromethane	ug/L (ppb)	50	<10	111	26-167
Vinyl chloride	ug/L (ppb)	50	<0.2	131	38-157
Bromomethane	ug/L (ppb)	50	<1	166 vo	24-165
Chloroethane	ug/L (ppb)	50	<1	177 vo	10-172
Trichlorofluoromethane	ug/L (ppb)	50	<1	169 vo	38-158
Acetone	ug/L (ppb)	250	<10	80	19-168
1,1-Dichloroethene	ug/L (ppb)	50	<1	143	35-149
Methylene chloride	ug/L (ppb)	50	<5	101	66-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	68	56-135
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	65-128
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	67-127
2,2-Dichloropropane	ug/L (ppb)	50	<1	64	49-148
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	71-129
Chloroform	ug/L (ppb)	50	<1	102	71-127
2-Butanone (MEK)	ug/L (ppb)	250	<10	81	47-162
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	68-132
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	94	63-135
1,1-Dichloropropene	ug/L (ppb)	50	<1	102	65-127
Carbon tetrachloride	ug/L (ppb)	50	<1	94	55-139
Benzene	ug/L (ppb)	50	<0.35	104	71-120
Trichloroethene	ug/L (ppb)	50	<1	99	72-120
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	75-125
Bromodichloromethane	ug/L (ppb)	50	<1	103	65-135
Dibromomethane	ug/L (ppb)	50	<1	96	65-135
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	82	65-141
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	93	55-146
Toluene	ug/L (ppb)	50	<1	102	68-131
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	92	63-147
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	97	63-143
2-Hexanone	ug/L (ppb)	250	<10	89	56-156
1,3-Dichloropropane	ug/L (ppb)	50	<1	97	78-124
Tetrachloroethene	ug/L (ppb)	50	<1	90	71-126
Dibromochloromethane	ug/L (ppb)	50	<1	95	65-135
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	89	77-127
Chlorobenzene	ug/L (ppb)	50	<1	104	72-118
Ethylbenzene	ug/L (ppb)	50	<1	110	69-129
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	75-133
m,p-Xylene	ug/L (ppb)	100	<2	108	72-128
o-Xylene	ug/L (ppb)	50	<1	101	67-133
Styrene	ug/L (ppb)	50	<1	106	73-126
Isopropylbenzene	ug/L (ppb)	50	<1	109	65-135
Bromoform	ug/L (ppb)	50	<1	95	60-136
n-Propylbenzene	ug/L (ppb)	50	<1	113	66-133
Bromobenzene	ug/L (ppb)	50	<1	96	75-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	109	72-130
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	92	65-137
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	94	66-135
2-Chlorotoluene	ug/L (ppb)	50	<1	106	62-131
4-Chlorotoluene	ug/L (ppb)	50	<1	106	62-132
tert-Butylbenzene	ug/L (ppb)	50	<1	107	64-135
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	109	72-131
sec-Butylbenzene	ug/L (ppb)	50	<1	114	64-134
p-Isopropyltoluene	ug/L (ppb)	50	<1	111	69-134
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	65-126
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	105	65-121
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	101	64-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	74	57-148
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	92	64-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	93	53-140
Naphthalene	ug/L (ppb)	50	<1	84	40-166
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	85	58-152

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Date Received: 05/25/10

Project: Scougal Rubber JK0605, F&BI 005221

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	105	102	27-138	3
Chloromethane	ug/L (ppb)	50	108	105	49-125	3
Vinyl chloride	ug/L (ppb)	50	124	117	53-131	6
Bromomethane	ug/L (ppb)	50	139 vo	130 vo	62-125	7
Chloroethane	ug/L (ppb)	50	129 vo	116	52-127	11
Trichlorofluoromethane	ug/L (ppb)	50	145	137	65-172	6
Acetone	ug/L (ppb)	250	111	112	32-177	1
1,1-Dichloroethene	ug/L (ppb)	50	129	125	68-131	3
Methylene chloride	ug/L (ppb)	50	104	103	17-177	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	93	92	54-156	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	101	71-128	1
1,1-Dichloroethane	ug/L (ppb)	50	104	103	74-118	1
2,2-Dichloropropane	ug/L (ppb)	50	82	82	73-156	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	99	74-126	1
Chloroform	ug/L (ppb)	50	103	103	76-118	0
2-Butanone (MEK)	ug/L (ppb)	250	106	106	52-152	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	106	105	77-118	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	98	77-123	1
1,1-Dichloropropene	ug/L (ppb)	50	103	101	75-122	2
Carbon tetrachloride	ug/L (ppb)	50	97	94	76-126	3
Benzene	ug/L (ppb)	50	103	102	77-121	1
Trichloroethene	ug/L (ppb)	50	100	99	74-119	1
1,2-Dichloropropane	ug/L (ppb)	50	101	101	77-121	0
Bromodichloromethane	ug/L (ppb)	50	103	103	77-129	0
Dibromomethane	ug/L (ppb)	50	104	103	79-121	1
4-Methyl-2-pentanone	ug/L (ppb)	250	105	105	65-135	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	100	99	79-129	1
Toluene	ug/L (ppb)	50	104	103	81-117	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	102	102	90-128	0
1,1,1-Trichloroethane	ug/L (ppb)	50	104	105	89-114	1
2-Hexanone	ug/L (ppb)	250	119	118	58-160	1
1,3-Dichloropropane	ug/L (ppb)	50	103	105	89-113	2
Tetrachloroethene	ug/L (ppb)	50	98	98	86-121	0
Dibromochloromethane	ug/L (ppb)	50	106	106	89-128	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	102	102	88-122	0
Chlorobenzene	ug/L (ppb)	50	104	103	86-118	1
Ethylbenzene	ug/L (ppb)	50	108	108	83-116	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	100	98	86-124	2
m,p-Xylene	ug/L (ppb)	100	108	107	84-120	1
o-Xylene	ug/L (ppb)	50	104	102	83-120	2
Styrene	ug/L (ppb)	50	108	106	87-119	2
Isopropylbenzene	ug/L (ppb)	50	109	107	83-120	2
Bromoform	ug/L (ppb)	50	110	110	77-119	0
n-Propylbenzene	ug/L (ppb)	50	111	110	83-118	1
Bromobenzene	ug/L (ppb)	50	99	100	88-117	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	108	107	85-121	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	107	109	83-115	2
1,2,3-Trichloropropane	ug/L (ppb)	50	107	109	84-117	2
2-Chlorotoluene	ug/L (ppb)	50	104	105	81-116	1
4-Chlorotoluene	ug/L (ppb)	50	105	105	83-117	0
tert-Butylbenzene	ug/L (ppb)	50	106	103	84-118	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	108	107	86-119	1
sec-Butylbenzene	ug/L (ppb)	50	111	109	84-121	2
p-Isopropyltoluene	ug/L (ppb)	50	110	109	85-118	1
1,3-Dichlorobenzene	ug/L (ppb)	50	103	102	85-118	1
1,4-Dichlorobenzene	ug/L (ppb)	50	106	105	85-119	1
1,2-Dichlorobenzene	ug/L (ppb)	50	104	103	81-117	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	107	107	62-136	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	110	108	75-129	2
Hexachlorobutadiene	ug/L (ppb)	50	103	100	74-132	3
Naphthalene	ug/L (ppb)	50	118	117	66-135	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	109	107	70-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/10

Date Received: 05/25/10

Project: Scougal Rubber JK0605, F&BI 005221

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 005221-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	96	28-164
Chloromethane	ug/L (ppb)	50	<10	101	26-167
Vinyl chloride	ug/L (ppb)	50	1.5	106	38-157
Bromomethane	ug/L (ppb)	50	<1	112	24-165
Chloroethane	ug/L (ppb)	50	<1	106	10-172
Trichlorofluoromethane	ug/L (ppb)	50	<1	111	38-158
Acetone	ug/L (ppb)	250	<10	91	19-168
1,1-Dichloroethene	ug/L (ppb)	50	<1	106	35-149
Methylene chloride	ug/L (ppb)	50	<5	100	66-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	103	56-135
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	65-128
1,1-Dichloroethane	ug/L (ppb)	50	1.1	104	67-127
2,2-Dichloropropane	ug/L (ppb)	50	<1	114	49-148
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	107	71-129
Chloroform	ug/L (ppb)	50	<1	105	71-127
2-Butanone (MEK)	ug/L (ppb)	250	<10	106	47-162
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	68-132
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	63-135
1,1-Dichloropropene	ug/L (ppb)	50	<1	107	65-127
Carbon tetrachloride	ug/L (ppb)	50	<1	109	55-139
Benzene	ug/L (ppb)	50	<0.35	109	71-120
Trichloroethene	ug/L (ppb)	50	3.1	109	72-120
1,2-Dichloropropane	ug/L (ppb)	50	<1	107	75-125
Bromodichloromethane	ug/L (ppb)	50	<1	106	65-135
Dibromomethane	ug/L (ppb)	50	<1	103	65-135
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	110	65-141
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	109	55-146
Toluene	ug/L (ppb)	50	<1	106	68-131
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	113	63-147
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	104	63-143
2-Hexanone	ug/L (ppb)	250	<10	116	56-156
1,3-Dichloropropane	ug/L (ppb)	50	<1	104	78-124
Tetrachloroethene	ug/L (ppb)	50	<1	104	71-126
Dibromochloromethane	ug/L (ppb)	50	<1	106	65-135
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	77-127
Chlorobenzene	ug/L (ppb)	50	<1	107	72-118
Ethylbenzene	ug/L (ppb)	50	<1	109	69-129
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	75-133
m,p-Xylene	ug/L (ppb)	100	<2	111	72-128
o-Xylene	ug/L (ppb)	50	<1	113	67-133
Styrene	ug/L (ppb)	50	<1	111	73-126
Isopropylbenzene	ug/L (ppb)	50	<1	114	65-135
Bromoform	ug/L (ppb)	50	<1	110	60-136
n-Propylbenzene	ug/L (ppb)	50	<1	110	66-133
Bromobenzene	ug/L (ppb)	50	<1	105	75-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	111	72-130
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	65-137
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	103	66-135
2-Chlorotoluene	ug/L (ppb)	50	<1	108	62-131
4-Chlorotoluene	ug/L (ppb)	50	<1	108	62-132
tert-Butylbenzene	ug/L (ppb)	50	<1	112	64-135
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	111	72-131
sec-Butylbenzene	ug/L (ppb)	50	<1	113	64-134
p-Isopropyltoluene	ug/L (ppb)	50	<1	115	69-134
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	108	65-126
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	107	65-121
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	108	64-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	101	57-148
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	111	64-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	111	53-140
Naphthalene	ug/L (ppb)	50	<1	110	40-166
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	110	58-152

