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: January 22, 2009

This technical memorandum summarizes the remedial actions conducted over the last 18 months at Scougal Rubber, and presents the results of the soil and groundwater confirmation sampling on June 10, 2008 and September 5, 2008. The confirmation results indicate that the remedial action reduced soil concentrations to below reporting limits and substantially reduced groundwater concentrations, although some residual contamination remains above cleanup levels. The memo concludes with a discussion of appropriate cleanup levels for the site and recommendations for confirmation groundwater monitoring and reporting to Ecology.

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 18 years and chlorinated solvents concentrations in groundwater are now approximately 1 percent of pre-remediation levels and the most recent soil samples are non-detect.

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 with the goal of receiving a No Further Action (NFA) letter from the Department of Ecology. PGG performed additional site investigation in 2006 as the basis for further remediation and found concentrations of as high as TCE (110 ug/L) and vinyl chloride (33 ug/L) in groundwater.

PGG developed a Final Remedial Action Plan and implemented a remediation removal of shallow impacted soil, in-situ chemical oxidation with potassium permanganate, and confirmation sampling. All confirmation soil samples were non-detect for chlorinated solvents. Groundwater concentrations were reduced an additional 90 percent in contaminant mass to approximately 1 percent of the pre-remediation levels, and chlorinated solvents are now near or below cleanup levels in compliance wells (Retec, 2003). Confirmation groundwater sampling is continuing in 2009.

Hydrogeologic Setting

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).

EXCAVATION

The first phase of the remedial action included excavating approximately 40 cubic yards of soil and installation of permanganate application piping. The depth of the excavation was 2.5 feet below ground surface (bgs) and 3 feet bgs in the northwestern corner where soil concentrations have historically been the highest. The final extent of the excavation is shown in Figure 2. The excavation was extended beneath the secondary containment area after observation of non-solvent contamination, as discussed below.

Contamination Observed During Excavation

During excavation adjacent to the corner of the Scougal Main Plant building, approximately 0.25 gallons of red, viscous free product were observed at approximately 0.25 feet below ground surface. The fluid was identified as automatic transmission fluid from the compressor assembly where it was used as coolant (Scougal, personal communication, 2007). The fluid observed in the excavation likely seeped through a crack in the concrete between the edge of the building and the adjacent slab. The excavation was expanded south to the edge of the Scougal Main Plant and east to the compressor area. The fluid was not observed in soils remaining in the sidewall of the excavation.

An MSDS for automatic transmission fluid was obtained and indicated that the fluid was composed primarily of paraffin, naphthalene, and toluene with diphenylamine as an additive. Soil samples SR-06, SR-07, and SR-11 were analyzed for naphthalene and toluene and were below detection limits and MTCA Method A cleanup levels (Table 1). Sample SR-01 was below detection limits for diphenylamine with a reporting limit of 0.3 mg/kg. It is likely that due to the viscosity of the fluid, transport into the subsurface was limited. No further action is indicated at this time.

No visual or olfactory evidence of chlorinated solvents were observed during excavation.

Soil Sampling

Ten soil samples were collected from the base of the excavation on June 12 and 16, 2007 to evaluate soil concentrations after excavation (Figure 3, Table 1). Analytical results indicated that COC concentrations remained above cleanup levels in most of the treatment area beneath the drum storage area. Samples collected from the trench were below cleanup levels.

PERMANGANATE SYSTEM INSTALLATION

The system was installed as specified in the Final Remedial Action Plan (PGG, 2007). Eight flush-mount surface monuments protected the eight fill ports connected to the PVC distribution piping. The area beneath the drum storage area was outfitted with six evenly spaced distribution pipes, as shown in Figure 3. The shallow trench adjacent to the former UST location was outfitted with a single PVC pipe with a fill port at each end to promote even distribution of permanganate along the trench.

PERMANGANATE APPLICATION

Potassium permanganate was applied to the treatment area in six monthly applications between July 19, 2007 and December 28, 2007. Cascade Columbia mixed the permanganate off-site and transported it to the site. A total of 11,850 gallons of permanganate were applied to the treatment area during the six events at 1,975 gallons per event as follows (Figure 3):

- 225 gallons per event to ports D, E, F, G and H
- 275 gallons per event to ports A and C
- 300 gallons per event to port B

Permanganate application was greater in the west end of the treatment area (Ports A, B and C) to address the highest concentrations observed in soil (up to 2,700 ug/L TCE). Applications were conducted without incident.

JUNE 2008 SOIL AND GROUNDWATER SAMPLING

PGG collected confirmation soil and groundwater samples on June 10, 2008, as outlined in the Final Remedial Action Plan (PGG, 2007). Washington-licensed drillers ESNNW advanced borings by geoprobe to eight feet below ground surface (bgs). PGG field personnel inspected soil cores for evidence of potassium permanganate and collected samples for analysis using EPA Method 5035 from between 1- to 2-feet below the bottom of the infiltration gallery excavation (approximately 4- to 6-feet bgs). Soil sample vials were placed in sealable plastic bags and immediately into coolers with ice.

Groundwater samples were collected from monitoring wells MW-11, MW-12 and MW-14 on June 10, 2008. PGG personnel purged and sampled the wells using low-flow sampling procedures. Samples were collected directly into lab-provided bottles and placed immediately into coolers with ice.

The initial purge water at MW-14 was purple in color, indicating that permanganate had reached the water table. An orange slime observed in the MW-12 well casing indicates the likely presence of iron-reducing bacteria which may increase dissolved iron concentrations in groundwater at that location.

ANALYTICAL RESULTS

The soil and groundwater samples were submitted to Washington-certified laboratory Friedman and Bruya Inc. The samples were analyzed for the following analytes using the EPA Methods specified in the Final Remedial Action Plan (PGG 2007):

1. tetrachloroethene, trichloroethene, cis-1,2 dichloroethene, and vinyl chloride were analyzed by EPA Method 8260B,

2. petroleum (TPH) compounds were analyzed by method NWTPH-Dx, and

3. manganese and iron were analyzed by EPA Method 200.8.

Upon receipt of the analytical results from the laboratory, the data were reviewed for quality assurance and quality control (QA/QC) and no significant issues were identified. All samples were analyzed within holding times, and all surrogate spike recoveries were within acceptable ranges. The matrix spike recovery for manganese was flagged '**b**' because the spike concentration was less than 20 percent of the sample concentration; the spike recovery was technically out of control, but may not be meaningful due to the low concentration of the spike. No corrective action was taken.

SOIL RESULTS

The soil analytical results are presented in Table 2. The analytical results were compared to Model Toxics Control Act (MTCA) cleanup levels as specified in the Final Remedial Action Plan (PGG 2007). Method A cleanup levels were used for comparison. Where no

Method A cleanup levels are established, Method B cleanup levels were used for comparison.

Volatile organic compounds

All six soil samples collected on June 10, 2008 were below detection limits for tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2 dichloroethene (DCE), and vinyl chloride (VC). Reporting limits were at or below cleanup levels.

GROUNDWATER RESULTS

The groundwater analytical results for the June 10, 2008 event are presented in Table 3, and key results are shown on Figure 2. Like the soil results, the groundwater results were compared to MTCA cleanup levels as specified in the Final Remedial Action Plan (PGG 2007). Method A cleanup levels were used for comparison. Where no Method A cleanup levels are established, Method B cleanup levels were used for comparison.

Volatile organic compounds

PCE concentrations were below reporting limits at all sampled wells. TCE concentrations were above cleanup levels (5 ug/L) at MW-14 (13 ug/L) and MW-11 (10 ug/L). DCE concentrations were below the cleanup level (8,000 ug/L) at all sampled wells. The VC concentration at MW-14 (15 ug/L) was above the cleanup level (0.2 ug/L), but did not exceed the cleanup level at the other two wells.

