February 17, 2011

Mr. Mark O. Zenger
Snoqualmie Summit Inn
PO Box 1449
Edmonds, Washington 98020

RE: Groundwater Monitoring Report, 1st Quarter 2011
Snoqualmie Summit Inn Property
SR 906, Kittitas County
Snoqualmie Pass, Washington
Ecology VCP CE0319
RGI Project No. 2008-321C

Dear Mr. Zenger:

The Riley Group, Inc. (RGI) has prepared this *Groundwater Monitoring Report, 1st Quarter 2011* for the Snoqualmie Summit Inn (hereafter referred to as the Site, Figure 1) located at Snoqualmie Pass, Kittitas County, Washington. Authorization to implement the scope of work outlined in this report was provided by the Client on July 12, 2010.

BACKGROUND

Subsequent to submitting an *Independent Cleanup Action Final Report*, prepared by RGI and dated November 12, 2009, to the Washington State Department of Ecology's (Ecology's) Voluntary Cleanup Program, Ecology issued an *Opinion Letter*, dated December 15, 2009 indicating the need for additional soil sampling and quarterly groundwater compliance monitoring at the Site. A work plan prepared by RGI to address Ecology's *Opinion Letter* was submitted to Ecology for their review and comment under their Voluntary Cleanup Program (VCP No. CE0319). Ecology responded in a letter dated March 30, 2010, concurring with the work plan with minor suggestions, which were taken into account herein.

Per Ecology (email correspondence dated October 26, 2010), analyses for PCBs are no longer required as they have not been previously detected in any of the soil or groundwater sampling conducted at the Site to date.

SCOPE OF WORK

The scope of work for this project included constructing five groundwater monitoring wells at the Site. The objectives of this project are to:

- Complete our evaluation of soil and groundwater quality beneath the Site
- Document the effectiveness of the recently completed independent remedial excavation cleanup action
- Establish the groundwater gradient and flow direction
- Monitor groundwater quality beneath the Site

The information obtained during this work will be used to help evaluate that the completed cleanup action at the Site has met the substantive requirements of the Model Toxics Control Act (MTCA) in order to obtain a determination of No Further Action (NFA) under the VCP.

WELL INSTALLATION

On July 30, 2010 five groundwater monitoring wells (MW-1 through MW-5) were completed on the Site (Figure 2). The well locations were selected to characterize groundwater quality in the formerly contaminated areas of the Site and to evaluate the Site specific groundwater flow direction and gradient. The top of well casing elevations were measured by RGI using an arbitrary datum.

GROUNDWATER MONITORING

Following well installation, the following scope of work was performed.

- Depth to groundwater was measured to the nearest hundredth of a foot using an electronic water level meter. These measurements are presented on Table 2.
- All wells were purged using a peristaltic, and/or submersible pump. At least three well casing volumes will be removed from each well prior to sampling or until the field-measure parameters (temperature, pH and specific conductivity) have stabilized. Approximate volumes of water purged from each well prior to sampling are as follows: MW-1 (8 gallons), MW-2 (7 gallons, pumped dry), MW-3 (5 gallons), MW-4 (5 gallons), and MW-5 (5.5 gallons).
- Following purging activities, each well was left to recharge to at least 80 percent of its original water level prior to sampling. All wells were sampled under low-flow conditions using a submersible or peristaltic pump with disposable tubing.
- Purge water was placed in labeled 55-gallon drums and left on the Site pending profiling and offsite disposal.
- Sampling start time, groundwater recovery time, field parameters, duration of purging, PID readings and water level measurements were recorded for each sampling event on field data sheets. These data are kept on file in RGI project file.
- Groundwater samples were collected in laboratory-supplied one half-liter amber, 500-milliliter polypropylene bottles and 40-milliliter vials with Teflon caps (no

headspace). Sample containers were placed in an ice-chilled cooler and transported to the analytical laboratory under proper chain-of-custody documentation.