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/10

Date Received: 05/25/10

Project: Scougal Rubber JK0605, F&BI 005221

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	106	108	27-138	2
Chloromethane	ug/L (ppb)	50	104	107	49-125	3
Vinyl chloride	ug/L (ppb)	50	103	106	53-131	3
Bromomethane	ug/L (ppb)	50	103	108	62-125	5
Chloroethane	ug/L (ppb)	50	90	98	52-127	9
Trichlorofluoromethane	ug/L (ppb)	50	102	107	65-172	5
Acetone	ug/L (ppb)	250	104	97	32-177	7
1,1-Dichloroethene	ug/L (ppb)	50	101	104	68-131	3
Methylene chloride	ug/L (ppb)	50	102	105	17-177	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	113	112	54-156	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	107	109	71-128	2
1,1-Dichloroethane	ug/L (ppb)	50	104	106	74-118	2
2,2-Dichloropropane	ug/L (ppb)	50	122	125	73-156	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	108	111	74-126	3
Chloroform	ug/L (ppb)	50	104	106	76-118	2
2-Butanone (MEK)	ug/L (ppb)	250	116	108	52-152	7
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	101	77-118	1
1,1,1-Trichloroethane	ug/L (ppb)	50	107	110	77-123	3
1,1-Dichloropropene	ug/L (ppb)	50	106	108	75-122	2
Carbon tetrachloride	ug/L (ppb)	50	110	112	76-126	2
Benzene	ug/L (ppb)	50	108	109	77-121	1
Trichloroethene	ug/L (ppb)	50	106	108	74-119	2
1,2-Dichloropropane	ug/L (ppb)	50	105	106	77-121	1
Bromodichloromethane	ug/L (ppb)	50	104	105	77-129	1
Dibromomethane	ug/L (ppb)	50	106	104	79-121	2
4-Methyl-2-pentanone	ug/L (ppb)	250	113	106	65-135	6
cis-1,3-Dichloropropene	ug/L (ppb)	50	111	112	79-129	1
Toluene	ug/L (ppb)	50	104	106	81-117	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	115	114	90-128	1
1,1,2-Trichloroethane	ug/L (ppb)	50	107	104	89-114	3
2-Hexanone	ug/L (ppb)	250	116	106	58-160	9
1,3-Dichloropropane	ug/L (ppb)	50	106	104	89-113	2
Tetrachloroethene	ug/L (ppb)	50	109	109	86-121	0
Dibromochloromethane	ug/L (ppb)	50	109	108	89-128	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	109	106	88-122	3
Chlorobenzene	ug/L (ppb)	50	105	107	86-118	2
Ethylbenzene	ug/L (ppb)	50	107	108	83-116	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	108	111	86-124	3
m,p-Xylene	ug/L (ppb)	100	109	111	84-120	2
o-Xylene	ug/L (ppb)	50	112	113	83-120	1
Styrene	ug/L (ppb)	50	111	112	87-119	1
Isopropylbenzene	ug/L (ppb)	50	112	114	83-120	2
Bromoform	ug/L (ppb)	50	116	111	77-119	4
n-Propylbenzene	ug/L (ppb)	50	106	106	83-118	0
Bromobenzene	ug/L (ppb)	50	105	104	88-117	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	109	109	85-121	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	104	98	83-115	6
1,2,3-Trichloropropane	ug/L (ppb)	50	105	98	84-117	7
2-Chlorotoluene	ug/L (ppb)	50	105	106	81-116	1
4-Chlorotoluene	ug/L (ppb)	50	105	105	83-117	0
tert-Butylbenzene	ug/L (ppb)	50	110	111	84-118	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	108	109	86-119	1
sec-Butylbenzene	ug/L (ppb)	50	109	110	84-121	1
p-Isopropyltoluene	ug/L (ppb)	50	112	114	85-118	2
1,3-Dichlorobenzene	ug/L (ppb)	50	106	107	85-118	1
1,4-Dichlorobenzene	ug/L (ppb)	50	106	106	85-119	0
1,2-Dichlorobenzene	ug/L (ppb)	50	107	107	81-117	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	106	99	62-136	7
1,2,4-Trichlorobenzene	ug/L (ppb)	50	112	111	75-129	1
Hexachlorobutadiene	ug/L (ppb)	50	111	115	74-132	4
Naphthalene	ug/L (ppb)	50	113	104	66-135	8
1,2,3-Trichlorobenzene	ug/L (ppb)	50	114	109	70-133	4

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

005221

SAMPLE CHAIN OF CUSTODY

ME 05/25/10

V3

Send Report To

Company Pacific Groinduct Corp

Address 2377 Eastlake Ave E

City, State, ZIP Seattle, WA 98102

Phone # (206) 329-0141 Fax # 325-6968

SAMPLERS (signature)

PROJECT NAME/NO.

Scrub Ruble
ST0605

PO #

REMARKS

email results to glen@pgh.com

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED							Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS				
MLW-11	A-C	5/24/10	1315	W	5				<input checked="" type="checkbox"/>						
MLW-12	A-C	5/24/10	1350	W	5				<input checked="" type="checkbox"/>						
MLW-14	A-C	5/24/10	1445	W	5				<input checked="" type="checkbox"/>						

SIGNATURE

Relinquished by:

Received by:

PRINT NAME

Relinquished by:

Received by:

COMPANY

Relinquished by:

Received by:

DATE

Relinquished by:

Received by:

TIME

Relinquished by:

Received by:

Received by:

Samples received at

14 C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COCC\COCC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 4, 2010

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included are the results from the testing of material submitted on April 23, 2010 from the Scougal Rubber PO JK0605, F&BI 004260 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 23, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber PO JK0605, F&BI 004260 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
004260-01	MW-14

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	04/23/10	Project:	Scougal Rubber PO JK0605
Date Extracted:	04/27/10	Lab ID:	004260-01
Date Analyzed:	04/28/10	Data File:	042745.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	63	127
Toluene-d8	100	65	127
4-Bromofluorobenzene	107	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	1.6	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.6	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber PO JK0605
Date Extracted:	04/27/10	Lab ID:	00610 mb
Date Analyzed:	04/28/10	Data File:	042723.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	100	65	127
4-Bromofluorobenzene	108	69	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/23/10

Project: Scougal Rubber PO JK0605, F&BI 004260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 004266-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	99	28-164
Chloromethane	ug/L (ppb)	50	<10	107	26-167
Vinyl chloride	ug/L (ppb)	50	<0.2	113	38-157
Bromomethane	ug/L (ppb)	50	<1	113	24-165
Chloroethane	ug/L (ppb)	50	<1	112	10-172
Trichlorofluoromethane	ug/L (ppb)	50	<1	121	38-158
Acetone	ug/L (ppb)	250	173 ve	128 b	19-168
1,1-Dichloroethene	ug/L (ppb)	50	<1	116	35-149
Methylene chloride	ug/L (ppb)	50	<5	98	66-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	101	56-135
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	106	65-128
1,1-Dichloroethane	ug/L (ppb)	50	<1	106	67-127
2,2-Dichloropropane	ug/L (ppb)	50	<1	114	49-148
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	112	71-129
Chloroform	ug/L (ppb)	50	<1	106	71-127
2-Butanone (MEK)	ug/L (ppb)	250	79	123 b	47-162
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	68-132
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	111	63-135
1,1-Dichloropropene	ug/L (ppb)	50	<1	115	65-127
Carbon tetrachloride	ug/L (ppb)	50	<1	111	55-139
Benzene	ug/L (ppb)	50	<0.35	115	71-120
Trichloroethene	ug/L (ppb)	50	<1	110	72-120
1,2-Dichloropropane	ug/L (ppb)	50	<1	112	75-125
Bromodichloromethane	ug/L (ppb)	50	<1	109	65-135
Dibromomethane	ug/L (ppb)	50	<1	108	65-135
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	116	65-141
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	112	55-146
Toluene	ug/L (ppb)	50	<1	109	68-131
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	120	63-147
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	106	63-143
2-Hexanone	ug/L (ppb)	250	<10	115	56-156
1,3-Dichloropropane	ug/L (ppb)	50	<1	108	78-124
Tetrachloroethene	ug/L (ppb)	50	<1	111	71-126
Dibromochloromethane	ug/L (ppb)	50	<1	109	65-135
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	109	77-127
Chlorobenzene	ug/L (ppb)	50	<1	108	72-118
Ethylbenzene	ug/L (ppb)	50	<1	115	69-129
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	111	75-133
m,p-Xylene	ug/L (ppb)	100	<2	112	72-128
o-Xylene	ug/L (ppb)	50	<1	110	67-133
Styrene	ug/L (ppb)	50	<1	112	73-126
Isopropylbenzene	ug/L (ppb)	50	<1	112	65-135
Bromoform	ug/L (ppb)	50	<1	111	60-136
n-Propylbenzene	ug/L (ppb)	50	<1	116	66-133
Bromobenzene	ug/L (ppb)	50	<1	105	75-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	118	72-130
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	65-137
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	108	66-135
2-Chlorotoluene	ug/L (ppb)	50	<1	112	62-131
4-Chlorotoluene	ug/L (ppb)	50	<1	113	62-132
tert-Butylbenzene	ug/L (ppb)	50	<1	116	64-135
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	118	72-131
sec-Butylbenzene	ug/L (ppb)	50	<1	120	64-134
p-Isopropyltoluene	ug/L (ppb)	50	<1	112	69-134
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	112	65-126
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	108	65-121
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	111	64-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	109	57-148
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	111	64-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	110	53-140
Naphthalene	ug/L (ppb)	50	<1	115	40-166
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	113	58-152

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/23/10

Project: Scougal Rubber PO JK0605, F&BI 004260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	108	108	27-138	0
Chloromethane	ug/L (ppb)	50	102	105	49-125	3
Vinyl chloride	ug/L (ppb)	50	107	107	53-131	0
Bromomethane	ug/L (ppb)	50	100	99	62-125	1
Chloroethane	ug/L (ppb)	50	99	96	52-127	3
Trichlorofluoromethane	ug/L (ppb)	50	104	101	65-172	3
Acetone	ug/L (ppb)	250	103	102	32-177	1
1,1-Dichloroethene	ug/L (ppb)	50	103	101	68-131	2
Methylene chloride	ug/L (ppb)	50	98	95	17-177	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	110	106	54-156	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	102	71-128	2
1,1-Dichloroethane	ug/L (ppb)	50	104	101	74-118	3
2,2-Dichloropropane	ug/L (ppb)	50	115	110	73-156	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	109	107	74-126	2
Chloroform	ug/L (ppb)	50	104	102	76-118	2
2-Butanone (MEK)	ug/L (ppb)	250	105	105	52-152	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	101	77-118	1
1,1,1-Trichloroethane	ug/L (ppb)	50	108	105	77-123	3
1,1-Dichloropropene	ug/L (ppb)	50	111	108	75-122	3
Carbon tetrachloride	ug/L (ppb)	50	110	105	76-126	5
Benzene	ug/L (ppb)	50	110	108	77-121	2
Trichloroethene	ug/L (ppb)	50	107	104	74-119	3
1,2-Dichloropropane	ug/L (ppb)	50	107	105	77-121	2
Bromodichloromethane	ug/L (ppb)	50	106	103	77-129	3
Dibromomethane	ug/L (ppb)	50	105	101	79-121	4
4-Methyl-2-pentanone	ug/L (ppb)	250	106	104	65-135	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	111	110	79-129	1
Toluene	ug/L (ppb)	50	105	104	81-117	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	113	111	90-128	2
1,1,2-Trichloroethane	ug/L (ppb)	50	102	101	89-114	1
2-Hexanone	ug/L (ppb)	250	108	107	58-160	1
1,3-Dichloropropane	ug/L (ppb)	50	104	104	89-113	0
Tetrachloroethene	ug/L (ppb)	50	107	105	86-121	2
Dibromochloromethane	ug/L (ppb)	50	108	105	89-128	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	105	104	88-122	1
Chlorobenzene	ug/L (ppb)	50	103	102	86-118	1
Ethylbenzene	ug/L (ppb)	50	109	107	83-116	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	108	105	86-124	3
m,p-Xylene	ug/L (ppb)	100	108	105	84-120	3
o-Xylene	ug/L (ppb)	50	106	103	83-120	3
Styrene	ug/L (ppb)	50	107	105	87-119	2
Isopropylbenzene	ug/L (ppb)	50	108	105	83-120	3
Bromoform	ug/L (ppb)	50	106	105	77-119	1
n-Propylbenzene	ug/L (ppb)	50	111	109	83-118	2
Bromobenzene	ug/L (ppb)	50	103	101	88-117	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	114	112	85-121	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	97	97	83-115	0
1,2,3-Trichloropropane	ug/L (ppb)	50	103	102	84-117	1
2-Chlorotoluene	ug/L (ppb)	50	109	108	81-116	1
4-Chlorotoluene	ug/L (ppb)	50	109	108	83-117	1
tert-Butylbenzene	ug/L (ppb)	50	113	111	84-118	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	114	112	86-119	2
sec-Butylbenzene	ug/L (ppb)	50	115	112	84-121	3
p-Isopropyltoluene	ug/L (ppb)	50	108	106	85-118	2
1,3-Dichlorobenzene	ug/L (ppb)	50	107	104	85-118	3
1,4-Dichlorobenzene	ug/L (ppb)	50	104	101	85-119	3
1,2-Dichlorobenzene	ug/L (ppb)	50	107	104	81-117	3
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	105	107	62-136	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	107	106	75-129	1
Hexachlorobutadiene	ug/L (ppb)	50	106	103	74-132	3
Naphthalene	ug/L (ppb)	50	111	111	66-135	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	107	107	70-133	0

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - Analyte present in the blank and the sample.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - Analysis performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Fremont
Analytical

2930 Westlake Ave N Suite 100
Seattle, WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Pacific Groundwater Group

Attn: Glen Wallace
2377 Eastlake Ave. N.
Seattle, WA 98102

RE: Scougal Rubber
Fremont Project No: CHM100310-5
PGG Project No: JK0605

March 15th, 2010

Attn:

Enclosed are the analytical results for the **Scougal Rubber** water sample (Sample ID: *MW-14*) submitted to Fremont Analytical on Wednesday March 10th, 2010

Sample Receipt:

The sample was received in good condition - in the proper containers, properly sealed, labeled and within holding time. The sample was contained in 3– 40mL VOAs preserved with HCL. The sample was received in a cooler with ice, with a cooler temperature of 7.6°C, which is within the laboratory recommended cooler temperature range (<4°C - 10°C). The sample was stored in a refrigeration unit at the USEPA-recommended temperature of 4°C ± 2°C. There were no sample receipt issues to report.