Metals

Manganese was elevated above concentrations found in the other wells, but below cleanup levels at MW-14. Iron concentrations were elevated at MW-11 (385 ug/L) and MW-12 (23,700 ug/L), although no Method A or B cleanup level is established for iron. The elevated iron concentration at MW-12 is likely influenced by iron-reducing bacteria in the well.

SEPTEMBER 2008 GROUNDWATER SAMPLING

PGG collected confirmation groundwater samples on September 5, 2008, as outlined in the Final Remedial Action Plan (PGG, 2007). Groundwater samples were collected from monitoring wells MW-11, MW-12 and MW-14. PGG personnel purged and sampled the wells using low-flow sampling procedures. Samples were collected directly into lab-provided bottles and placed immediately into coolers with ice.

The purge water at MW-14 had a light purple-brown color, indicating that permanganate had reached the water table; the coloration was not as strong as in the June event. As in the June sampling event, an orange slime observed in the MW-12 well casing indicates

the likely presence of iron-reducing bacteria which may increase dissolved iron concentrations in groundwater at that location.

GROUNDWATER RESULTS

The groundwater analytical results are presented in Table 3. Like the soil results, the groundwater results were compared to MTCA cleanup levels as specified in the Final Remedial Action Plan (PGG 2007). Method A cleanup levels were used for comparison. Where no Method A cleanup levels are established, Method B cleanup levels were used for comparison.

Volatile organic compounds

PCE concentrations were below reporting limits at all sampled wells. TCE concentrations were above cleanup levels (5 ug/L) at MW-14 (14 ug/L) and MW-11 (13 ug/L). DCE concentrations were below the cleanup level (8,000 ug/L) at all sampled wells. The VC concentrations at MW-14 (25 ug/L) and MW-12 (1 ug/L) were above the cleanup level (0.2 ug/L), and was not detected at MW-11.

Metals

Manganese was elevated above cleanup levels (2,200 ug/L) at MW-14 (2,660 ug/L) representing an approximately 20 percent increase over the June sampling event. Iron concentrations were elevated at MW-11 (436 ug/L), MW-12 (37,800 ug/L) and MW-14 (2,850 ug/L), but no Method A or B cleanup level is established. The elevated iron concentration at MW-12 is likely influenced by iron-reducing bacteria in the well. The elevated manganese and iron concentrations are likely due to the effects of oxidation and are expected to decrease naturally as groundwater chemistry returns to normal oxidation.

SUMMARY

Confirmation sampling indications that the application of potassium permanganate has reduced soil chlorinated solvent concentrations to below reporting limits and cleanup levels. Groundwater concentrations of chlorinated solvents in the treatment area at MW-14 are substantially reduced to 1 percent of pre-remediation levels. Groundwater concentrations down gradient from the treatment area are below or marginally above cleanup levels (Table 3). Since 2006, groundwater concentrations have decreased to one tenth of pre-oxidation concentrations in the treatment area.

Groundwater flow direction and rate from previous water level measurements suggest that treated groundwater has migrated at least 25 feet since the last permanganate application in December. Based on this transport rate, the effects of remediation would be expected to be observed at MW-11 around or before the June sampling event with a decreasing trend in subsequent sampling events. This trend has not been observed in June or September 2008, but is expected to be observed in the future.

RECOMMENDATIONS

No additional soil remedial action or soil sampling is indicated based on the current known nature and extent of contamination. Confirmation sampling indicates that the soil component of the remedial action has been successful and a No Further Action Determination is recommended for soil at the site.

The Final Remedial Action Plan calls for one year of quarterly groundwater monitoring to provide data to evaluate the effectiveness of the remedial action. Half of the required groundwater monitoring is now complete.

Groundwater Cleanup Levels Protective of Surface Water

Scougal's groundwater discharges to the Duwamish River about 2,000 feet to the west of the site, the only receptor of groundwater in this area of South Seattle[1]. The Duwamish River is not classified as a suitable domestic water supply source under WAC 173-201.

Based on the known receptor of groundwater discharging to surface water, it is appropriate to compare groundwater concentrations with surface water cleanup levels. Because groundwater TCE, DCE, and VC are near or below detection limits (and below the most stringent MTCA cleanup levels) at MW-12, we know the site is protective of its only groundwater receptor, surface water. The lack of chlorinated solvent detections at downgradient well MW-12, shows that the site's plume does not reach the Duwamish. In light of this known point of compliance, one compares the highest concentrations found (Well MW-14) with surface water cleanup levels. TCE and VC concentrations in well MW-14 are shown below in comparison to surface water Methods B and C cleanup levels:

	MW-14	Method B	Method C	(all concentrations in ug/L)
TCE	14	6.7	170	
VC	25	3.7	92	

As shown in this comparison, even the highest concentrations found in groundwater at Scougal are protective of surface water, based on Method C assumptions. Since the Duwamish River is not used for drinking water, Scougal is located 2,000 feet from the river, and groundwater TCE and VC concentrations naturally attenuate to below Method B

[1] Groundwater in the Duwamish Lowlands where Scougal is located is not a viable source of drinking water. Scougal lies in a highly developed portion of Seattle where city water is readily accessible. King County Board of Health, Title 12, Section 12.24.010A states that drinking water supply must come from the highest quality source feasible. Connection to the city water supply is mandatory for businesses or residences in this area. In addition, WAC 173-160-205(2) specifies certain setback distances for water supply wells. The code stipulates that wells be setback at least 100 feet from storm or sanitary sewers, public right-of-ways and buildings. Sewer mains run through Scougal and down Michigan Avenue. A storm sewer runs next to well MW-14 along Scougal's west fenceline. These structures and the permeability of the aquifer would preclude the installation of a drinking water well anywhere near the site.

cleanup levels at compliance well MW-12, we recommend that Scougal is protective of surface water and therefore protective of human health and the environment. We recommend a No Further Action determination for this site's groundwater.

This approach is consistent with the cleanup levels established for the Scougal Remediation (RETEC 2001) as reported to Ecology at that time. Consistent with MTCA's *grandfather clause* (WAC 173-340-702) that acknowledges remediation begun under cleanup levels at the time, we recommend that the use of surface water cleanup levels, coupled with the fact that cleanup levels are achieved by compliance well MW-12, be weighed to substantiate a No Further Action determination for soil and groundwater at the site.

As two more rounds of groundwater sampling are needed for groundwater closure, the results of that sampling will be reported when that data is available in spring 2009.

At this time, we recommend that Scougal receive a partial sufficiency NFA for soil. This recommendation is based on the lack of detections of chlorinated solvents and degradation products in soil confirmation samples.

Attachments:

Table 1.	Excavation Sampling Results
Table 2.	Soil Confirmation Sampling Results
Table 3.	Groundwater 2006 Pre-Treatment and Confirmation Sampling Results
Figure 1.	Site Location Map
Figure 2.	Permanganate Application System Diagram
Figure 3.	Locations of Soil and Groundwater Samples
Appendix A.	Analytical Results

cc: Matt Bowman, Scougal Rubber Corporation

Table 1. Excavation Sampling Results

Scougal Rubber, Seattle, Washington

Soil Analytical Results June 12 and 16, 2007

Constituent	Units	Cleanup Level	SR-01	SR-02	SR-03	SR-04	SR-06	SR-07	SR-08	SR-09	SR-10	SR-11
Tetrachloroethene	mg/kg	0.05	U 0.05	U 0.05	**0.06**	**0.33**	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05
Trichloroethene	mg/kg	0.03	U 0.03	U 0.03	**0.37**	**2.7**	**0.08**	**0.03**	**0.24**	**0.44**	U 0.03	U 0.03
cis-1,2-Dichloroethene	mg/kg	8,000	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05
Vinyl Chloride	mg/kg	0.67	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05
TPH-D	mg/kg	2,000	U 50	1,200	--	--	--	--	--	--	--	--
TPH-O	mg/kg	2,000	U 250	1,800	--	--	--	--	--	--	--	--
Napthalene	mg/kg	5	--	--	--	--	U 0.05	U 0.05	--	--	--	U 0.05
Toluene	mg/kg	7	--	--	--	--	U 0.05	U 0.05	--	--	--	U 0.05
Diphenylamine	mg/kg	--	U 0.03	--	--	--	--	--	--	--	--	--

Note: Sample ID SR-05 was not assigned to a sample.

