

June 18, 2008

Mr. David Gibson Les Schwab Tire Centers 646 NW Madras Highway Prineville, Oregon 97754

RE: Groundwater Monitoring Event – Second Quarter 2008 Les Schwab Tire Center 2311 Commercial Avenue Anacortes, Washington RGI Project # 2007-092B

Dear Mr. Gibson:

This letter report documents The Riley Group Inc.'s (RGI's) field protocols and findings associated with the sampling of the groundwater extraction well (EW-1) located at the Les Schwab Tire Center in Anacortes, Washington (referred to hereafter as the Site).

Authorization to implement the scope of work outlined in this quarterly groundwater monitoring report was provided by you (Client) on August 27, 2007.

# SITE LOCATION & DESCRIPTION

The Site, located at 2311 Commercial Avenue is currently occupied by a Les Schwab Tires Center. RGI understands that the subject Site is currently owned by Les Schwab Tire Centers Corporate. In November 2007, RGI conducted an interim cleanup action for soil and groundwater at the subject Site associated with a petroleum release from a leaking hydraulic hoist. The remedial excavation initially contained floating freeproduct oil-range TPH on the groundwater surface. Following the remedial activities, Wallgren's contractor installed a 4-inch diameter groundwater extraction well (EW-1) in the former source area to remove floating free-product oil and to monitor groundwater quality at the Site. Following multiple groundwater extraction events performed by Wallgren's contractor, RGI collected a groundwater sample from the well on December 17, 2007. The sample was analyzed for diesel- and oil-range total petroleum hydrocarbons (TPH). Analytical results showed oil TPH concentrations of 100 ug/L, below the Model Toxics Control Act (MTCA) Method A Groundwater Cleanup Level of 500 µg/L. Diesel-range TPH was not detected in the groundwater sample. Groundwater sampling and testing done in February of 2008 (first quarter) documented a concentration of 800 µg/L oil-range TPH.

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### **PROJECT OBJECTIVES**

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The objective of this project was to perform groundwater extraction and sampling on the on-site groundwater extraction well to document groundwater quality in the former source area. Based on historical data, the contaminant of concern is oil-range TPH. In addition, the groundwater monitoring well installed earlier by other workers was damaged by above-ground repair activities. A steel-capped wellhead monument with locking cap was installed to prevent further damage to the well and to prevent the entry of contaminants to the well from above-ground activities.

### DEWATERING WELL SAMPLING EVENT

### **GROUNDWATER WELLHEAD MONUMENT INSTALLATION**

Acknowledging the degraded condition of the plastic monitoring well annulus from above-ground activities, it was decided to install a dedicated groundwater well-head with steel cover plate and locking sealed cap. RGI visited the Site on May 14, 2008 to install the new wellhead monument. The six-inch thick concrete slab surrounding the well annulus was cut, broken, and removed. The upper exposed four inches of the well annulus was cut off and a plastic locking plug was placed on the well top casing. The steel wellhead monument was then placed around the well casing and fresh concrete was poured around the wellhead.

### **GROUNDWATER WELL DEWATERING AND SAMPLE COLLECTION**

On May 8, 2008, RGI pumped groundwater from extraction well, EW-1, at the Site (Figures 2 & 3). A single groundwater sample, EW1-Q2, was collected following the extraction effort.

RGI used a clear bailer to determine the presence, or absence, of free product in the well. Visible free product was not encountered. Depth to groundwater, recorded using an electronic water level indicator, was 1.40 feet below ground surface (bgs).

The groundwater was extracted using a Grundfos electric pump and was pumped into the on-site oil/water separator. Groundwater was pumped from the well at regular intervals for approximately 20 minutes until it was dry several times in succession. Following pumping, the well was left to recharge for approximately 40 minutes before the pumping was resumed. An estimated 40 to 60 gallons of groundwater was removed.

Following groundwater extraction activities, the well was left to recharge to at least 80% of its original water level prior to sampling. The well was sampled using a disposable plastic bailer.

The groundwater sample was collected in laboratory-supplied 500 milliliter amber bottles. Sample containers were placed in an ice-chilled cooler and transported to the analytical laboratory under proper chain-of-custody documentation.