Sample Analysis:

Examination of the sample was conducted for the presence of the following:

- ***Volatile Organic Compounds in Water by EPA Method 8260***

This application was performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied. There were no sample analysis issues to report.

Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical!

Sincerely,

Michael Dee
Sr. Chemist / Principal
mikedee@fremontanalytical.com

Analysis of Volatile Organic Compounds in Water by EPA Method 8260

Project: Scougal Rubber
Client: Pacific Groundwater Group
Client Project #: JK0605
Lab Project #: CHM100310-5

EPA 8260B (µg/L)	MRL	Method Blank	LCS	MW-14	Duplicate		MS	MSD	RPD %
					MW-14	MW-14	MW-14	MW-14	
Date Analyzed		3/12/10	3/12/10	3/12/10	3/12/10		3/12/10	3/12/10	
Matrix				Water	Water		Water	Water	
Dichlorodifluoromethane (CFC-12)	1.0	nd		nd	nd				
Chloromethane	1.0	nd		nd	nd				
Vinyl chloride *	0.2	nd		5.7	5.4	6%			
Bromomethane	1.0	nd		nd	nd				
Chloroethane	1.0	nd		nd	nd				
Trichlorofluoromethane (CFC-11)	1.0	nd		nd	nd				
1,1-Dichloroethene	1.0	nd	70%	nd	nd		83%	69%	19%
Methylene chloride	1.0	nd		nd	nd				
trans-1,2-Dichloroethene	1.0	nd		nd	nd				
1,1-Dichloroethane	1.0	nd		1.1	1.0	10%			
2,2-Dichloropropane	2.0	nd		nd	nd				
cis-1,2-Dichloroethene	1.0	nd		2.4	2.3	3%			
Chloroform	1.0	nd		nd	nd				
1,1-Dichloropropene	1.0	nd		nd	nd				
Carbon tetrachloride	1.0	nd		nd	nd				
1,1,1-Trichloroethane (TCA)	1.0	nd		nd	nd				
Benzene	1.0	nd	114%	nd	nd		123%	127%	3%
1,2-Dichloroethane (EDC)	1.0	nd		nd	nd				
Trichloroethene (TCE)	1.0	nd	97%	2.3	2.2	6%	117%	104%	12%
1,2-Dichloropropane	1.0	nd		nd	nd				

"nd" Indicates not detected at listed reporting limits

"int" Indicates that interference prevents determination

* Instrument Detection Limit

"J" Indicates estimated value

"MRL" Indicates Method Reporting Limit

"LCS" Indicates Laboratory Control Sample

"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%

Acceptable Recovery Limits:

Surrogate = 65% to 135%

LCS, LCSD, MS, MSD = 65% to 135%

Surrogate Concentration = 10 µg/L

Spike Concentration = 10 µg/L

Analysis of Volatile Organic Compounds in Water by EPA Method 8260

Project: Scougal Rubber
Client: Pacific Groundwater Group
Client Project #: JK0605
Lab Project #: CHM100310-5

EPA 8260B (µg/L)	MRL	Method Blank	LCS	MW-14	Duplicate		MS	MSD	RPD %
					MW-14	RPD	MW-14	MW-14	
Date Analyzed		3/12/10	3/12/10	3/12/10	3/12/10		3/12/10	3/12/10	
Matrix				Water	Water		Water	Water	
Dibromomethane	1.0	nd		nd	nd				
Bromodichloromethane	1.0	nd		nd	nd				
cis-1,3-Dichloropropene	1.0	nd		nd	nd				
Toluene	1.0	nd	119%	nd	nd		130%	119%	9%
Trans-1,3-Dichloropropene	1.0	nd		nd	nd				
1,1,2-Trichloroethane	1.0	nd		nd	nd				
Tetrachloroethene (PCE)	1.0	nd		nd	nd				
1,3-Dichloropropane	1.0	nd		nd	nd				
Dibromochloromethane	1.0	nd		nd	nd				
1,2-Dibromoethane (EDB) *	0.01	nd		nd	nd				
Chlorobenzene	1.0	nd	86%	nd	nd		78%	77%	0%
1,1,1,2-Tetrachloroethane	1.0	nd		nd	nd				
Ethylbenzene	1.0	nd		nd	nd				
Total Xylenes	1.0	nd		nd	nd				
Styrenes	1.0	nd		nd	nd				
Bromoform	1.0	nd		nd	nd				
Isopropylbenzene	2.0	nd		nd	nd				
1,2,3-Trichloropropane	1.0	nd		nd	nd				
Bromobenzene	1.0	nd		nd	nd				
1,1,2,2-Tetrachloroethane	1.0	nd		nd	nd				

"nd" Indicates not detected at listed reporting limits

"int" Indicates that interference prevents determination

* Instrument Detection Limit

"J" Indicates estimated value

"MRL" Indicates Method Reporting Limit

"LCS" Indicates Laboratory Control Sample

"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%

Acceptable Recovery Limits:

Surrogate = 65% to 135%

LCS, LCSD, MS, MSD = 65% to 135%

Surrogate Concentration = 10 µg/L

Spike Concentration = 10 µg/L

Analysis of Volatile Organic Compounds in Water by EPA Method 8260

Project: Scougal Rubber
Client: Pacific Groundwater Group
Client Project #: JK0605
Lab Project #: CHM100310-5

EPA 8260B (µg/L)	MRL	Method Blank	LCS	MW-14	Duplicate		MS	MSD	RPD %
					MW-14	RPD	MW-14	MW-14	
Date Analyzed		3/12/10	3/12/10	3/12/10	3/12/10		3/12/10	3/12/10	
Matrix				Water	Water		Water	Water	
n-Propylbenzene	1.0	nd		nd	nd				
2-Chlorotoluene	1.0	nd		nd	nd				
4-Chlorotoluene	1.0	nd		nd	nd				
1,3,5-Trimethylbenzene	1.0	nd		nd	nd				
tert-Butylbenzene	1.0	nd		nd	nd				
1,2,4-Trimethylbenzene	1.0	nd		nd	nd				
sec-Butylbenzene	1.0	nd		nd	nd				
1,3-Dichlorobenzene	1.0	nd		nd	nd				
4-Isopropyltoluene	1.0	nd		nd	nd				
1,4-Dichlorobenzene	1.0	nd		nd	nd				
1,2-Dichlorobenzene	1.0	nd		nd	nd				
n-Butylbenzene	1.0	nd		nd	nd				
1,2-Dibromo-3-Chloropropane	1.0	nd		nd	nd				
1,2,4-Trichlorobenzene	2.0	nd		nd	nd				
Hexachloro-1,3-butadiene	4.0	nd		nd	nd				
Naphthalene	4.0	nd		nd	nd				
1,2,3-Trichlorobenzene	4.0	nd		nd	nd				

Surrogate Recovery

Dibromofluoromethane	79%	79%	82%	85%	104%	97%
Toluene-d8	98%	98%	95%	97%	124%	114%
1-Bromo-4-fluorobenzene	93%	95%	92%	92%	100%	100%

"nd" Indicates not detected at listed reporting limits

"int" Indicates that interference prevents determination

* Instrument Detection Limit

"J" Indicates estimated value

"MRL" Indicates Method Reporting Limit

"LCS" Indicates Laboratory Control Sample

"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

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Surrogate = 65% to 135%

LCS, LCSD, MS, MSD = 65% to 135%

Surrogate Concentration = 10 µg/L

Spike Concentration = 10 µg/L



Fremont Analytical

Chain of Custody Record

2930 Westlake Ave. N. Suite 100
Seattle, WA 98103

Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (Internal): WHM100310-5

Date: 3/10/10

Page: 1 of 1

Client: Pacific Groundwater Group

Project Name: Seagull Rubber

Address: 2377 Eastlake Ave E

Location:

City, State, Zip: Seattle, WA 98102 Tel: 329-0141

Collected by: Alan Walker

Reports To (PM): Alan Walker Fax: 329-6968

Email: glenn@pwws.com Project No: JK0605

Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx/Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	CI PESTICIDES 8081	CI HERBICIDES 8151A	Metals*	Total (T) Dissolved (D)	Anions (IC)**	Comments/Depth
1 MW-4	1220 W	VOA	3/10	X														RL 0.2mg/L For Vinyl Chloride.
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Relinquished	Date/Time	Received	Date/Time	Sample Receipt:	Special Remarks:
x <u>[Signature]</u>	<u>3/10/10 14:45</u>	<u>Jay Zehn</u>	<u>3/10/10 14:45</u>	Good?	
Relinquished	Date/Time	Received	Date/Time	Cooler Temperature:	
x		x		Seals Intact?: <u>n/a</u>	
				Total Number of Containers: <u>3</u>	TAT --> 24HR 48HR Standard



Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 4, 2010

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Ave. East, Suite 200
Seattle, WA 98102

Project: Scougal Rubber (SR) JK0605
ARI ID: QG66

Dear Mr. Wallace:

Please find enclosed the original Chain of Custody record, sample receipt documentation, and the final data for the samples from the project referenced above.

Sample receipt information and analytical details are addressed in the Case Narrative.

An electronic copy of this package will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Eric Branson", with a long horizontal flourish extending to the right.

Eric Branson
Project Manager
(206) 695-6213
eric@arilabs.com
www.arilabs.com



Case Narrative

- Sample Receipt & Analytical Details -

Sample Receipt:

Analytical Resources, Inc. accepted one water sample in good condition on 01/22/10. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for the parameter listed below, as requested on the Chain of Custody.

Volatile Organics by EPA Method 8260C:

Acrolein was out of control at a low bias in the Continuing Calibration. Acrolein is a known poor performer. Q flags* have been applied to the Form III to indicate such.

*A Q flag indicates an analyte with an Initial or Continuing Calibration that does not meet the established acceptance criteria (<20% Relative Standard Deviation, <20% Drift, or minimum Relative Response Factor). Q flags are only applied to Form I's when there is a detection for the analyte.

Due to the large number of compounds that may be analyzed, Method 8260C allows up to 20% of analyzed compounds to fail to meet the acceptance criteria before a calibration is considered invalid.

The analysis was otherwise completed routinely.