Bold indicates exceedance of cleanup level

Cleanup levels are as listed in Table 3 of the Scougal Rubber Final Remedial Action Plan. MTCA Method A values are included for napthalene and toluene.

Sample locations shown on Figure 1

Table 2. Soil Confirmation Sampling Results

Scougal Rubber, Seattle, Washington

Soil Analyatical Results June 10, 2008

Constituent	Units	Cleanup Level	SR-12	SR-13	SR-14	SR-15	SR-16	SR-17
Tetrachloroethene	mg/kg	0.05	U 0.025	U 0.025	U 0.025	U 0.025	U 0.025	U 0.025
Trichloroethene	mg/kg	0.03	U 0.03	U 0.03	U 0.03	U 0.03	U 0.03	U 0.03
cis-1,2-Dichloroethene	mg/kg	8,000	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05
Vinyl Chloride	mg/kg	0.67	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05	U 0.05

Bold indicates exceedance of cleanup level

Cleanup levels as listed in Table 3 of the Scougal Rubber Final Remedial Action Plan; Method A cleanup levels are listed unless no Method A is established and Method B cleanup levels are listed.

Sample locations shown on Figure 1

Table 3. Groundwater 2006 Pre-Treatment and Confirmation Sampling Results

Scougal Rubber, Seattle, Washington

Constituent	Units	MW-11	MW-12	MW-14	Groundwater Method A	Surface Water Method B	Surface Water Method C
Pre-Treatment Groundwater Analytical Results August 3, 2006							
Tetrachloroethene	ug/L	0.3	U	4.1	5	0.39	9.7
Trichloroethene	ug/L	**9.4**	0.2	**110**	5	6.7	170
cis-1,2-Dichloroethene	ug/L	8.7	0.4	26	80*	*	*
Vinyl Chloride	ug/L	U	**0.7**	**33**	0.2	3.7	92
TPH-O	ug/L	U	U	U	2,000	--	--
Confirmation Groundwater Analytical Results June 10, 2008							
Tetrachloroethene	ug/L	U 1	U 1	U 1	5	0.39	9.7
Trichloroethene	ug/L	**10**	U 1	**13**	5	6.7	170
cis-1,2-Dichloroethene	ug/L	3.7	U 1	3.7	80*	--	--
Vinyl Chloride	ug/L	U 0.2	U 0.2	**15**	0.2	3.7	92
TPH-D	ug/L	260	230	150	2,000	--	--
TPH-O	ug/L	310	350	U 250	2,000	--	--
Manganese	ug/L	384	944	2,190	2,200	--	--
Iron	ug/L	385	23,700	U 250	--	--	--
Oxidation-Reduction Potential	mV	-7	14.5	-244	--	--	--
pH	std.	6.89	6.81	7.1	--	--	--
Specific Conductivity	mS/cm	450	440	450	--	--	--
Dissolved Oxygen	mg/L	9.5	9.5	9.7	--	--	--
Temperature	C	14.2	14.5	14.2	--	--	--
Confirmation Groundwater Analytical Results September 5, 2008							
Tetrachloroethene	ug/L	U 1	U 1	U 1	5	0.39	9.7
Trichloroethene	ug/L	**13**	U 1	**14**	5	6.7	170
cis-1,2-Dichloroethene	ug/L	2.9	U 1	3.4	80*	*	*
Vinyl Chloride	ug/L	U 0.2	**1**	**25**	0.2	3.7	92
TPH-D	ug/L	270	140	U 50	2,000	--	--
TPH-O	ug/L	290	U 250	U 250	2,000	--	--
Manganese	ug/L	322	1140	**2,660**	2,200	--	--
Iron	ug/L	436	37,800	2850	--	--	--
Oxidation-Reduction Potential	mV	56.7	-89.8	-43.3	--	--	--
pH	std.	6.05	6.14	6.38	--	--	--
Specific Conductivity	mS/cm	914	593	434	--	--	--
Dissolved Oxygen	mg/L	0.85	0.48	0.56	--	--	--
Temperature	C	16.34	17.3	15.89	--	--	--

* MTCA Method A values are not available for cis-1,2 dichloroethene; Groundwater MTCA Method B and C, non-carcinogen values are 80 and 180 ug/L, respectively.

-- indicates that the value is not available for that constituent in MTCA CLARC tables as of January 20, 2009.