### FINDINGS & RECOMMENDATIONS

Analytical results and the MTCA Method A Groundwater Cleanup Levels for the contaminants of concern are summarized in Table 1. Oil-range TPH was detected at a concentration of 810 ug/L which exceeds the MTCA Method A Cleanup Level of 500 ug/L. RGI recommends additional extraction and removal of the impacted groundwater. In an effort to preserve the integrity of the groundwater extraction well from above-ground auto repair activities and/or other contaminant sources, RGI will replace the existing plastic cap well annulus with a below-grade sealed wellhead monument with traffic-rated steel cover and locking cap.

### **PROJECT LIMITATIONS**

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of work completed in same or similar locations at the present time. RGI's results and findings from the select area do not necessarily reflect soil or groundwater conditions underlying other areas of the Site not investigated. RGI reserves the right to modify its conclusions and/or recommendations as new data and information is made available. No legal or other warranty, expressed or implied, is made.

Any questions regarding our work or this report, the presentation of information, or interpretation of data are welcome and should be referred to the undersigned.

Sincerely yours,

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Jason Cass, L.G. Senior Geologist

Paul D. Riley, LG, LHG Principal

Attachments:

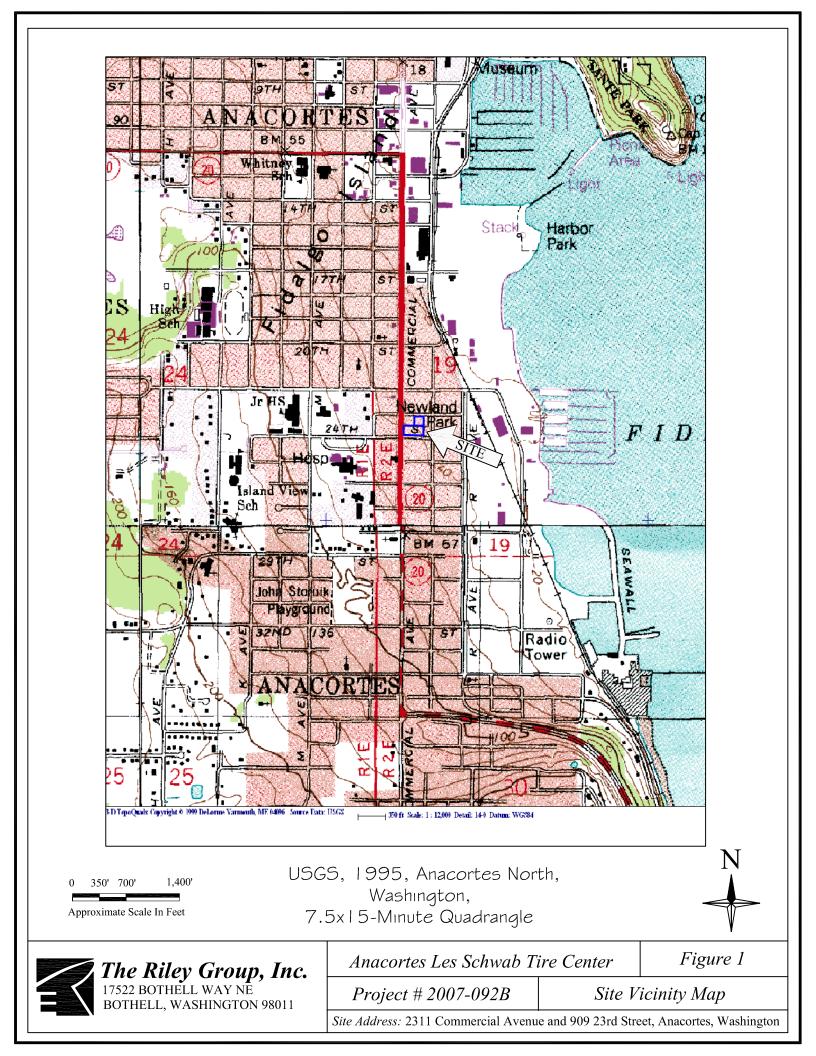


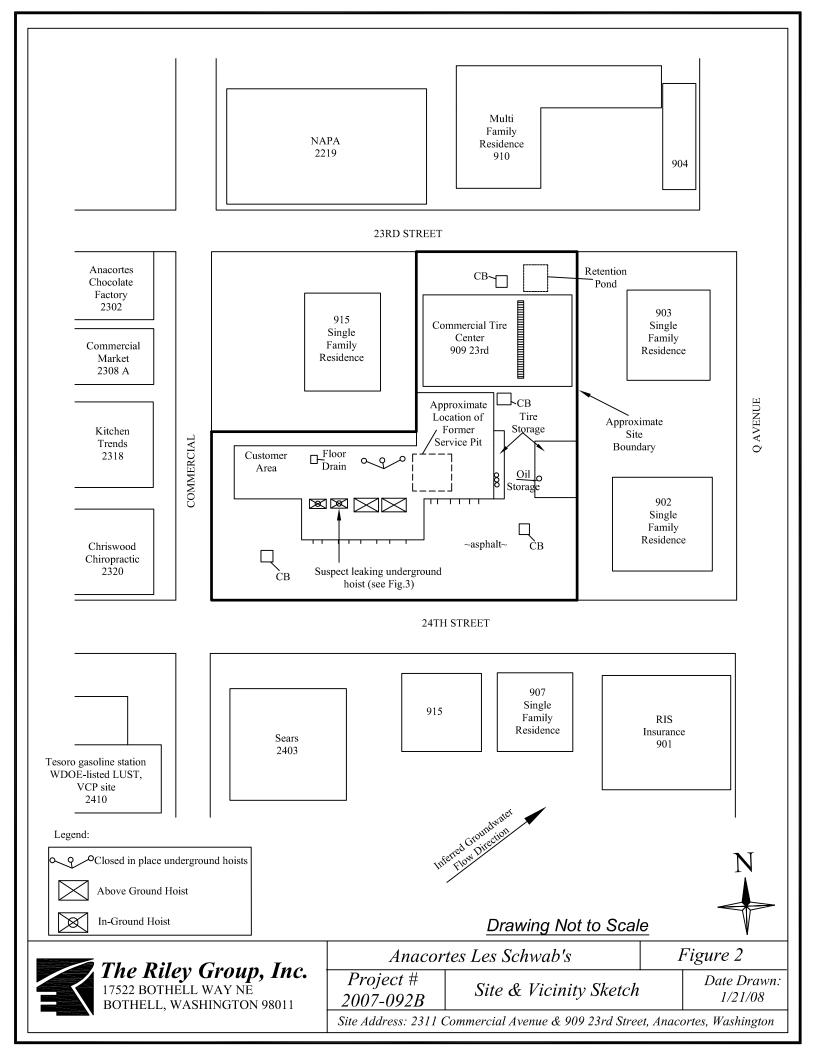
Figures 1, 2 & 3 Table 1 Analytical Laboratory Report

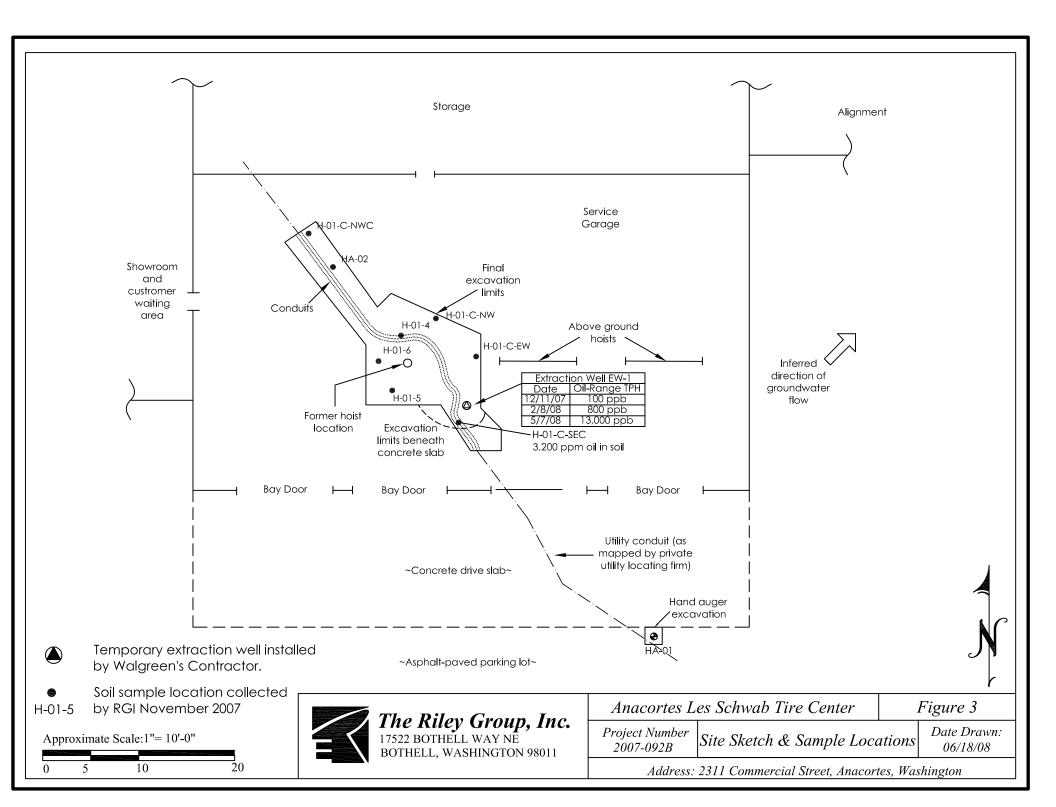
Report Distribution:

*Mr. David Gibson, Les Schwab, Inc. (two copies & electronic pdf)* 

# THE RILEY GROUP, INC.







# Table 1. Summary of Groundwater Sample Results - Second Quarter 2008.Anacortes Les Schwab2311 Commercial Avenue, Anacortes, WashingtonThe Riley Group, Inc. Project #2007-092B

Sample Number	Sample Date	Depth to Groundwater Diesel TPH		Oil TPH				
2nd Quarter, 2008, Sampling Event								
EW1-2Q	5/5/2008	1.4	5,000	13,000				
1st Quarter, 2008, Sampling Event								
H1-01	2/7/2008	4.5 260		810				
Initial December 2007, Sampling Event								
H1-01	12/17/2007	3.5	ND	100				
MTCA Method A (	Cleanup Lev	500	500					

Groundwater samples collected from the extraction well, EW-1, were collected by The Riley Group, Inc. using a disposable plastic bailer.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion feet bgs = feet below grade surface.

Diesel TPH, diesel range total petroleum hydrocarbons determined using Ecology Test Method NWTPH-Dx with silica gel cleanup.

Oil TPH, heavy oil range total petroleum hydrocarbons determined using Ecology Test Method NWTPH-Dx with silica gel cleanup.

ND, non-detect, contaminant not detected at noted analytical detection limit.

--, Not analyzed or not applicable.

**Bold** and shaded concentrations (if any) exceed MTCA Method A Groundwater Cleanup Levels.

MTCA, Washington State Department of Ecology Model Toxics Control Act (WAC 173-340-900, Table 720-1).

### ENVIRONMENTAL CHEMISTS

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February 13, 2008

Paul Riley, Project Manager The Riley Group, Inc. 17522 Bothell Way NE, Suite A Bothell, WA 98011

Dear Mr. Riley:

Included are the results from the testing of material submitted on February 8, 2008 from the 2007-092B, F&BI 802080 project. There are 4 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.

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Michael Erdahl Project Manager

Enclosures TRG0213R.DOC

# ENVIRONMENTAL CHEMISTS

# CASE NARRATIVE

This case narrative encompasses samples received on February 8, 2008 by Friedman & Bruya, Inc. from the The Riley Group, Inc. 2007-092B, F&BI 802080 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	<u>The Riley Group, Inc.</u>
802080-01	H1-01

All quality control requirements were acceptable.

### ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/08 Date Received: 02/08/08 Project: 2007-092B, F&BI 802080 Date Extracted: 02/11/08 Date Analyzed: 02/11/08

## RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx Sample Extracts Passed Through a Silica Gel Column Prior to Analysis Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 50-150)
H1-01 802080-01	260 x	810	85
Method Blank	<50	<250	80

### ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/08 Date Received: 02/08/08 Project: 2007-092B, F&BI 802080

# 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	Silica Gel			
			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	$\operatorname{RPD}$
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	93	98	70-130	5

### ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.