Cooler Receipt Form

ARI Client: Pacific Groundwater Group

Project Name: Scougel Rubber

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: QG66

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 13.5

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: [Signature] Date: 1/22/10 Time: 1630

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI..... NA

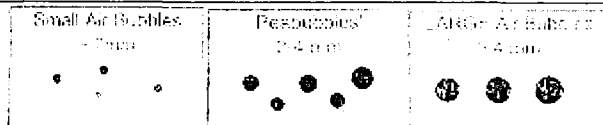
Samples Logged by: JW Date: 1/22/10 Time: 1648

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
 Peabubbles → "pb"
 Large → "lg"
 Headspace → "hs"

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: MW-14
SAMPLE

Lab Sample ID: QG66A
LIMS ID: 10-1459
Matrix: Water
Data Release Authorized:
Reported: 01/27/10

QC Report No: QG66-Pacific Groundwater Group
Project: Scougal Rubber
JK0605
Date Sampled: 01/22/10
Date Received: 01/22/10

Instrument/Analyst: NT10/PAB
Date Analyzed: 01/26/10 15:13

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	1.0	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	2.3	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	1.8	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	1.4	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14

Page 2 of 2

SAMPLE

Lab Sample ID: QG66A

QC Report No: QG66-Pacific Groundwater Group

LIMS ID: 10-1459

Project: Scougal Rubber

Matrix: Water

JK0605

Date Analyzed: 01/26/10 15:13

CAS Number	Analyte	RL	Result	Q
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in $\mu\text{g/L}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	92.3%
d8-Toluene	98.1%
Bromofluorobenzene	94.9%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: QG66-Pacific Groundwater Group
Project: Scougal Rubber
JK0605

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-012610	Method Blank	10	91.7%	98.4%	95.1%	104%	0
LCS-012610	Lab Control	10	94.7%	98.4%	102%	96.8%	0
LCSD-012610	Lab Control Dup	10	92.4%	99.6%	106%	94.5%	0
QG66A	MW-14	10	92.3%	98.1%	94.9%	105%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene

70-132
80-120
80-120
80-120

80-143
80-120
80-120
80-120

Prep Method: SW5030B
Log Number Range: 10-1459 to 10-1459

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-012610

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-012610

QC Report No: QG66-Pacific Groundwater Group

LIMS ID: 10-1459

Project: Scougal Rubber

Matrix: Water

JK0605

Data Release Authorized: *AB*

Date Sampled: NA

Reported: 01/27/10

Date Received: NA

Instrument/Analyst LCS: NT10/PAB

Sample Amount LCS: 10.0 mL

LCSD: NT10/PAB

LCSD: 10.0 mL

Date Analyzed LCS: 01/26/10 13:14

Purge Volume LCS: 10.0 mL

LCSD: 01/26/10 13:44

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCS	LCSD Recovery	RPD
Chloromethane	10.0	10.0	100%	10.7	10.0	107%	6.8%
Bromomethane	8.2	10.0	82.0%	9.3	10.0	93.0%	12.6%
Vinyl Chloride	9.6	10.0	96.0%	10.8	10.0	108%	11.8%
Chloroethane	9.5	10.0	95.0%	10.4	10.0	104%	9.0%
Methylene Chloride	9.7	10.0	97.0%	10.4	10.0	104%	7.0%
Acetone	42.3	50.0	84.6%	43.7	50.0	87.4%	3.3%
Carbon Disulfide	9.5	10.0	95.0%	10.5	10.0	105%	10.0%
1,1-Dichloroethene	8.9	10.0	89.0%	10.9	10.0	109%	20.2%
1,1-Dichloroethane	9.7	10.0	97.0%	9.9	10.0	99.0%	2.0%
trans-1,2-Dichloroethene	9.7	10.0	97.0%	10.5	10.0	105%	7.9%
cis-1,2-Dichloroethene	10.0	10.0	100%	10.0	10.0	100%	0.0%
Chloroform	10.0	10.0	100%	9.9	10.0	99.0%	1.0%
1,2-Dichloroethane	10.3	10.0	103%	9.6	10.0	96.0%	7.0%
2-Butanone	48.1	50.0	96.2%	44.9	50.0	89.8%	6.9%
1,1,1-Trichloroethane	10.1	10.0	101%	10.2	10.0	102%	1.0%
Carbon Tetrachloride	10.8	10.0	108%	10.7	10.0	107%	0.9%
Vinyl Acetate	9.3	10.0	93.0%	8.2	10.0	82.0%	12.6%
Bromodichloromethane	10.4	10.0	104%	9.9	10.0	99.0%	4.9%
1,2-Dichloropropane	10.0	10.0	100%	9.5	10.0	95.0%	5.1%
cis-1,3-Dichloropropene	10.6	10.0	106%	9.8	10.0	98.0%	7.8%
Trichloroethene	10.6	10.0	106%	10.8	10.0	108%	1.9%
Dibromochloromethane	10.6	10.0	106%	9.7	10.0	97.0%	8.9%
1,1,2-Trichloroethane	10.4	10.0	104%	9.6	10.0	96.0%	8.0%
Benzene	10.5	10.0	105%	10.2	10.0	102%	2.9%
trans-1,3-Dichloropropene	10.6	10.0	106%	10.1	10.0	101%	4.8%
2-Chloroethylvinylether	10.0	10.0	100%	9.6	10.0	96.0%	4.1%
Bromoform	11.0	10.0	110%	9.7	10.0	97.0%	12.6%
4-Methyl-2-Pentanone (MIBK)	49.8	50.0	99.6%	47.8	50.0	95.6%	4.1%
2-Hexanone	48.9	50.0	97.8%	45.7	50.0	91.4%	6.8%
Tetrachloroethene	10.7	10.0	107%	10.1	10.0	101%	5.8%
1,1,2,2-Tetrachloroethane	9.7	10.0	97.0%	9.0	10.0	90.0%	7.5%
Toluene	10.6	10.0	106%	10.2	10.0	102%	3.8%
Chlorobenzene	10.5	10.0	105%	10.1	10.0	101%	3.9%
Ethylbenzene	10.6	10.0	106%	10.4	10.0	104%	1.9%
Styrene	11.2	10.0	112%	11.0	10.0	110%	1.8%
Trichlorofluoromethane	9.7	10.0	97.0%	11.0	10.0	110%	12.6%
1,1,2-Trichloro-1,2,2-trifluoroethane	10.1	10.0	101%	10.9	10.0	109%	7.6%
m,p-Xylene	21.5	20.0	108%	21.2	20.0	106%	1.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-012610

Page 2 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-012610
LIMS ID: 10-1459
Matrix: Water

QC Report No: QG66-Pacific Groundwater Group
Project: Scougal Rubber
JK0605

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	10.8	10.0	108%	10.8	10.0	108%	0.0%
1,2-Dichlorobenzene	10.2	10.0	102%	9.5	10.0	95.0%	7.1%
1,3-Dichlorobenzene	10.7	10.0	107%	10.3	10.0	103%	3.8%
1,4-Dichlorobenzene	10.5	10.0	105%	10.0	10.0	100%	4.9%
Acrolein	38.8 Q	50.0	77.6%	39.1 Q	50.0	78.2%	0.8%
Methyl Iodide	9.0	10.0	90.0%	9.7	10.0	97.0%	7.5%
Bromoethane	9.3	10.0	93.0%	10.8	10.0	108%	14.9%
Acrylonitrile	8.9	10.0	89.0%	8.8	10.0	88.0%	1.1%
1,1-Dichloropropene	10.6	10.0	106%	10.4	10.0	104%	1.9%
Dibromomethane	10.4	10.0	104%	9.7	10.0	97.0%	7.0%
1,1,1,2-Tetrachloroethane	10.6	10.0	106%	10.6	10.0	106%	0.0%
1,2-Dibromo-3-chloropropane	9.7	10.0	97.0%	8.0	10.0	80.0%	19.2%
1,2,3-Trichloropropane	10.4	10.0	104%	9.6	10.0	96.0%	8.0%
trans-1,4-Dichloro-2-butene	9.3	10.0	93.0%	8.6	10.0	86.0%	7.8%
1,3,5-Trimethylbenzene	11.0	10.0	110%	10.7	10.0	107%	2.8%
1,2,4-Trimethylbenzene	10.9	10.0	109%	10.8	10.0	108%	0.9%
Hexachlorobutadiene	9.3	10.0	93.0%	8.1	10.0	81.0%	13.8%
Ethylene Dibromide	10.6	10.0	106%	10.0	10.0	100%	5.8%
Bromochloromethane	10.7	10.0	107%	9.8	10.0	98.0%	8.8%
2,2-Dichloropropane	9.8	10.0	98.0%	9.2	10.0	92.0%	6.3%
1,3-Dichloropropane	10.1	10.0	101%	8.9	10.0	89.0%	12.6%
Isopropylbenzene	10.7	10.0	107%	10.1	10.0	101%	5.8%
n-Propylbenzene	10.7	10.0	107%	10.0	10.0	100%	6.8%
Bromobenzene	10.8	10.0	108%	9.8	10.0	98.0%	9.7%
2-Chlorotoluene	10.5	10.0	105%	10.1	10.0	101%	3.9%
4-Chlorotoluene	10.7	10.0	107%	10.1	10.0	101%	5.8%
tert-Butylbenzene	10.8	10.0	108%	10.6	10.0	106%	1.9%
sec-Butylbenzene	10.6	10.0	106%	10.6	10.0	106%	0.0%
4-Isopropyltoluene	10.9	10.0	109%	10.9	10.0	109%	0.0%
n-Butylbenzene	10.4	10.0	104%	10.4	10.0	104%	0.0%
1,2,4-Trichlorobenzene	10.6	10.0	106%	8.7	10.0	87.0%	19.7%
Naphthalene	9.7	10.0	97.0%	7.8	10.0	78.0%	21.7%
1,2,3-Trichlorobenzene	10.2	10.0	102%	8.4	10.0	84.0%	19.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	94.7%	92.4%
d8-Toluene	98.4%	99.6%
Bromofluorobenzene	102%	106%
d4-1,2-Dichlorobenzene	96.8%	94.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-012610

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METHOD BLANK

Lab Sample ID: MB-012610

QC Report No: QG66-Pacific Groundwater Group

LIMS ID: 10-1459

Project: Scougal Rubber

Matrix: Water

JK0605

Data Release Authorized: *AS*

Date Sampled: NA

Reported: 01/27/10

Date Received: NA

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 01/26/10 14:14

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-012610

Page 2 of 2

METHOD BLANK

Lab Sample ID: MB-012610

QC Report No: QG66-Pacific Groundwater Group

LIMS ID: 10-1459

Project: Scougal Rubber

Matrix: Water

JK0605

Date Analyzed: 01/26/10 14:14

CAS Number	Analyte	RL	Result	Q
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in $\mu\text{g/L}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	91.7%
d8-Toluene	98.4%
Bromofluorobenzene	95.1%
d4-1,2-Dichlorobenzene	104%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

December 16, 2009

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Ave. East, Suite 200
Seattle, WA 98102

Project: Scougal Rubber (SR) JK0605
ARI ID: QA26

Dear Mr. Wallace:

Please find enclosed the original Chain of Custody record, sample receipt documentation, and the final data for the samples from the project referenced above.

Sample receipt information and analytical details are addressed in the Case Narrative.

An electronic copy of this package will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Eric Branson
Project Manager
(206) 695-6213
eric@arilabs.com
www.arilabs.com



Case Narrative

- Sample Receipt & Analytical Details -

Sample Receipt:

Analytical Resources, Inc. accepted one water sample and one Trip Blank in good condition on 12/04/09. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

One of three vials for the sample was received unpreserved. This was noted on the Chain of Custody. The preservative is irrelevant if the analysis is performed within one week of sample collection, which was the case in this instance.

The sample was analyzed for the parameter listed below, as requested on the Chain of Custody.

Volatile Organics by EPA Method 8260C:

Acrolein was out of control at a low bias in the Continuing Calibration. Acrolein is a known poor performer. Q flags* have been applied to the Form III to indicate such.

*A Q flag indicates an analyte with an Initial or Continuing Calibration that does not meet the established acceptance criteria (<20% Relative Standard Deviation, <20% Drift, or minimum Relative Response Factor). Q flags are only applied to Form I's when there is a detection for the analyte.

Due to the large number of compounds that may be analyzed, Method 8260C allows up to 20% of analyzed compounds to fail to meet the acceptance criteria before a calibration is considered invalid.

The analysis was otherwise completed routinely.