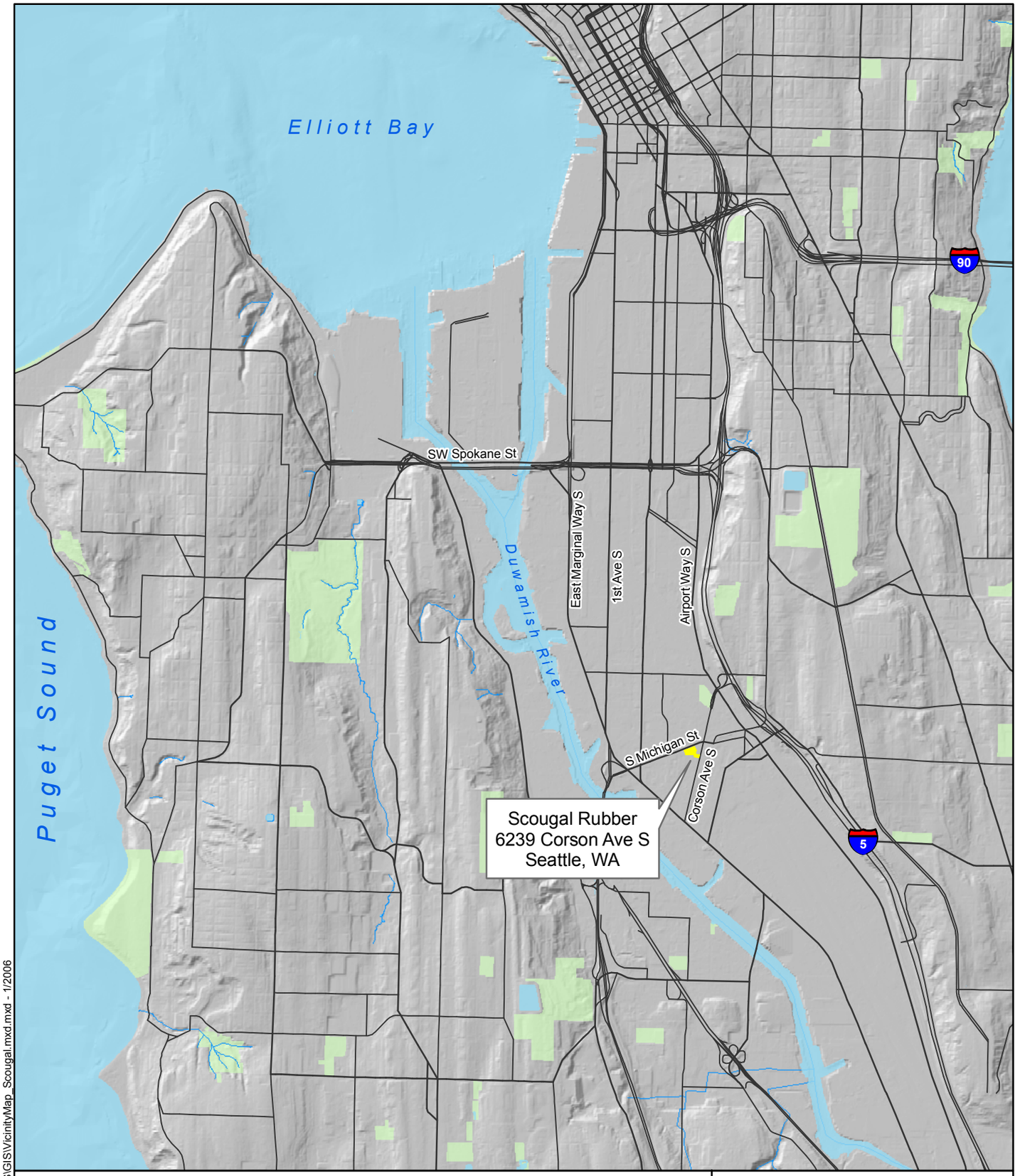

Figure 1
Site Location Map

Scougal Rubber
Seattle, Washington

PgG

JK0605

K:\JANET\JK0605-ScougalRubber\GIS\GIS\VicinityMap_Scougal.mxd.mxd - 1/2006

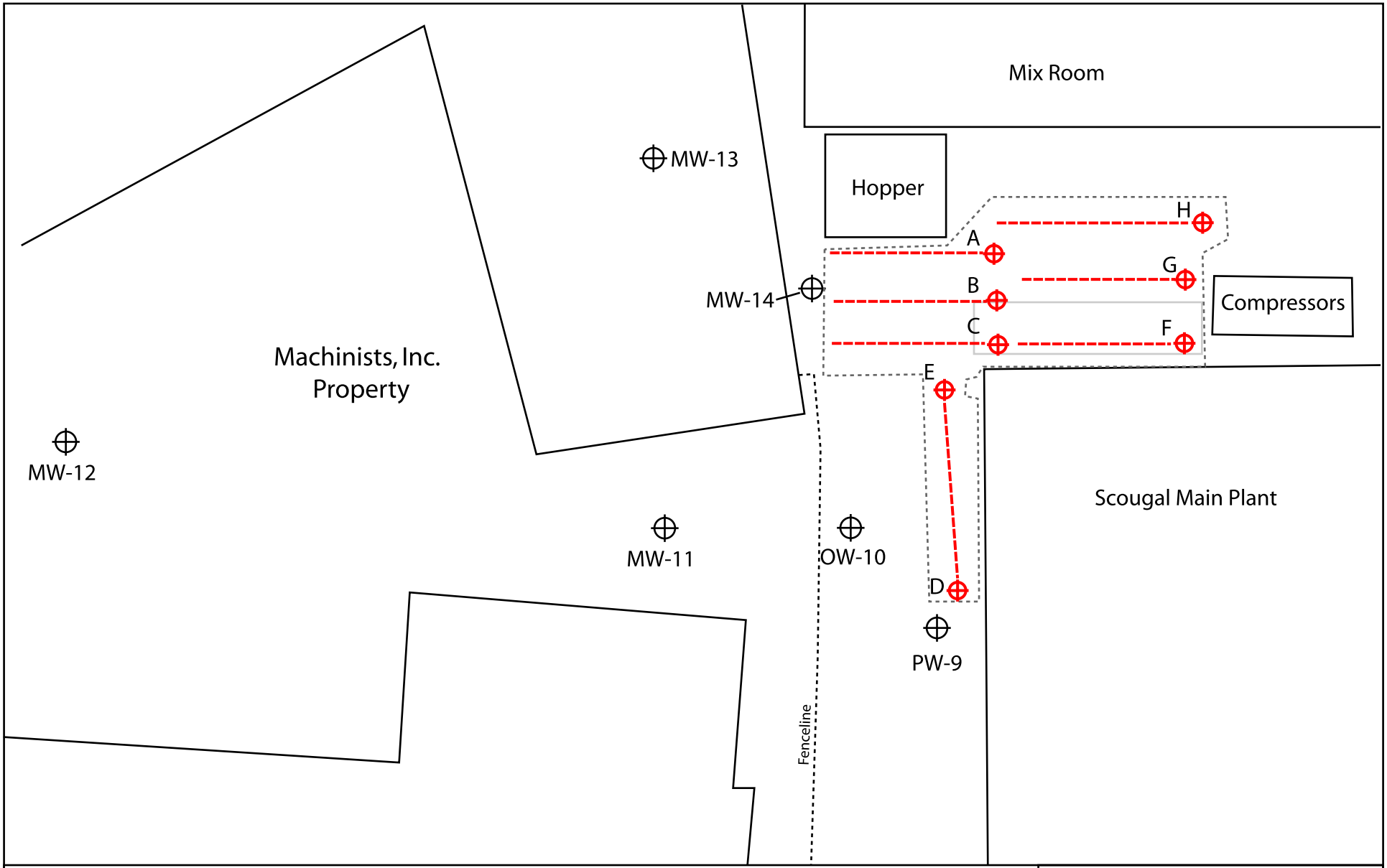

Figure 2. Permanganate Application System

Scougal Rubber, Seattle, WA

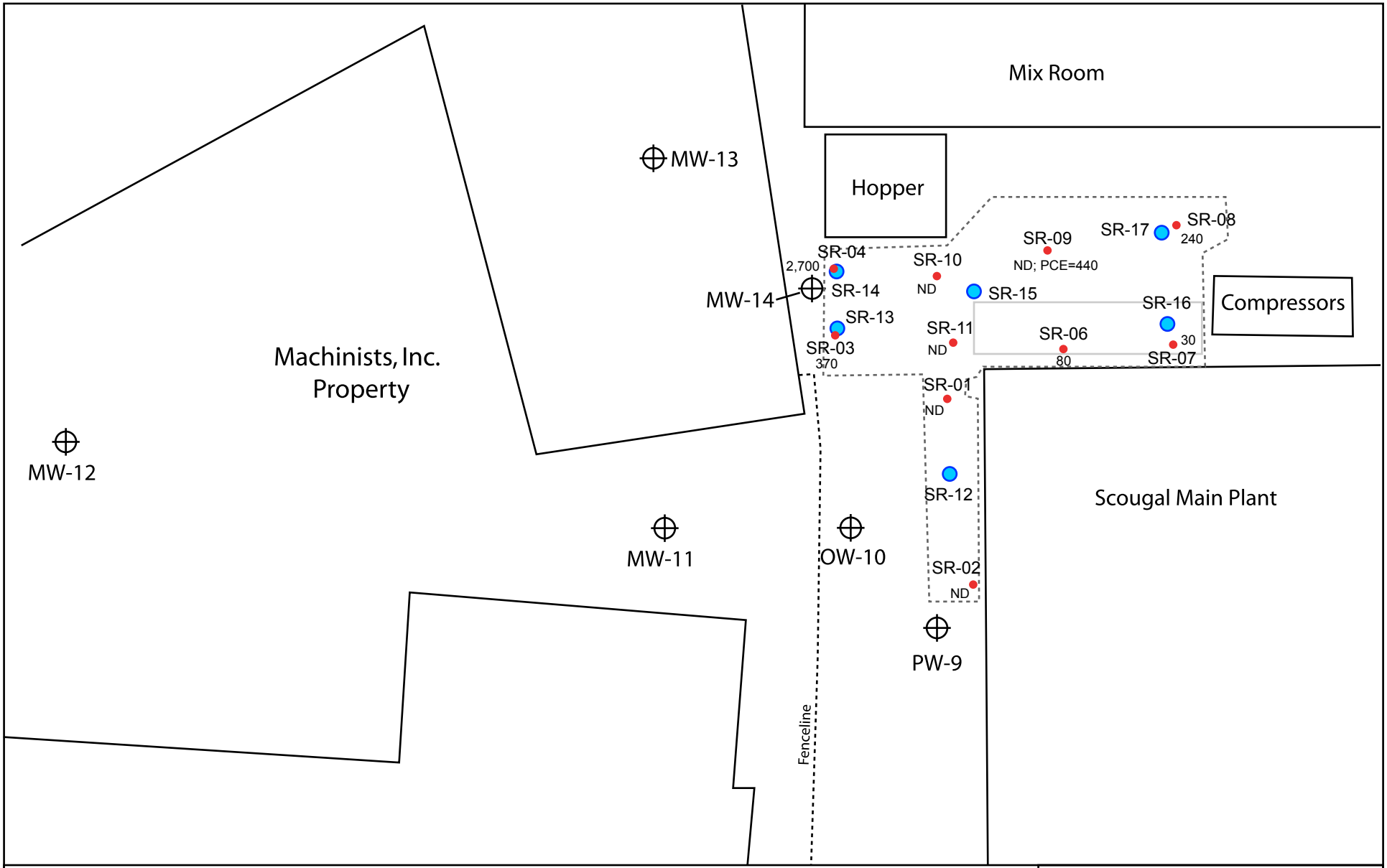

Figure 3. Confirmation Sample Locations

Scougal Rubber, Seattle, WA

APPENDIX A
ANALYTICAL RESULTS

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

June 26, 2007

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 June 18, 2007 from the Scougal Rubber (SR) JK0605, F&BI 706197 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
PGG0626R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-04	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-01
Date Analyzed:	06/21/07	Data File:	061978.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	103	56	118
1,2-Dichloroethane-d4	106	59	116
Toluene-d8	100	51	121
4-Bromofluorobenzene	112	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	2.7
Tetrachloroethene	0.33

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-06	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-02
Date Analyzed:	06/21/07	Data File:	061979.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	82	56	118
1,2-Dichloroethane-d4	83	59	116
Toluene-d8	86	51	121
4-Bromofluorobenzene	90	32	146

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	0.08
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-07	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-03
Date Analyzed:	06/21/07	Data File:	061972.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	56	118
1,2-Dichloroethane-d4	83	59	116
Toluene-d8	88	51	121
4-Bromofluorobenzene	93	32	146

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-08	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-04
Date Analyzed:	06/21/07	Data File:	061973.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	56	118
1,2-Dichloroethane-d4	84	59	116
Toluene-d8	90	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	0.24
Tetrachloroethene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-09	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-05
Date Analyzed:	06/21/07	Data File:	061974.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	85	56	118
1,2-Dichloroethane-d4	83	59	116
Toluene-d8	90	51	121
4-Bromofluorobenzene	93	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	0.44
Tetrachloroethene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-10	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-06
Date Analyzed:	06/21/07	Data File:	061975.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	82	56	118
1,2-Dichloroethane-d4	86	59	116
Toluene-d8	91	51	121
4-Bromofluorobenzene	91	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-11	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-07
Date Analyzed:	06/21/07	Data File:	061976.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	85	56	118
1,2-Dichloroethane-d4	85	59	116
Toluene-d8	89	51	121
4-Bromofluorobenzene	91	32	146

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-03	Client:	Pacific Groundwater Group
Date Received:	06/18/07	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	706197-08
Date Analyzed:	06/21/07	Data File:	061977.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	56	118
1,2-Dichloroethane-d4	83	59	116
Toluene-d8	84	51	121
4-Bromofluorobenzene	92	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	0.37
Tetrachloroethene	0.06

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougal Rubber (SR) JK0605
Date Extracted:	06/19/07	Lab ID:	07-895 mb
Date Analyzed:	06/20/07	Data File:	061949.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	82	56	118
1,2-Dichloroethane-d4	84	59	116
Toluene-d8	98	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Date of Report: 06/26/07
Date Received: 06/18/07
Project: Scougal Rubber (SR) JK0605, F&BI 706197

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B GCMS5

Laboratory Code: 706134-42 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Toluene	mg/kg (ppm)	<0.05	<0.05	nm
Tetrachloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Naphthalene	mg/kg (ppm)	<0.05	<0.05	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	95	94	28-130	1
Chloroethane	mg/kg (ppm)	2.5	96	98	41-134	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	97	96	46-129	0
Methylene chloride	mg/kg (ppm)	2.5	94	94	42-136	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	98	95	78-108	4
1,1-Dichloroethane	mg/kg (ppm)	2.5	101	97	75-116	4
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	99	95	86-113	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	102	101	75-119	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	98	94	72-124	4
Trichloroethene	mg/kg (ppm)	2.5	97	94	20-194	4
Toluene	mg/kg (ppm)	2.5	92	97	65-126	5
Tetrachloroethene	mg/kg (ppm)	2.5	101	100	80-127	1
Naphthalene	mg/kg (ppm)	2.5	92	94	71-135	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 probablility.

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.

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.

fp – Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.

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.

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.

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

June 27, 2007

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 June 12, 2007 from the Scougel Rubber JK0605, F&BI 706124 project. There are 9 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
PGG0627R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/07
Date Received: 06/12/07
Project: Scougel Rubber JK0605, F&BI 706124
Date Extracted: 06/13/07
Date Analyzed: 06/14/07

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
SR-01 706124-01	<50	<250	112
SR-02 706124-02	1,200	1,800	108
Method Blank	<50	<250	108

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-01	Client:	Pacific Groundwater Group
Date Received:	06/12/07	Project:	Scougel Rubber JK0605,
Date Extracted:	06/15/07	Lab ID:	706124-01
Date Analyzed:	06/16/07	Data File:	061527.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	82	51	134
1,2-Dichloroethane-d4	85	51	137
Toluene-d8	90	54	139
4-Bromofluorobenzene	105	42	164

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-02	Client:	Pacific Groundwater Group
Date Received:	06/12/07	Project:	Scougel Rubber JK0605,
Date Extracted:	06/15/07	Lab ID:	706124-02
Date Analyzed:	06/16/07	Data File:	061528.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	80	51	134
1,2-Dichloroethane-d4	83	51	137
Toluene-d8	92	54	139
4-Bromofluorobenzene	105	42	164

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougel Rubber JK0605,
Date Extracted:	06/15/07	Lab ID:	07-853 mb
Date Analyzed:	06/16/07	Data File:	061526.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	87	51	134
1,2-Dichloroethane-d4	83	51	137
Toluene-d8	93	54	139
4-Bromofluorobenzene	111	42	164

Compounds:	Concentration mg/kg (ppm)
Toluene	<0.05
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.05
Naphthalene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	SR-01	Client:	Pacific Groundwater Group
Date Received:	06/12/07	Project:	Scougel Rubber JK0605,
Date Extracted:	06/13/07	Lab ID:	706124-01
Date Analyzed:	06/14/07	Data File:	061405.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	83	26	125
Phenol-d6	87	35	110
Nitrobenzene-d5	93	45	119
2-Fluorobiphenyl	79	50	118
2,4,6-Tribromophenol	62	39	106
Terphenyl-d14	81	45	126

Compounds:	Concentration mg/kg (ppm)
Diphenylamine	<0.3 L

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	Not Applicable	Project:	Scougel Rubber JK0605,
Date Extracted:	06/13/07	Lab ID:	07857mb
Date Analyzed:	06/14/07	Data File:	061404.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	26	125
Phenol-d6	80	35	110
Nitrobenzene-d5	85	45	119
2-Fluorobiphenyl	72	50	118
2,4,6-Tribromophenol	53	39	106
Terphenyl-d14	73	45	126

Compounds:	Concentration mg/kg (ppm)
Diphenylamine	<0.3 L

Date of Report: 06/27/07
Date Received: 06/12/07
Project: Scougel Rubber JK0605, F&BI 706124

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

Laboratory Code: 706140-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	94	93	71-137	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	111	70-129

Date of Report: 06/27/07
Date Received: 06/12/07
Project: Scougel Rubber JK0605, F&BI 706124

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 706134-14 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Tetrachloroethene	mg/kg (ppm)	<0.05	<0.05	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	116	122	48-152	5
Chloroethane	mg/kg (ppm)	2.5	124	106	10-165	16
1,1-Dichloroethene	mg/kg (ppm)	2.5	84	91	36-140	7
Methylene chloride	mg/kg (ppm)	2.5	85	89	61-124	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	93	70-125	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	91	95	79-115	4
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	92	96	78-131	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	94	96	74-126	3
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	95	100	79-122	5
Trichloroethene	mg/kg (ppm)	2.5	99	102	78-117	3
Tetrachloroethene	mg/kg (ppm)	2.5	104	106	78-128	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 probablility.