Cooler Receipt Form

ARI Client: PGG

Project Name: Scougal Rubber (SR)

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: QA26

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 16.1

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 12/4/09 Time: 1627

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... (Bubble Wrap) Wet Ice Gel Packs Baggies (Foam Block) Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES (NO)

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? NA (YES) NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI..... NA 11/23/09

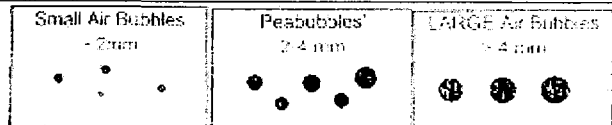
Samples Logged by: AV Date: 12/5/09 Time: 1042

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14
SAMPLE

Page 1 of 2

Lab Sample ID: QA26A

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized:

Date Sampled: 12/04/09

Reported: 12/10/09

Date Received: 12/04/09

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 12/07/09 13:37

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	0.5	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	5.8	
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	1.2	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	1.3	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	3.7	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	0.3	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14

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SAMPLE

Lab Sample ID: QA26A

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Date Analyzed: 12/07/09 13:37

CAS Number	Analyte	RL	Result	Q
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in $\mu\text{g/L}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.3%
d8-Toluene	101%
Bromofluorobenzene	98.6%
d4-1,2-Dichlorobenzene	104%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: TRIP BLANKS

Page 1 of 2

SAMPLE

Lab Sample ID: QA26B

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29981

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized: *[Signature]*

Date Sampled: 12/04/09

Reported: 12/10/09

Date Received: 12/04/09

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 12/07/09 14:56

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: TRIP BLANKS

Page 2 of 2

SAMPLE

Lab Sample ID: QA26B

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29981

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Date Analyzed: 12/07/09 14:56

CAS Number	Analyte	RL	Result	Q
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.9%
d8-Toluene	102%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: QA26-Pacific Groundwater Group
Project: Scougal Rubber (SR)
JK0605

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-120709	Method Blank	10	95.3%	101%	97.5%	106%	0
LCS-120709	Lab Control	10	101%	103%	102%	100%	0
LCSD-120709	Lab Control Dup	10	103%	103%	106%	103%	0
QA26A	MW-14	10	95.3%	101%	98.6%	104%	0
QA26B	TRIP BLANKS	10	94.9%	102%	97.7%	105%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene

70-132
80-120
80-120
80-120

80-143
80-120
80-120
80-120

Prep Method: SW5030B
Log Number Range: 09-29980 to 09-29981

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-120709

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-120709

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized: *B*

Date Sampled: NA

Reported: 12/10/09

Date Received: NA

Instrument/Analyst LCS: NT10/PAB

Sample Amount LCS: 10.0 mL

LCSD: NT10/PAB

LCSD: 10.0 mL

Date Analyzed LCS: 12/07/09 11:55

Purge Volume LCS: 10.0 mL

LCSD: 12/07/09 12:25

LCSD: 10.0 mL

Analyte	LCS	Spike		LCS	LCSD	Spike		RPD
		Added-LCS	Recovery			Added-LCSD	Recovery	
Chloromethane	9.5	10.0	95.0%	10.5	10.0	105%	10.0%	
Bromomethane	10.2	10.0	102%	10.6	10.0	106%	3.8%	
Vinyl Chloride	10.7	10.0	107%	10.9	10.0	109%	1.9%	
Chloroethane	10.1	10.0	101%	10.8	10.0	108%	6.7%	
Methylene Chloride	9.2	10.0	92.0%	10.0	10.0	100%	8.3%	
Acetone	43.0	50.0	86.0%	48.8	50.0	97.6%	12.6%	
Carbon Disulfide	9.5	10.0	95.0%	9.8	10.0	98.0%	3.1%	
1,1-Dichloroethene	9.7	10.0	97.0%	9.9	10.0	99.0%	2.0%	
1,1-Dichloroethane	9.5	10.0	95.0%	9.7	10.0	97.0%	2.1%	
trans-1,2-Dichloroethene	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%	
cis-1,2-Dichloroethene	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%	
Chloroform	9.7	10.0	97.0%	9.9	10.0	99.0%	2.0%	
1,2-Dichloroethane	9.0	10.0	90.0%	9.8	10.0	98.0%	8.5%	
2-Butanone	45.7	50.0	91.4%	51.1	50.0	102%	11.2%	
1,1,1-Trichloroethane	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%	
Carbon Tetrachloride	9.2	10.0	92.0%	9.3	10.0	93.0%	1.1%	
Vinyl Acetate	8.5	10.0	85.0%	9.4	10.0	94.0%	10.1%	
Bromodichloromethane	9.7	10.0	97.0%	10.4	10.0	104%	7.0%	
1,2-Dichloropropane	9.7	10.0	97.0%	10.5	10.0	105%	7.9%	
cis-1,3-Dichloropropene	10.1	10.0	101%	10.8	10.0	108%	6.7%	
Trichloroethene	10.6	10.0	106%	11.1	10.0	111%	4.6%	
Dibromochloromethane	9.2	10.0	92.0%	9.9	10.0	99.0%	7.3%	
1,1,2-Trichloroethane	9.5	10.0	95.0%	10.3	10.0	103%	8.1%	
Benzene	9.8	10.0	98.0%	10.3	10.0	103%	5.0%	
trans-1,3-Dichloropropene	9.8	10.0	98.0%	10.8	10.0	108%	9.7%	
2-Chloroethylvinylether	9.3	10.0	93.0%	10.2	10.0	102%	9.2%	
Bromoform	8.6	10.0	86.0%	9.0	10.0	90.0%	4.5%	
4-Methyl-2-Pentanone (MIBK)	45.2	50.0	90.4%	51.4	50.0	103%	12.8%	
2-Hexanone	45.2	50.0	90.4%	50.5	50.0	101%	11.1%	
Tetrachloroethene	9.5	10.0	95.0%	9.7	10.0	97.0%	2.1%	
1,1,2,2-Tetrachloroethane	8.3	10.0	83.0%	8.9	10.0	89.0%	7.0%	
Toluene	10.0	10.0	100%	10.6	10.0	106%	5.8%	
Chlorobenzene	9.5	10.0	95.0%	10.0	10.0	100%	5.1%	
Ethylbenzene	9.6	10.0	96.0%	10.1	10.0	101%	5.1%	
Styrene	10.4	10.0	104%	11.1	10.0	111%	6.5%	
Trichlorofluoromethane	9.6	10.0	96.0%	9.9	10.0	99.0%	3.1%	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%	
m,p-Xylene	19.5	20.0	97.5%	20.4	20.0	102%	4.5%	
o-Xylene	9.8	10.0	98.0%	10.3	10.0	103%	5.0%	
1,2-Dichlorobenzene	9.4	10.0	94.0%	10.0	10.0	100%	6.2%	
1,3-Dichlorobenzene	9.5	10.0	95.0%	9.8	10.0	98.0%	3.1%	
1,4-Dichlorobenzene	9.4	10.0	94.0%	9.8	10.0	98.0%	4.2%	
Acrolein	24.5 Q	50.0	49.0%	28.5 Q	50.0	57.0%	15.1%	
Methyl Iodide	8.8	10.0	88.0%	8.9	10.0	89.0%	1.1%	
Bromoethane	9.5	10.0	95.0%	9.6	10.0	96.0%	1.0%	

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-120709

Page 2 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-120709

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	9.1	10.0	91.0%	10.4	10.0	104%	13.3%
1,1-Dichloropropene	9.8	10.0	98.0%	10.2	10.0	102%	4.0%
Dibromomethane	9.2	10.0	92.0%	10.0	10.0	100%	8.3%
1,1,1,2-Tetrachloroethane	9.2	10.0	92.0%	9.7	10.0	97.0%	5.3%
1,2-Dibromo-3-chloropropane	8.5	10.0	85.0%	10.0	10.0	100%	16.2%
1,2,3-Trichloropropane	8.2	10.0	82.0%	8.7	10.0	87.0%	5.9%
trans-1,4-Dichloro-2-butene	9.3	10.0	93.0%	10.1	10.0	101%	8.2%
1,3,5-Trimethylbenzene	9.5	10.0	95.0%	9.4	10.0	94.0%	1.1%
1,2,4-Trimethylbenzene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Hexachlorobutadiene	8.8	10.0	88.0%	9.6	10.0	96.0%	8.7%
Ethylene Dibromide	9.6	10.0	96.0%	10.6	10.0	106%	9.9%
Bromochloromethane	9.0	10.0	90.0%	9.8	10.0	98.0%	8.5%
2,2-Dichloropropane	8.6	10.0	86.0%	9.0	10.0	90.0%	4.5%
1,3-Dichloropropane	9.1	10.0	91.0%	9.8	10.0	98.0%	7.4%
Isopropylbenzene	9.0	10.0	90.0%	8.9	10.0	89.0%	1.1%
n-Propylbenzene	9.3	10.0	93.0%	9.2	10.0	92.0%	1.1%
Bromobenzene	8.6	10.0	86.0%	8.7	10.0	87.0%	1.2%
2-Chlorotoluene	9.1	10.0	91.0%	9.0	10.0	90.0%	1.1%
4-Chlorotoluene	9.3	10.0	93.0%	9.2	10.0	92.0%	1.1%
tert-Butylbenzene	9.2	10.0	92.0%	9.3	10.0	93.0%	1.1%
sec-Butylbenzene	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
4-Isopropyltoluene	10.1	10.0	101%	10.2	10.0	102%	1.0%
n-Butylbenzene	10.6	10.0	106%	10.8	10.0	108%	1.9%
1,2,4-Trichlorobenzene	8.2	10.0	82.0%	9.0	10.0	90.0%	9.3%
Naphthalene	7.5	10.0	75.0%	8.2	10.0	82.0%	8.9%
1,2,3-Trichlorobenzene	8.2	10.0	82.0%	8.4	10.0	84.0%	2.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	101%	103%
d8-Toluene	103%	103%
Bromofluorobenzene	102%	106%
d4-1,2-Dichlorobenzene	100%	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-120709

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METHOD BLANK

Lab Sample ID: MB-120709

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized: *B*

Date Sampled: NA

Reported: 12/10/09

Date Received: NA

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 12/07/09 12:54

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-120709

Page 2 of 2

METHOD BLANK

Lab Sample ID: MB-120709

QC Report No: QA26-Pacific Groundwater Group

LIMS ID: 09-29980

Project: Scougal Rubber (SR)

Matrix: Water

JK0605

Date Analyzed: 12/07/09 12:54

CAS Number	Analyte	RL	Result	Q
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.3%
d8-Toluene	101%
Bromofluorobenzene	97.5%
d4-1,2-Dichlorobenzene	106%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

October 5, 2009

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Ave. East, Suite 200
Seattle, WA 98102

Project: Scougal JK0605
ARI ID: PP89

Dear Mr. Wallace:

Please find enclosed the original Chain of Custody record, sample receipt documentation, and the final data for the samples from the project referenced above.

Sample receipt information and analytical details are addressed in the Case Narrative.

An electronic copy of this package will be kept on file at ARI. Should you have any questions or concerns, please feel free to call me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Eric Branson
Project Manager
(206) 695-6213
eric@arilabs.com
www.arilabs.com



Case Narrative

- Sample Receipt & Analytical Details -

Sample Receipt:

Analytical Resources, Inc. accepted one water sample and one Trip Blank in good condition on 09/24/09. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form and Preservation Verification sheet.

The sample was analyzed for the parameter listed below, as requested on the Chain of Custody.

Volatile Organics by EPA Methode 8260C:

This analysis was completed routinely.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: PP89	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Pacific Groundwater	Phone: 206 329 0141	Date: 9/23/09
Client Contact: Glen Wallace		Ice Present?
Client Project Name: Scougard		No. of Coolers:
		Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested							Notes/Comments	
MW-14	9/23/09	14:25	A9	3	8260	VOCs	X						

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Janet Knox	Printed Name: Rick Huber	Printed Name:	Printed Name:
	Company: PGG	Company: ARI	Company:	Company:
	Date & Time: 9/24/09 1:31 pm	Date & Time: 9/24/09 1330	Date & Time:	Date & Time:

000005844

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

Cooler Receipt Form

ARI Client: PGG

Project Name: Scasal

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: PP89

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 9.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 101986

Cooler Accepted by: [Signature] Date: 9/24/09 Time: 1445

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO

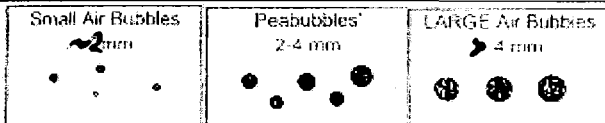
Samples Logged by: JW Date: 9/24/09 Time: 1505

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
 Peabubbles → "pb"
 Large → "lg"
 Headspace → "hs"



Cooler Temperature Compliance Form

Cooler#: <u>1</u>		Temperature(°C): <u>9.2</u>	
Sample ID	Bottle Count	Bottle Type	
MW-14	3	40 mL vials	
Trip Blank	2	" "	

Cooler#: _____		Temperature(°C): _____	
Sample ID	Bottle Count	Bottle Type	

Cooler#: _____		Temperature(°C): _____	
Sample ID	Bottle Count	Bottle Type	

Cooler#: _____		Temperature(°C): _____	
Sample ID	Bottle Count	Bottle Type	

Completed by: JW Date: 9/24/09 Time: 1505

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14

Page 1 of 2

SAMPLE

Lab Sample ID: PP89A

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Data Release Authorized: *B*

Date Sampled: 09/23/09

Reported: 09/28/09

Date Received: 09/24/09

Instrument/Analyst: NT5/PKC

Sample Amount: 10.0 mL

Date Analyzed: 09/25/09 14:17

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	1.9	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	1.1	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	1.7	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	4.0	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14

Page 2 of 2

SAMPLE

Lab Sample ID: PP89A

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Date Analyzed: 09/25/09 14:17