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.

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.

fp – Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.

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.

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.

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

June 24, 2008

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 June 11, 2008 from the Scougal Rubber JK0605, F&BI 806111 project. There are 23 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
PGG0624R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 11, 2008 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 806111 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pacific Groundwater Group
806111-01	SR-12
806111-02	SR-13
806111-03	SR-14
806111-04	SR-15
806111-05	SR-16
806111-06	SR-17
806111-07	MW-11
806111-08	MW-12
806111-09	MW-14

All quality control requirements were acceptable.

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111
Date Extracted: 06/12/08
Date Analyzed: 06/13/08

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-132)
MW-11 806111-07	260 x	310	97
MW-12 806111-08	230 x	350	97
MW-14 806111-09	150 x	<250	99
Method Blank	<50	<250	86

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/17/08	Lab ID:	806111-07
Date Analyzed:	06/17/08	Data File:	806111-07.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	384
Iron (screen)	385

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/17/08	Lab ID:	806111-08
Date Analyzed:	06/17/08	Data File:	806111-08.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	944
Iron (screen)	23,700

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/17/08	Lab ID:	806111-09
Date Analyzed:	06/17/08	Data File:	806111-09.026
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	66	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	2,190
Iron (screen)	<250

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 806111
Date Extracted:	06/17/08	Lab ID:	I8-217 mb
Date Analyzed:	06/17/08	Data File:	I8-217 mb.013
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125

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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-12	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/13/08	Lab ID:	806111-01
Date Analyzed:	06/13/08	Data File:	061315.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	108	43	128
1,2-Dichloroethane-d4	109	44	125
Toluene-d8	103	42	130
4-Bromofluorobenzene	110	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-13	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/13/08	Lab ID:	806111-02
Date Analyzed:	06/13/08	Data File:	061316.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	43	128
1,2-Dichloroethane-d4	92	44	125
Toluene-d8	88	42	130
4-Bromofluorobenzene	91	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-14	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/13/08	Lab ID:	806111-03
Date Analyzed:	06/13/08	Data File:	061317.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	93	43	128
1,2-Dichloroethane-d4	94	44	125
Toluene-d8	90	42	130
4-Bromofluorobenzene	94	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-15	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/16/08	Lab ID:	806111-04
Date Analyzed:	06/16/08	Data File:	061617.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	105	43	128
1,2-Dichloroethane-d4	103	44	125
Toluene-d8	104	42	130
4-Bromofluorobenzene	112	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-16	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/16/08	Lab ID:	806111-05
Date Analyzed:	06/16/08	Data File:	061618.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	96	43	128
1,2-Dichloroethane-d4	94	44	125
Toluene-d8	94	42	130
4-Bromofluorobenzene	103	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SR-17	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/16/08	Lab ID:	806111-06
Date Analyzed:	06/16/08	Data File:	061619.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	43	128
1,2-Dichloroethane-d4	98	44	125
Toluene-d8	98	42	130
4-Bromofluorobenzene	106	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/13/08	Lab ID:	080932 mb
Date Analyzed:	06/13/08	Data File:	061306.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	79	43	128
1,2-Dichloroethane-d4	77	44	125
Toluene-d8	74	42	130
4-Bromofluorobenzene	82	27	154

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/12/08	Lab ID:	806111-07
Date Analyzed:	06/12/08	Data File:	061210.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	69	124
1,2-Dichloroethane-d4	97	67	131
Toluene-d8	89	73	132
4-Bromofluorobenzene	87	81	146

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	3.7
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	10
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/12/08	Lab ID:	806111-08
Date Analyzed:	06/12/08	Data File:	061211.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	97	69	124
1,2-Dichloroethane-d4	104	67	131
Toluene-d8	95	73	132
4-Bromofluorobenzene	94	81	146

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	06/11/08	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/12/08	Lab ID:	806111-09
Date Analyzed:	06/12/08	Data File:	061212.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	91	69	124
1,2-Dichloroethane-d4	99	67	131
Toluene-d8	90	73	132
4-Bromofluorobenzene	88	81	146

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	15
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	3.7
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	13
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 806111
Date Extracted:	06/12/08	Lab ID:	080880 mb
Date Analyzed:	06/12/08	Data File:	061207.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	93	69	124
1,2-Dichloroethane-d4	100	67	131
Toluene-d8	94	73	132
4-Bromofluorobenzene	94	81	146

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111

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	101	92	67-141	9

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111

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

Laboratory Code: 806039-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Manganese	ug/L (ppb)	1,290	1,410	9	0-20

Laboratory Code: 806039-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Manganese	ug/L (ppb)	20	1,290	372 b	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Manganese	ug/L (ppb)	20	99	70-130

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 806112-17 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	114	108	22-139	5
Chloroethane	mg/kg (ppm)	2.5	265 vo	254 vo	38-142	4
1,1-Dichloroethene	mg/kg (ppm)	2.5	127	122	46-132	4
Methylene chloride	mg/kg (ppm)	2.5	108	106	46-131	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	108	106	67-120	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	111	108	77-117	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	109	107	75-122	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	119	117	74-122	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	129 vo	124	74-125	4
Trichloroethene	mg/kg (ppm)	2.5	108	106	76-119	2
Tetrachloroethene	mg/kg (ppm)	2.5	123	120	79-127	2

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111

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

Laboratory Code: 806119-12 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	ug/L (ppb)	<0.2	<0.2	nm
Chloroethane	ug/L (ppb)	<1	<1	nm
1,1-Dichloroethene	ug/L (ppb)	<1	<1	nm
Methylene chloride	ug/L (ppb)	<5	<5	nm
trans-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
1,1-Dichloroethane	ug/L (ppb)	<1	<1	nm
cis-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	ug/L (ppb)	<1	<1	nm
1,1,1-Trichloroethane	ug/L (ppb)	<1	<1	nm
Trichloroethene	ug/L (ppb)	<1	<1	nm
Tetrachloroethene	ug/L (ppb)	<1	<1	nm

Laboratory Code: 806119-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	106	35-159
Chloroethane	ug/L (ppb)	50	<1	98	19-172
1,1-Dichloroethene	ug/L (ppb)	50	<1	111	34-149
Methylene chloride	ug/L (ppb)	50	<5	100	64-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	65-131
1,1-Dichloroethane	ug/L (ppb)	50	<1	105	59-132
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	64-134
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	67-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	59-142
Trichloroethene	ug/L (ppb)	50	<1	102	71-121
Tetrachloroethene	ug/L (ppb)	50	<1	104	71-130

Date of Report: 06/24/08
Date Received: 06/11/08
Project: Scougal Rubber JK0605, F&BI 806111

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	122	117	48-142	4
Chloroethane	ug/L (ppb)	50	114	95	28-161	18
1,1-Dichloroethene	ug/L (ppb)	50	118	118	61-127	0
Methylene chloride	ug/L (ppb)	50	106	106	56-136	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	111	108	78-118	3
1,1-Dichloroethane	ug/L (ppb)	50	111	110	78-117	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	111	109	81-118	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	109	109	74-128	0
1,1,1-Trichloroethane	ug/L (ppb)	50	123	120	70-135	2
Trichloroethene	ug/L (ppb)	50	111	110	80-114	1
Tetrachloroethene	ug/L (ppb)	50	113	112	83-115	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 probablility.

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.

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

September 17, 2008

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 September 5, 2008 from the Scougal Rubber JK0605, F&BI 809043 project. There are 18 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
PGG0917R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2008 by Friedman & Bruya, Inc. from the Pacific Groundwater Group Scougal Rubber JK0605, F&BI 809043 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pacific Groundwater Group
809043-01	MW-11
809043-02	MW-12
809043-03	MW-14
809043-04	Trip Blank

All quality control requirements were acceptable.

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043
Date Extracted: 09/09/08
Date Analyzed: 09/09/08

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-132)
MW-11 809043-01	270	290	89
MW-12 809043-02	140	<250	94
MW-14 809043-03	<50	<250	88
Method Blank	<50	<250	90

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	809043-01
Date Analyzed:	09/11/08	Data File:	809043-01.010
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	322
Iron (screen)	436

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	809043-02 x10
Date Analyzed:	09/11/08	Data File:	809043-02 x10.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	109	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	1,140
Iron (screen)	37,800

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	809043-03
Date Analyzed:	09/11/08	Data File:	809043-03.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	102	60	125

Analyte:	Concentration ug/L (ppb)
Manganese	2,660
Iron (screen)	2,850

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 809043
Date Extracted:	09/10/08	Lab ID:	I8-345 mb
Date Analyzed:	09/11/08	Data File:	I8-345 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	102	60	125

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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-11	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	809043-01
Date Analyzed:	09/10/08	Data File:	091007.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	57	121
1,2-Dichloroethane-d4	100	58	118
Toluene-d8	101	59	117
4-Bromofluorobenzene	113	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	1.1	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	2.9	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	13	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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-12	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	809043-02
Date Analyzed:	09/10/08	Data File:	091008.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	102	57	121
1,2-Dichloroethane-d4	101	58	118
Toluene-d8	102	59	117
4-Bromofluorobenzene	114	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	1.0	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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-14	Client:	Pacific Groundwater Group
Date Received:	09/05/08	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/09/08	Lab ID:	809043-03
Date Analyzed:	09/09/08	Data File:	090914.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	57	121
1,2-Dichloroethane-d4	101	58	118
Toluene-d8	102	59	117
4-Bromofluorobenzene	109	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	1.7	Tetrachloroethene	<1
Vinyl chloride	25	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	3.4	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	14	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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/09/08	Lab ID:	081440 mb
Date Analyzed:	09/09/08	Data File:	090907.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	57	121
1,2-Dichloroethane-d4	102	58	118
Toluene-d8	103	59	117
4-Bromofluorobenzene	117	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

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Pacific Groundwater Group
Date Received:	NA	Project:	Scougal Rubber JK0605, F&BI 809043
Date Extracted:	09/10/08	Lab ID:	081443 mb
Date Analyzed:	09/10/08	Data File:	091006.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	101	57	121
1,2-Dichloroethane-d4	101	58	118
Toluene-d8	100	59	117
4-Bromofluorobenzene	111	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

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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	101	106	67-141	5

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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

Laboratory Code: 809043-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	322	324	1	0-20

Laboratory Code: 809043-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	322	74 b	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	110	70-130

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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

Laboratory Code: 809066-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	<1	60	63	27-155	5
Chloromethane	ug/L (ppb)	50	<1	87	80	30-167	8
Vinyl chloride	ug/L (ppb)	50	<0.2	94	92	36-166	2
Bromomethane	ug/L (ppb)	50	<1	99	95	47-169	4
Chloroethane	ug/L (ppb)	50	<1	90	89	46-160	1
Trichlorofluoromethane	ug/L (ppb)	50	<1	135	131	48-158	3
Acetone	ug/L (ppb)	50	<10	106	100	31-182	6
1,1-Dichloroethene	ug/L (ppb)	50	<1	108	103	69-118	5
Methylene chloride	ug/L (ppb)	50	<5	101	100	68-126	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	109	104	80-119	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	104	72-129	8
1,1-Dichloroethane	ug/L (ppb)	50	<1	108	102	70-128	6
2,2-Dichloropropane	ug/L (ppb)	50	<1	112	105	60-136	6
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	107	71-127	5
Chloroform	ug/L (ppb)	50	<1	111	106	65-132	5
2-Butanone (MEK)	ug/L (ppb)	50	<10	101	100	64-129	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	109	104	69-133	5
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	121	114	62-133	6
1,1-Dichloropropene	ug/L (ppb)	50	<1	112	106	71-124	6
Carbon Tetrachloride	ug/L (ppb)	50	<1	122	116	62-134	5
Benzene	ug/L (ppb)	50	<1	109	104	77-117	5
Trichloroethene	ug/L (ppb)	50	<1	109	103	79-118	6
1,2-Dichloropropane	ug/L (ppb)	50	<1	109	104	79-119	5
Bromodichloromethane	ug/L (ppb)	50	<1	120	115	60-136	4
Dibromomethane	ug/L (ppb)	50	<1	112	109	66-141	3
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	106	104	58-134	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	117	112	75-127	4
Toluene	ug/L (ppb)	50	<1	110	104	77-118	6
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	104	99	75-128	5
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	107	102	68-131	5
2-Hexanone	ug/L (ppb)	50	<10	106	104	54-142	2
1,3-Dichloropropane	ug/L (ppb)	50	<1	108	104	71-128	4
Tetrachloroethene	ug/L (ppb)	50	<1	106	101	77-121	5
Dibromochloromethane	ug/L (ppb)	50	<1	120	115	71-128	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	111	108	69-134	3
Chlorobenzene	ug/L (ppb)	50	<1	106	102	78-118	4
Ethylbenzene	ug/L (ppb)	50	<1	109	105	78-120	4
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	117	113	78-124	3
m,p-Xylene	ug/L (ppb)	100	<2	108	104	76-121	4
o-Xylene	ug/L (ppb)	50	<1	110	106	71-125	4
Styrene	ug/L (ppb)	50	<1	113	108	74-125	5
Isopropylbenzene	ug/L (ppb)	50	<1	111	105	71-125	6
Bromoform	ug/L (ppb)	50	<1	105	103	65-142	2
n-Propylbenzene	ug/L (ppb)	50	<1	109	103	68-127	6
Bromobenzene	ug/L (ppb)	50	<1	109	105	78-116	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	112	105	74-121	6
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	96	51-154	4
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	100	96	53-150	4
2-Chlorotoluene	ug/L (ppb)	50	<1	106	100	66-127	6
4-Chlorotoluene	ug/L (ppb)	50	<1	107	101	65-130	6
tert-Butylbenzene	ug/L (ppb)	50	<1	111	105	69-122	6
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	111	104	68-126	7
sec-Butylbenzene	ug/L (ppb)	50	<1	112	104	68-129	7
p-Isopropyltoluene	ug/L (ppb)	50	<1	114	107	70-125	6
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	105	99	72-123	6
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	103	97	69-126	6
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	106	100	69-128	6
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<1	103	100	32-164	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	126	116	76-132	8
Hexachlorobutadiene	ug/L (ppb)	50	<1	117	108	68-128	8
Naphthalene	ug/L (ppb)	50	<1	109	105	47-159	4
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	122	114	70-143	7

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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