CAS Number	Analyte	RL	Result	Q
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	99.8%
Bromofluorobenzene	97.0%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: Trip Blank
SAMPLE

Page 1 of 2

Lab Sample ID: PP89B

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22207

Project: Scougal

Matrix: Water

JK0605

Data Release Authorized: *[Signature]*

Date Sampled: 09/23/09

Reported: 09/28/09

Date Received: 09/24/09

Instrument/Analyst: NT5/PKC

Sample Amount: 10.0 mL

Date Analyzed: 09/25/09 11:44

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: Trip Blank

Page 2 of 2

SAMPLE

Lab Sample ID: PP89B

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22207

Project: Scougal

Matrix: Water

JK0605

Date Analyzed: 09/25/09 11:44

CAS Number	Analyte	RL	Result	Q
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.6%
d8-Toluene	99.6%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PP89-Pacific Groundwater Group
Project: Scougal
JK0605

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-092509	Method Blank	10	101%	102%	98.7%	102%	0
LCS-092509	Lab Control	10	101%	101%	102%	103%	0
LCSD-092509	Lab Control Dup	10	97.7%	101%	103%	102%	0
PP89A	MW-14	10	102%	99.8%	97.0%	105%	0
PP89B	Trip Blank	10	99.6%	99.6%	98.8%	103%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane	70-132	80-143
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B
Log Number Range: 09-22206 to 09-22207

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-092509

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-092509

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Data Release Authorized:

Date Sampled: NA

Reported: 09/28/09

Date Received: NA

Instrument/Analyst LCS: NT5/PKC

Sample Amount LCS: 10.0 mL

LCSD: NT5/PKC

LCSD: 10.0 mL

Date Analyzed LCS: 09/25/09 09:48

Purge Volume LCS: 10.0 mL

LCSD: 09/25/09 10:13

LCSD: 10.0 mL

Analyte	LCS	Spike		LCSD	Spike		RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Chloromethane	9.0	10.0	90.0%	9.2	10.0	92.0%	2.2%
Bromomethane	11.2	10.0	112%	12.1	10.0	121%	7.7%
Vinyl Chloride	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
Chloroethane	8.7	10.0	87.0%	8.4	10.0	84.0%	3.5%
Methylene Chloride	8.9	10.0	89.0%	8.8	10.0	88.0%	1.1%
Acetone	40.5	50.0	81.0%	41.6	50.0	83.2%	2.7%
Carbon Disulfide	9.2	10.0	92.0%	9.2	10.0	92.0%	0.0%
1,1-Dichloroethene	9.6	10.0	96.0%	9.4	10.0	94.0%	2.1%
1,1-Dichloroethane	9.2	10.0	92.0%	9.2	10.0	92.0%	0.0%
trans-1,2-Dichloroethene	9.7	10.0	97.0%	9.6	10.0	96.0%	1.0%
cis-1,2-Dichloroethene	9.5	10.0	95.0%	9.5	10.0	95.0%	0.0%
Chloroform	9.6	10.0	96.0%	9.3	10.0	93.0%	3.2%
1,2-Dichloroethane	9.4	10.0	94.0%	9.6	10.0	96.0%	2.1%
2-Butanone	42.9	50.0	85.8%	42.2	50.0	84.4%	1.6%
1,1,1-Trichloroethane	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
Carbon Tetrachloride	10.1	10.0	101%	10.2	10.0	102%	1.0%
Vinyl Acetate	8.8	10.0	88.0%	8.8	10.0	88.0%	0.0%
Bromodichloromethane	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
1,2-Dichloropropane	9.1	10.0	91.0%	9.2	10.0	92.0%	1.1%
cis-1,3-Dichloropropene	9.2	10.0	92.0%	9.5	10.0	95.0%	3.2%
Trichloroethene	9.3	10.0	93.0%	9.5	10.0	95.0%	2.1%
Dibromochloromethane	9.5	10.0	95.0%	9.9	10.0	99.0%	4.1%
1,1,2-Trichloroethane	9.1	10.0	91.0%	9.4	10.0	94.0%	3.2%
Benzene	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
trans-1,3-Dichloropropene	9.3	10.0	93.0%	9.7	10.0	97.0%	4.2%
2-Chloroethylvinylether	8.5	10.0	85.0%	8.9	10.0	89.0%	4.6%
Bromoform	9.1	10.0	91.0%	9.2	10.0	92.0%	1.1%
4-Methyl-2-Pentanone (MIBK)	43.3	50.0	86.6%	45.2	50.0	90.4%	4.3%
2-Hexanone	43.7	50.0	87.4%	44.4	50.0	88.8%	1.6%
Tetrachloroethene	10.1	10.0	101%	10.0	10.0	100%	1.0%
1,1,2,2-Tetrachloroethane	8.7	10.0	87.0%	8.9	10.0	89.0%	2.3%
Toluene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Chlorobenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Ethylbenzene	9.5	10.0	95.0%	11.5	10.0	115%	19.0%
Styrene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Trichlorofluoromethane	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%
1,1,2-Trichloro-1,2,2-trifluoroethane	9.8	10.0	98.0%	9.6	10.0	96.0%	2.1%
m,p-Xylene	20.4	20.0	102%	20.5	20.0	102%	0.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-092509

Page 2 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-092509

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	10.0	10.0	100%	10.1	10.0	101%	1.0%
1,2-Dichlorobenzene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
1,3-Dichlorobenzene	10.1	10.0	101%	10.1	10.0	101%	0.0%
1,4-Dichlorobenzene	10.1	10.0	101%	10.2	10.0	102%	1.0%
Acrolein	43.1	50.0	86.2%	45.4	50.0	90.8%	5.2%
Methyl Iodide	10.6	10.0	106%	10.7	10.0	107%	0.9%
Bromoethane	10.0	10.0	100%	10.1	10.0	101%	1.0%
Acrylonitrile	8.5	10.0	85.0%	8.6	10.0	86.0%	1.2%
1,1-Dichloropropene	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
Dibromomethane	9.3	10.0	93.0%	9.4	10.0	94.0%	1.1%
1,1,1,2-Tetrachloroethane	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%
1,2-Dibromo-3-chloropropane	9.0	10.0	90.0%	8.8	10.0	88.0%	2.2%
1,2,3-Trichloropropane	9.2	10.0	92.0%	9.0	10.0	90.0%	2.2%
trans-1,4-Dichloro-2-butene	9.3	10.0	93.0%	8.5	10.0	85.0%	9.0%
1,3,5-Trimethylbenzene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
1,2,4-Trimethylbenzene	10.0	10.0	100%	10.0	10.0	100%	0.0%
Hexachlorobutadiene	10.7	10.0	107%	10.8	10.0	108%	0.9%
Ethylene Dibromide	9.4	10.0	94.0%	9.8	10.0	98.0%	4.2%
Bromochloromethane	9.6	10.0	96.0%	9.5	10.0	95.0%	1.0%
2,2-Dichloropropane	9.6	10.0	96.0%	9.4	10.0	94.0%	2.1%
1,3-Dichloropropane	9.1	10.0	91.0%	9.3	10.0	93.0%	2.2%
Isopropylbenzene	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%
n-Propylbenzene	10.0	10.0	100%	10.0	10.0	100%	0.0%
Bromobenzene	9.5	10.0	95.0%	9.7	10.0	97.0%	2.1%
2-Chlorotoluene	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%
4-Chlorotoluene	9.8	10.0	98.0%	10.0	10.0	100%	2.0%
tert-Butylbenzene	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%
sec-Butylbenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%
4-Isopropyltoluene	10.2	10.0	102%	10.2	10.0	102%	0.0%
n-Butylbenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%
1,2,4-Trichlorobenzene	10.1	10.0	101%	10.3	10.0	103%	2.0%
Naphthalene	9.3	10.0	93.0%	9.4	10.0	94.0%	1.1%
1,2,3-Trichlorobenzene	10.1	10.0	101%	10.1	10.0	101%	0.0%

Reported in $\mu\text{g/L}$ (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	101%	97.7%
d8-Toluene	101%	101%
Bromofluorobenzene	102%	103%
d4-1,2-Dichlorobenzene	103%	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-092509

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METHOD BLANK

Lab Sample ID: MB-092509

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Data Release Authorized: *AS*

Date Sampled: NA

Reported: 09/28/09

Date Received: NA

Instrument/Analyst: NT5/PKC

Sample Amount: 10.0 mL

Date Analyzed: 09/25/09 10:39

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-092509

Page 2 of 2

METHOD BLANK

Lab Sample ID: MB-092509

QC Report No: PP89-Pacific Groundwater Group

LIMS ID: 09-22206

Project: Scougal

Matrix: Water

JK0605

Date Analyzed: 09/25/09 10:39

CAS Number	Analyte	RL	Result	Q
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	102%
Bromofluorobenzene	98.7%
d4-1,2-Dichlorobenzene	102%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 30, 2009

Glen Wallace
Pacific Groundwater Group
2377 Eastlake Ave. East, Suite 200
Seattle, WA 98102

Client Project: Scougal Rubber
ARI ID: PH59

Dear Mr. Wallace:

Please find enclosed the original Chain of Custody record and the final results for the samples from the project referenced above. Analytical Resources (ARI) accepted one water sample in good condition on July 21, 2009. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for Volatile Organics, as requested on the Chain of Custody.

Vinyl Acetate and o-Xylene had recoveries below the Control Limit in the Continuing Calibration. Q-flags* have been applied to LCS Form III's to indicate such.

The analysis was otherwise completed routinely.

A copy of these reports and the supporting data will remain on file with ARI. Please feel free to call me at any time, if you require any additional information.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Eric Branson". The signature is written in a cursive style and is followed by a horizontal line.

Eric Branson
Project Manager
(206) 695-6213
eric@arilabs.com
www.arilabs.com

*A Q-flag indicates an analyte with an Initial or Continuing Calibration that does not meet established acceptance criteria (<20% Relative Standard Deviation, <20% Drift, or minimum Relative Response Factor). According to Method 8260C, due to the large number of compounds that may be analyzed by this method, up to 20% of analyzed compounds will be allowed to fail to meet the criteria before a calibration is considered invalid. Q-flags are only applied to Form I's when there is a detection for the analyte.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: PGG

Project Name: Sageel Rubber

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: PH59

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.7

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 101886

Cooler Accepted by: R Date: 7/21/09 Time: 1150

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO

Samples Logged by: JH Date: 7/21/09 Time: 12:50

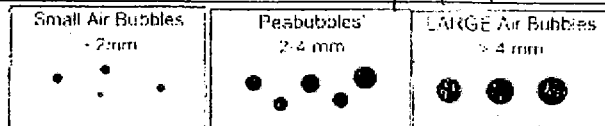
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

3067 voc vials have "Lg" bubbles.