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	78	68	31-145	14
Chloromethane	ug/L (ppb)	50	90	74	22-155	20
Vinyl chloride	ug/L (ppb)	50	100	82	33-158	20
Bromomethane	ug/L (ppb)	50	113	99	26-174	13
Chloroethane	ug/L (ppb)	50	113	98	35-157	14
Trichlorofluoromethane	ug/L (ppb)	50	94	95	49-153	1
Acetone	ug/L (ppb)	50	141	96	38-171	38 vo
1,1-Dichloroethene	ug/L (ppb)	50	119	104	55-139	13
Methylene chloride	ug/L (ppb)	50	109	99	52-129	10
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	112	97	72-125	14
trans-1,2-Dichloroethene	ug/L (ppb)	50	111	93	73-120	18
1,1-Dichloroethane	ug/L (ppb)	50	112	93	75-118	19
2,2-Dichloropropane	ug/L (ppb)	50	135 vo	113	68-128	18
cis-1,2-Dichloroethene	ug/L (ppb)	50	109	90	78-119	19
Chloroform	ug/L (ppb)	50	116	101	78-120	14
2-Butanone (MEK)	ug/L (ppb)	50	114	85	61-139	29 vo
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	122	114	74-129	7
1,1,1-Trichloroethane	ug/L (ppb)	50	129	110	68-130	16
1,1-Dichloropropene	ug/L (ppb)	50	113	94	74-123	18
Carbon Tetrachloride	ug/L (ppb)	50	134 vo	115	67-131	15
Benzene	ug/L (ppb)	50	107	97	76-115	10
Trichloroethene	ug/L (ppb)	50	110	103	76-118	7
1,2-Dichloropropane	ug/L (ppb)	50	107	101	74-119	6
Bromodichloromethane	ug/L (ppb)	50	127 vo	120	78-122	6
Dibromomethane	ug/L (ppb)	50	115	109	80-119	5
4-Methyl-2-pentanone	ug/L (ppb)	50	107	100	56-134	7
cis-1,3-Dichloropropene	ug/L (ppb)	50	119	113	77-122	5
Toluene	ug/L (ppb)	50	106	100	77-115	6
trans-1,3-Dichloropropene	ug/L (ppb)	50	109	106	78-128	3
1,1,2-Trichloroethane	ug/L (ppb)	50	104	101	82-116	3
2-Hexanone	ug/L (ppb)	50	111	96	58-144	14
1,3-Dichloropropane	ug/L (ppb)	50	105	103	80-118	2
Tetrachloroethene	ug/L (ppb)	50	102	96	79-119	6
Dibromochloromethane	ug/L (ppb)	50	122	117	86-122	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	109	105	84-116	4
Chlorobenzene	ug/L (ppb)	50	104	98	81-110	6
Ethylbenzene	ug/L (ppb)	50	109	103	80-113	6
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	120 vo	114	81-119	5
m,p-Xylene	ug/L (ppb)	100	106	100	80-120	6
o-Xylene	ug/L (ppb)	50	107	102	79-115	5
Styrene	ug/L (ppb)	50	112 vo	107	79-111	5
Isopropylbenzene	ug/L (ppb)	50	111	104	76-115	7
Bromoform	ug/L (ppb)	50	106	102	80-131	4
n-Propylbenzene	ug/L (ppb)	50	109	102	74-119	7
Bromobenzene	ug/L (ppb)	50	104	99	80-116	5
1,3,5-Trimethylbenzene	ug/L (ppb)	50	111	104	75-115	7
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	97	91	78-118	6
1,2,3-Trichloropropane	ug/L (ppb)	50	100	94	76-124	6
2-Chlorotoluene	ug/L (ppb)	50	105	98	77-115	7
4-Chlorotoluene	ug/L (ppb)	50	108	100	77-116	8
tert-Butylbenzene	ug/L (ppb)	50	108	101	76-113	7
1,2,4-Trimethylbenzene	ug/L (ppb)	50	110	104	75-115	6
sec-Butylbenzene	ug/L (ppb)	50	111	103	74-116	7
p-Isopropyltoluene	ug/L (ppb)	50	113	106	75-117	6
1,3-Dichlorobenzene	ug/L (ppb)	50	102	96	81-111	6
1,4-Dichlorobenzene	ug/L (ppb)	50	100	95	81-110	5
1,2-Dichlorobenzene	ug/L (ppb)	50	102	97	81-111	5
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	105	97	72-137	8
1,2,4-Trichlorobenzene	ug/L (ppb)	50	114	108	74-131	5
Hexachlorobutadiene	ug/L (ppb)	50	115	105	64-138	9
Naphthalene	ug/L (ppb)	50	94	88	74-131	7
1,2,3-Trichlorobenzene	ug/L (ppb)	50	109	101	73-134	8

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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

Laboratory Code: 809037-04 (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

Date of Report: 09/17/08
Date Received: 09/05/08
Project: Scougal Rubber JK0605, F&BI 809043

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

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	109	31-145	1
Chloromethane	ug/L (ppb)	50	108	106	22-155	2
Vinyl chloride	ug/L (ppb)	50	109	102	33-158	7
Bromomethane	ug/L (ppb)	50	108	104	26-174	4
Chloroethane	ug/L (ppb)	50	99	92	35-157	7
Trichlorofluoromethane	ug/L (ppb)	50	93	76	49-153	20
Acetone	ug/L (ppb)	50	120	103	38-171	15
1,1-Dichloroethene	ug/L (ppb)	50	109	107	55-139	2
Methylene chloride	ug/L (ppb)	50	103	101	52-129	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	107	108	72-125	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	108	106	73-120	2
1,1-Dichloroethane	ug/L (ppb)	50	106	104	75-118	2
2,2-Dichloropropane	ug/L (ppb)	50	122	119	68-128	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	105	78-119	2
Chloroform	ug/L (ppb)	50	107	107	78-120	0
2-Butanone (MEK)	ug/L (ppb)	50	104	101	61-139	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	105	106	74-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	116	114	68-130	2
1,1-Dichloropropene	ug/L (ppb)	50	110	109	74-123	1
Carbon Tetrachloride	ug/L (ppb)	50	118	116	67-131	2
Benzene	ug/L (ppb)	50	105	104	76-115	1
Trichloroethene	ug/L (ppb)	50	107	105	76-118	2
1,2-Dichloropropane	ug/L (ppb)	50	106	105	74-119	1
Bromodichloromethane	ug/L (ppb)	50	114	114	78-122	0
Dibromomethane	ug/L (ppb)	50	109	109	80-119	0
4-Methyl-2-pentanone	ug/L (ppb)	50	104	104	56-134	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	117	116	77-122	1
Toluene	ug/L (ppb)	50	104	102	77-115	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	102	100	78-128	2
1,1,2-Trichloroethane	ug/L (ppb)	50	102	103	82-116	1
2-Hexanone	ug/L (ppb)	50	105	102	58-144	3
1,3-Dichloropropane	ug/L (ppb)	50	104	103	80-118	1
Tetrachloroethene	ug/L (ppb)	50	104	102	79-119	2
Dibromochloromethane	ug/L (ppb)	50	113	111	86-122	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	108	107	84-116	1
Chlorobenzene	ug/L (ppb)	50	103	102	81-110	1
Ethylbenzene	ug/L (ppb)	50	105	103	80-113	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	113	111	81-119	2
m,p-Xylene	ug/L (ppb)	100	106	103	80-120	3
o-Xylene	ug/L (ppb)	50	107	105	79-115	2
Styrene	ug/L (ppb)	50	110	108	79-111	2
Isopropylbenzene	ug/L (ppb)	50	109	106	76-115	3
Bromoform	ug/L (ppb)	50	102	100	80-131	2
n-Propylbenzene	ug/L (ppb)	50	106	105	74-119	1
Bromobenzene	ug/L (ppb)	50	104	104	80-116	0
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	106	75-115	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	94	96	78-118	2
1,2,3-Trichloropropane	ug/L (ppb)	50	96	96	76-124	0
2-Chlorotoluene	ug/L (ppb)	50	102	100	77-115	2
4-Chlorotoluene	ug/L (ppb)	50	103	102	77-116	1
tert-Butylbenzene	ug/L (ppb)	50	105	105	76-113	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	105	103	75-115	2
sec-Butylbenzene	ug/L (ppb)	50	108	107	74-116	1
p-Isopropyltoluene	ug/L (ppb)	50	109	109	75-117	0
1,3-Dichlorobenzene	ug/L (ppb)	50	100	101	81-111	1
1,4-Dichlorobenzene	ug/L (ppb)	50	99	99	81-110	0
1,2-Dichlorobenzene	ug/L (ppb)	50	101	101	81-111	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	99	99	72-137	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	120	119	74-131	1
Hexachlorobutadiene	ug/L (ppb)	50	114	114	64-138	0
Naphthalene	ug/L (ppb)	50	102	103	74-131	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	115	116	73-134	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 probablility.

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.