By: JH Date: 7/21/09



Small → "sm"
 Peabubbles → "pb"
 Large → "lg"
 Headspace → "hs"

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14
SAMPLE

Page 1 of 2

Lab Sample ID: PH59A


QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized: 

Date Sampled: 07/20/09

Reported: 07/28/09

Date Received: 07/21/09

Instrument/Analyst: NT5/PKC

Sample Amount: 10.0 mL

Date Analyzed: 07/23/09 20:22

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	9.2	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	0.9	
156-60-5	trans-1,2-Dichloroethene	0.2	0.2	
156-59-2	cis-1,2-Dichloroethene	0.2	5.8	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	19	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	0.8	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-14

Page 2 of 2

SAMPLE

Lab Sample ID: PH59A

QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Date Analyzed: 07/23/09 20:22

CAS Number	Analyte	RL	Result	Q
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in $\mu\text{g/L}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	96.4%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	108%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PH59-Pacific Groundwater Group
Project: Scougel Rubber (SR)
JK0605

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-072309	Method Blank	10	103%	102%	93.3%	106%	0
LCS-072309	Lab Control	10	98.7%	97.5%	102%	99.7%	0
LCSD-072309	Lab Control Dup	10	96.6%	96.2%	100%	99.8%	0
PH59A	MW-14	10	107%	96.4%	94.0%	108%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene

70-132
80-120
80-120
80-120

80-143
80-120
80-120
80-120

Prep Method: SW5030B
Log Number Range: 09-17240 to 09-17240

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-072309

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-072309

QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized:

Date Sampled: NA

Reported: 07/28/09

Date Received: NA

Instrument/Analyst LCS: NT5/PKC

Sample Amount LCS: 10.0 mL

LCSD: NT5/PKC

LCSD: 10.0 mL

Date Analyzed LCS: 07/23/09 10:34

Purge Volume LCS: 10.0 mL

LCSD: 07/23/09 10:59

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.0	10.0	90.0%	8.7	10.0	87.0%	3.4%
Bromomethane	9.8	10.0	98.0%	8.9	10.0	89.0%	9.6%
Vinyl Chloride	8.9	10.0	89.0%	8.4	10.0	84.0%	5.8%
Chloroethane	8.6	10.0	86.0%	8.2	10.0	82.0%	4.8%
Methylene Chloride	9.1	10.0	91.0%	8.8	10.0	88.0%	3.4%
Acetone	43.5	50.0	87.0%	43.5	50.0	87.0%	0.0%
Carbon Disulfide	8.9	10.0	89.0%	8.4	10.0	84.0%	5.8%
1,1-Dichloroethene	9.0	10.0	90.0%	8.6	10.0	86.0%	4.5%
1,1-Dichloroethane	9.2	10.0	92.0%	9.0	10.0	90.0%	2.2%
trans-1,2-Dichloroethene	8.8	10.0	88.0%	8.5	10.0	85.0%	3.5%
cis-1,2-Dichloroethene	9.3	10.0	93.0%	9.1	10.0	91.0%	2.2%
Chloroform	9.3	10.0	93.0%	8.9	10.0	89.0%	4.4%
1,2-Dichloroethane	9.0	10.0	90.0%	9.3	10.0	93.0%	3.3%
2-Butanone	41.9	50.0	83.8%	42.4	50.0	84.8%	1.2%
1,1,1-Trichloroethane	8.9	10.0	89.0%	8.5	10.0	85.0%	4.6%
Carbon Tetrachloride	9.3	10.0	93.0%	9.0	10.0	90.0%	3.3%
Vinyl Acetate	8.4 Q	10.0	84.0%	8.5 Q	10.0	85.0%	1.2%
Bromodichloromethane	9.2	10.0	92.0%	8.9	10.0	89.0%	3.3%
1,2-Dichloropropane	9.1	10.0	91.0%	9.0	10.0	90.0%	1.1%
cis-1,3-Dichloropropene	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%
Trichloroethene	9.2	10.0	92.0%	8.8	10.0	88.0%	4.4%
Dibromochloromethane	9.8	10.0	98.0%	9.4	10.0	94.0%	4.2%
1,1,2-Trichloroethane	9.0	10.0	90.0%	9.3	10.0	93.0%	3.3%
Benzene	9.2	10.0	92.0%	9.0	10.0	90.0%	2.2%
trans-1,3-Dichloropropene	9.5	10.0	95.0%	9.8	10.0	98.0%	3.1%
2-Chloroethylvinylether	8.4	10.0	84.0%	8.9	10.0	89.0%	5.8%
Bromoform	9.3	10.0	93.0%	9.5	10.0	95.0%	2.1%
4-Methyl-2-Pentanone (MIBK)	46.0	50.0	92.0%	46.5	50.0	93.0%	1.1%
2-Hexanone	44.9	50.0	89.8%	46.1	50.0	92.2%	2.6%
Tetrachloroethene	9.5	10.0	95.0%	9.2	10.0	92.0%	3.2%
1,1,2,2-Tetrachloroethane	8.7	10.0	87.0%	8.9	10.0	89.0%	2.3%
Toluene	9.1	10.0	91.0%	9.0	10.0	90.0%	1.1%
Chlorobenzene	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
Ethylbenzene	10.2	10.0	102%	9.6	10.0	96.0%	6.1%
Styrene	8.4	10.0	84.0%	7.8	10.0	78.0%	7.4%
Trichlorofluoromethane	9.0	10.0	90.0%	8.4	10.0	84.0%	6.9%
1,1,2-Trichloro-1,2,2-trifluoroethane	8.7	10.0	87.0%	8.2	10.0	82.0%	5.9%
m,p-Xylene	20.3	20.0	102%	20.3	20.0	102%	0.0%
o-Xylene	8.2 Q	10.0	82.0%	8.0 Q	10.0	80.0%	2.5%
1,2-Dichlorobenzene	9.3	10.0	93.0%	9.6	10.0	96.0%	3.2%
1,3-Dichlorobenzene	9.8	10.0	98.0%	10.0	10.0	100%	2.0%
1,4-Dichlorobenzene	9.5	10.0	95.0%	9.6	10.0	96.0%	1.0%
Acrolein	44.4	50.0	88.8%	44.0	50.0	88.0%	0.9%
Methyl Iodide	9.9	10.0	99.0%	9.4	10.0	94.0%	5.2%
Bromoethane	9.3	10.0	93.0%	8.9	10.0	89.0%	4.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-072309

Page 2 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-072309

QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	8.9	10.0	89.0%	9.0	10.0	90.0%	1.1%
1,1-Dichloropropene	9.0	10.0	90.0%	8.8	10.0	88.0%	2.2%
Dibromomethane	9.0	10.0	90.0%	8.9	10.0	89.0%	1.1%
1,1,1,2-Tetrachloroethane	9.7	10.0	97.0%	9.3	10.0	93.0%	4.2%
1,2-Dibromo-3-chloropropane	8.1	10.0	81.0%	8.4	10.0	84.0%	3.6%
1,2,3-Trichloropropane	9.5	10.0	95.0%	9.2	10.0	92.0%	3.2%
trans-1,4-Dichloro-2-butene	7.9	10.0	79.0%	7.5	10.0	75.0%	5.2%
1,3,5-Trimethylbenzene	10.1	10.0	101%	10.2	10.0	102%	1.0%
1,2,4-Trimethylbenzene	10.4	10.0	104%	10.6	10.0	106%	1.9%
Hexachlorobutadiene	10.0	10.0	100%	10.4	10.0	104%	3.9%
Ethylene Dibromide	9.4	10.0	94.0%	9.4	10.0	94.0%	0.0%
Bromochloromethane	9.2	10.0	92.0%	9.4	10.0	94.0%	2.2%
2,2-Dichloropropane	8.9	10.0	89.0%	8.5	10.0	85.0%	4.6%
1,3-Dichloropropane	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
Isopropylbenzene	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%
n-Propylbenzene	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
Bromobenzene	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
2-Chlorotoluene	9.5	10.0	95.0%	9.7	10.0	97.0%	2.1%
4-Chlorotoluene	10.1	10.0	101%	10.1	10.0	101%	0.0%
tert-Butylbenzene	9.9	10.0	99.0%	10.1	10.0	101%	2.0%
sec-Butylbenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
4-Isopropyltoluene	8.2	10.0	82.0%	8.4	10.0	84.0%	2.4%
n-Butylbenzene	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
1,2,4-Trichlorobenzene	9.6	10.0	96.0%	9.9	10.0	99.0%	3.1%
Naphthalene	9.5	10.0	95.0%	10.1	10.0	101%	6.1%
1,2,3-Trichlorobenzene	9.9	10.0	99.0%	10.1	10.0	101%	2.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	98.7%	96.6%
d8-Toluene	97.5%	96.2%
Bromofluorobenzene	102%	100%
d4-1,2-Dichlorobenzene	99.7%	99.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-072309

Page 1 of 2

METHOD BLANK

Lab Sample ID: MB-072309

QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 07/28/09

Date Received: NA

Instrument/Analyst: NT5/PKC

Sample Amount: 10.0 mL

Date Analyzed: 07/23/09 11:25

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	0.5	< 0.5	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-072309

Page 2 of 2

METHOD BLANK

Lab Sample ID: MB-072309

QC Report No: PH59-Pacific Groundwater Group

LIMS ID: 09-17240

Project: Scougel Rubber (SR)

Matrix: Water

JK0605

Date Analyzed: 07/23/09 11:25

CAS Number	Analyte	RL	Result	Q
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in $\mu\text{g/L}$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	102%
Bromofluorobenzene	93.3%
d4-1,2-Dichlorobenzene	106%

ESN NORTHWEST CHEMISTRY LABORATORY

Pacific Groundwater Group
 SCOUGEL RUBBER PROJECT
 Client Project #JK0605
 Washington

ESN Northwest
 1210 Eastside Street SE Suite 200
 Olympia, WA 98501
 (360) 459-4670 (360) 459-3432 Fax
 lab@esnnw.com

Analytical Results

8260B, µg/kg (Soil)		MTH BLK	LCS	SR-24	SR-25	SR-26	SR-24 DUP
Date extracted	Reporting	05/12/09	05/12/09	05/12/09	05/12/09	05/12/09	05/12/09
Date analyzed	Limits	05/18/09	05/15/09	05/18/09	05/18/09	05/18/09	05/18/09
Vinyl chloride	50	nd		nd	nd	nd	nd
1,1-Dichloroethene	50	nd	145%	nd	nd	nd	nd
Trichloroethene (TCE)	20	nd	108%	nd	nd	nd	nd
Tetrachloroethene (PCE)	20	nd		20	380	nd	37

Surrogate recoveries

Dibromofluoromethane	93%	96%	91%	86%	90%	92%
Toluene-d8	137%	132%	136%	123%	131%	137%
4-Bromofluorobenzene	117%	108%	116%	0%	107%	111%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Pacific Groundwater Group
SCOUGEL RUBBER PROJECT
Client Project #JK0605
Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnw.com

Analytical Results

8260B, µg/kg (Soil)		MS	MSD	RPD
Date extracted	Reporting	05/15/09	05/15/09	
Date analyzed	Limits	05/15/09	05/15/09	

Vinyl chloride	50			
1,1-Dichloroethene	50	116%	128%	10%
Trichloroethene (TCE)	20	95%	99%	4%
Tetrachloroethene (PCE)	20			

Surrogate recoveries

Dibromofluoromethane		93%	92%	0%
Toluene-d8		119%	118%	0%
4-Bromofluorobenzene		102%	104%	0%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Pacific Groundwater Group
 SCOUGAL RUBBER PROJECT
 Client Project #JK0602
 Seattle, Washington

ESN Northwest
 1210 Eastside Street SE Suite 200
 Olympia, WA 98501
 (360) 459-4670 (360) 459-3432 Fax
 lab@esnnw.com

Analytical Results

8260B Chlorinated, µg/L	MTH BLK	LCS	LCS D	SR-18	SR-19	SR-20	SR-21	SR-22	SR-23
Matrix	Reporting	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Limits	05/06/09	05/06/09	05/06/09				05/06/09	05/06/09
Vinyl chloride	0.2	nd	79%	85%	nd	nd	nd	nd	nd
1,1-Dichloroethene	1.0	nd	80%	84%	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	116%	123%	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	87%	94%	nd	nd	nd	nd	1.4
Trichloroethene (TCE)	1.0	nd	81%	87%	nd	nd	nd	1.1	1.1
Tetrachloroethene (PCE)	1.0	nd	65%	79%	nd	nd	nd	nd	nd

Surrogate recoveries

Dibromofluoromethane	98%	102%	102%	140%	140%	135%	124%	113%	107%
Toluene-d8	123%	125%	124%	132%	128%	134%	131%	131%	138%
4-Bromofluorobenzene	86%	89%	89%	122%	127%	118%	113%	91%	87%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 Acceptable Recovery limits: 65% TO 135%
 Acceptable RPD limit: 35%

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
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3012 16th Avenue West
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February 3, 2009

Glen Wallace, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Mr. Wallace:

Included are the results from the testing of material submitted on January 23, 2009 from the Scougal Rubber JK0605, F&BI 901197 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0203R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 23, 2009 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 901197 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
901197-01	MW-11
901197-02	MW-12
901197-03	MW-14

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09
Date Received: 01/23/09
Project: Scougal Rubber JK0605, F&BI 901197
Date Extracted: 01/27/09
Date Analyzed: 01/27/09 and 01/28/09

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
MW-11 901197-01	60	<250	97
MW-12 901197-02	140	<250	93
MW-14 901197-03	140	<250	95
Method Blank	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	01/23/09	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/26/09	Lab ID:	901197-01
Date Analyzed:	01/26/09	Data File:	901197-01.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	29.7
Iron (screen)	<250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	01/23/09	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/26/09	Lab ID:	901197-02
Date Analyzed:	01/26/09	Data File:	901197-02.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	120
Iron (screen)	<250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	01/23/09	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/26/09	Lab ID:	901197-03
Date Analyzed:	01/26/09	Data File:	901197-03.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	301
Iron (screen)	<250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/26/09	Lab ID:	I9-033 mb
Date Analyzed:	01/26/09	Data File:	I9-033 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	<1
Iron (screen)	<250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11	Client: Pacific Groundwater Group
Date Received: 01/23/09	Project: Scougal Rubber JK0605, F&BI 901197
Date Extracted: 01/23/09	Lab ID: 901197-01
Date Analyzed: 01/23/09	Data File: 012312.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	58	118
Toluene-d8	103	59	117
4-Bromofluorobenzene	103	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	12	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	01/23/09	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/23/09	Lab ID:	901197-02
Date Analyzed:	01/23/09	Data File:	012313.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	58	118
Toluene-d8	101	59	117
4-Bromofluorobenzene	100	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-14	Client: Pacific Groundwater Group
Date Received: 01/23/09	Project: Scougal Rubber JK0605, F&BI 901197
Date Extracted: 01/23/09	Lab ID: 901197-03
Date Analyzed: 01/23/09	Data File: 012314.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	58	118
Toluene-d8	104	59	117
4-Bromofluorobenzene	103	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	1.6
Vinyl chloride	13	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	1.3	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	41	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 901197
Date Extracted:	01/23/09	Lab ID:	09-067 mb
Date Analyzed:	01/23/09	Data File:	012306.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	58	118
Toluene-d8	102	59	117
4-Bromofluorobenzene	103	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09

Date Received: 01/23/09

Project: Scougal Rubber JK0605, F&BI 901197

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	120	123	69-135	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09

Date Received: 01/23/09

Project: Scougal Rubber JK0605, F&BI 901197

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 901107-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Manganese	ug/L (ppb)	42.0	43.6	4	0-20

Laboratory Code: 901107-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Manganese	ug/L (ppb)	20	42.0	88 b	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Manganese	ug/L (ppb)	20	101	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09

Date Received: 01/23/09

Project: Scougal Rubber JK0605, F&BI 901197

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 901191-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	<1	<1	nm
Chloromethane	ug/L (ppb)	<1	<1	nm
Vinyl chloride	ug/L (ppb)	<0.2	<0.2	nm
Bromomethane	ug/L (ppb)	<1	<1	nm
Chloroethane	ug/L (ppb)	<1	<1	nm
Trichlorofluoromethane	ug/L (ppb)	<1	<1	nm
Acetone	ug/L (ppb)	<10	<10	nm
1,1-Dichloroethene	ug/L (ppb)	<1	<1	nm
Methylene chloride	ug/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	ug/L (ppb)	<1	<1	nm
trans-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
1,1-Dichloroethane	ug/L (ppb)	<1	<1	nm
2,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
cis-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
Chloroform	ug/L (ppb)	<1	<1	nm
2-Butanone (MEK)	ug/L (ppb)	<10	<10	nm
1,2-Dichloroethane (EDC)	ug/L (ppb)	<1	<1	nm
1,1,1-Trichloroethane	ug/L (ppb)	<1	<1	nm
1,1-Dichloropropene	ug/L (ppb)	<1	<1	nm
Carbon tetrachloride	ug/L (ppb)	<1	<1	nm
Benzene	ug/L (ppb)	<1	<1	nm
Trichloroethene	ug/L (ppb)	<1	<1	nm
1,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
Bromodichloromethane	ug/L (ppb)	<1	<1	nm
Dibromomethane	ug/L (ppb)	<1	<1	nm
4-Methyl-2-pentanone	ug/L (ppb)	<10	<10	nm
cis-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	ug/L (ppb)	<1	<1	nm
2-Hexanone	ug/L (ppb)	<10	<10	nm
1,3-Dichloropropane	ug/L (ppb)	<1	<1	nm
Tetrachloroethene	ug/L (ppb)	<1	<1	nm
Dibromochloromethane	ug/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	ug/L (ppb)	<1	<1	nm
Chlorobenzene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
m,p-Xylene	ug/L (ppb)	<2	<2	nm
o-Xylene	ug/L (ppb)	<1	<1	nm
Styrene	ug/L (ppb)	<1	<1	nm
Isopropylbenzene	ug/L (ppb)	<1	<1	nm
Bromoform	ug/L (ppb)	<1	<1	nm
n-Propylbenzene	ug/L (ppb)	<1	<1	nm
Bromobenzene	ug/L (ppb)	<1	<1	nm
1,3,5-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	ug/L (ppb)	<1	<1	nm
2-Chlorotoluene	ug/L (ppb)	<1	<1	nm
4-Chlorotoluene	ug/L (ppb)	<1	<1	nm
tert-Butylbenzene	ug/L (ppb)	<1	<1	nm
1,2,4-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
sec-Butylbenzene	ug/L (ppb)	<1	<1	nm
p-Isopropyltoluene	ug/L (ppb)	<1	<1	nm
1,3-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,4-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	ug/L (ppb)	<1	<1	nm
1,2,4-Trichlorobenzene	ug/L (ppb)	<1	<1	nm
Hexachlorobutadiene	ug/L (ppb)	<1	<1	nm
Naphthalene	ug/L (ppb)	<1	<1	nm
1,2,3-Trichlorobenzene	ug/L (ppb)	<1	<1	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09

Date Received: 01/23/09

Project: Scougal Rubber JK0605, F&BI 901197

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 901191-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	96	27-155
Chloromethane	ug/L (ppb)	50	<1	96	30-167
Vinyl chloride	ug/L (ppb)	50	<0.2	107	36-166
Bromomethane	ug/L (ppb)	50	<1	102	47-169
Chloroethane	ug/L (ppb)	50	<1	103	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	125	48-158
Acetone	ug/L (ppb)	50	<10	125	31-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	112	69-118
Methylene chloride	ug/L (ppb)	50	<5	108	68-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	99	80-119
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	103	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	97	60-136
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	71-127
Chloroform	ug/L (ppb)	50	<1	101	65-132
2-Butanone (MEK)	ug/L (ppb)	50	<10	98	64-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	105	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	62-133
1,1-Dichloropropene	ug/L (ppb)	50	<1	97	71-124
Carbon tetrachloride	ug/L (ppb)	50	<1	102	62-134
Benzene	ug/L (ppb)	50	<1	101	77-120
Trichloroethene	ug/L (ppb)	50	<1	98	79-118
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	79-119
Bromodichloromethane	ug/L (ppb)	50	<1	102	60-136
Dibromomethane	ug/L (ppb)	50	<1	102	66-141
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	107	58-134
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	101	75-127
Toluene	ug/L (ppb)	50	<1	97	77-120
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	101	75-128
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	97	68-131
2-Hexanone	ug/L (ppb)	50	<10	99	54-142
1,3-Dichloropropane	ug/L (ppb)	50	<1	98	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	92	77-121
Dibromochloromethane	ug/L (ppb)	50	<1	98	71-128
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	97	69-134
Chlorobenzene	ug/L (ppb)	50	<1	95	78-118
Ethylbenzene	ug/L (ppb)	50	<1	101	78-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	78-124
m,p-Xylene	ug/L (ppb)	100	<2	99	76-121
o-Xylene	ug/L (ppb)	50	<1	98	71-125
Styrene	ug/L (ppb)	50	<1	103	74-125
Isopropylbenzene	ug/L (ppb)	50	<1	101	71-125
Bromoform	ug/L (ppb)	50	<1	102	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	97	68-127
Bromobenzene	ug/L (ppb)	50	<1	91	78-116
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	99	74-121
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	91	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	92	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	95	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	95	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	96	69-122
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	68-126
sec-Butylbenzene	ug/L (ppb)	50	<1	100	68-129
p-Isopropyltoluene	ug/L (ppb)	50	<1	100	70-125
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	92	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	91	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	91	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<1	96	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	91	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	92	68-128
Naphthalene	ug/L (ppb)	50	<1	92	47-159
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	91	70-143

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/03/09

Date Received: 01/23/09

Project: Scougal Rubber JK0605, F&BI 901197

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	98	92	31-145	6
Chloromethane	ug/L (ppb)	50	111	100	22-155	10
Vinyl chloride	ug/L (ppb)	50	109	104	33-158	5
Bromomethane	ug/L (ppb)	50	103	98	26-174	5
Chloroethane	ug/L (ppb)	50	99	97	35-157	2
Trichlorofluoromethane	ug/L (ppb)	50	137	129	49-153	6
Acetone	ug/L (ppb)	50	122	108	38-171	12
1,1-Dichloroethene	ug/L (ppb)	50	109	103	55-139	6
Methylene chloride	ug/L (ppb)	50	130 vo	123	52-129	6
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	100	99	72-125	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	99	73-120	5
1,1-Dichloroethane	ug/L (ppb)	50	104	102	75-118	2
2,2-Dichloropropane	ug/L (ppb)	50	114	108	68-128	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	100	78-119	4
Chloroform	ug/L (ppb)	50	106	100	78-120	6
2-Butanone (MEK)	ug/L (ppb)	50	108	96	61-139	12
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	104	101	74-129	3
1,1,1-Trichloroethane	ug/L (ppb)	50	109	103	68-130	6
1,1-Dichloropropene	ug/L (ppb)	50	101	97	74-123	4
Carbon tetrachloride	ug/L (ppb)	50	110	105	67-131	5
Benzene	ug/L (ppb)	50	104	99	76-115	5
Trichloroethene	ug/L (ppb)	50	103	97	76-118	6
1,2-Dichloropropane	ug/L (ppb)	50	106	102	74-119	4
Bromodichloromethane	ug/L (ppb)	50	107	104	78-122	3
Dibromomethane	ug/L (ppb)	50	103	102	80-119	1
4-Methyl-2-pentanone	ug/L (ppb)	50	99	102	56-134	3
cis-1,3-Dichloropropene	ug/L (ppb)	50	108	104	77-122	4
Toluene	ug/L (ppb)	50	100	97	77-115	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	106	103	78-128	3
1,1,1-Trichloroethane	ug/L (ppb)	50	98	96	82-116	2
2-Hexanone	ug/L (ppb)	50	93	97	58-144	4
1,3-Dichloropropane	ug/L (ppb)	50	100	98	80-118	2
Tetrachloroethene	ug/L (ppb)	50	100	94	79-119	6
Dibromochloromethane	ug/L (ppb)	50	102	99	86-122	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	99	99	84-116	0
Chlorobenzene	ug/L (ppb)	50	99	95	81-110	4
Ethylbenzene	ug/L (ppb)	50	102	98	80-113	4
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	98	81-119	5
m,p-Xylene	ug/L (ppb)	100	101	97	80-120	4
o-Xylene	ug/L (ppb)	50	102	98	79-115	4
Styrene	ug/L (ppb)	50	104	100	79-111	4
Isopropylbenzene	ug/L (ppb)	50	104	99	76-115	5
Bromoform	ug/L (ppb)	50	105	103	80-131	2
n-Propylbenzene	ug/L (ppb)	50	101	99	74-119	2
Bromobenzene	ug/L (ppb)	50	97	95	80-116	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	103	99	75-115	4
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	90	92	78-118	2
1,2,3-Trichloropropane	ug/L (ppb)	50	90	91	76-124	1
2-Chlorotoluene	ug/L (ppb)	50	100	97	77-115	3
4-Chlorotoluene	ug/L (ppb)	50	100	97	77-116	3
tert-Butylbenzene	ug/L (ppb)	50	103	99	76-113	4
1,2,4-Trimethylbenzene	ug/L (ppb)	50	101	98	75-115	3
sec-Butylbenzene	ug/L (ppb)	50	104	101	74-116	3
p-Isopropyltoluene	ug/L (ppb)	50	105	101	75-117	4
1,3-Dichlorobenzene	ug/L (ppb)	50	98	95	81-111	3
1,4-Dichlorobenzene	ug/L (ppb)	50	97	94	81-110	3
1,2-Dichlorobenzene	ug/L (ppb)	50	97	95	81-111	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	95	98	72-137	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	100	97	74-131	3
Hexachlorobutadiene	ug/L (ppb)	50	106	100	64-138	6
Naphthalene	ug/L (ppb)	50	94	93	74-131	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	98	95	73-134	3

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 – More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - The analyte indicated was found in the method blank. The result should be considered an estimate.
- fc – The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - The sample was extracted outside of holding time. Results should be considered estimates.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j – The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The pattern of peaks present is not indicative of diesel.
- y - The pattern of peaks present is not indicative of motor oil.