ANALYTICAL TESTING

Groundwater samples collected during this quarterly groundwater monitoring cycle were submitted to Friedman & Bruya, Inc. (FBI), for laboratory testing as outlined below. A total of five groundwater samples were submitted for the following analyses:

- Gasoline range total petroleum hydrocarbons (TPH) using Ecology Test Method NWTPH-Gx.
- Benzene, ethylbenzene, toluene, xylenes (BTEX) using EPA Test Method 8021.
- Diesel- and oil-range TPH using Ecology Test Method NWTPH-DX with silica gel cleanup[1].
- Volatile organic compounds (VOCs) using EPA Test Method 8260B.
- Low level Carcinogenic Polynuclear Aromatic Hydrocarbons (cPAH) using EPA Test Method 8270SIM.
- Lead and arsenic using EPA Test Method 200.8 (soil) and EPA Test Method 6000/7000 (water).

CLEANUP REGULATIONS

Washington's hazardous waste cleanup law the MTCA (RCW 70.105D) mandates that site cleanups protect human health and the environment. The MTCA Cleanup Regulation (Ch 173-340 WAC) defines the approach for establishing cleanup requirements for individual sites, including the establishment of cleanup standards and selection of cleanup actions.

The MTCA regulation provides three options for establishing generic and site-specific cleanup levels for soil and groundwater. Method A cleanup levels have been adopted for specific purposes and are intended to provide conservative cleanup levels for sites undergoing routine site characterization or cleanup actions or those sites with relatively few hazardous substances. Method B and C cleanup levels are set using a site risk assessment, which focus on the use of "reasonable maximum exposure" assumptions based on site-specific characteristics and toxicity of the contaminants of concern.

The analytical data for this project are compared to the MTCA Method A Cleanup Levels for Ground Water (WAC 173-340-720, Table 720-1) and are summarized in Tables 1.

FINDINGS AND CONCLUSIONS

Groundwater

Depth to groundwater as measured with an electronic meter, ranged from 0.5 to 5.8 feet below the top of casing (btc). Groundwater gradient was calculated at 0.03 ft/ft and the flow is towards the south (Figure 2).

[1] Silica gel cleanup removes naturally occurring organics, which can give falsely elevated diesel/oil TPH readings.

The groundwater samples did not yield any of the contaminants of concern except for lead, and arsenic. The MTCA Method A Cleanup Levels for Ground Water are presented in parentheses.

- Total (unfiltered) arsenic concentrations ranged from None Detected to 15.2 µg/L (5).
- Dissolved (filtered) arsenic concentrations ranged from None Detected to 10.4 µg/L (5).
- Total (unfiltered) lead concentrations ranged from None Detected to 3.69 µg/L (15).
- Dissolved (filtered) lead concentrations were not detected above the method detection limits.

The elevated concentrations of total lead and arsenic detected in the unfiltered water samples are due to presence of sediment in the samples. The elevated concentrations of dissolved arsenic are due to naturally occurring arsenic in the local bedrock and weathered bedrock (soil).

Discussion

RGI contacted the Snoqualmie Pass Utility District (SPUD) for information on the chemistry of the groundwater produced for public consumption in the Site's vicinity. According to SPUD, water is produced from five deep wells located near Alpental. The wells are screened from approximately 100 feet to 460 feet bgs. The analytical data from SPUD indicates that two of the wells have yielded concentrations of dissolved arsenic that ranges from approximately 700 µg/L to approximately 1,300 µg/L. In order to comply with the State and Federal drinking water maximum contaminant level (MCL) of 10 µg/L, SPUD blends the water from these two wells with water from the other wells prior to distribution. SPUD does not otherwise treat the water prior to distribution.

Given the natural background concentrations of arsenic in the SPUD water supply wells, the concentrations detected at the subject Site are considered naturally occurring and background.

The next quarterly groundwater sampling event is scheduled for the second quarter (April through June) 2011.

LIMITATIONS

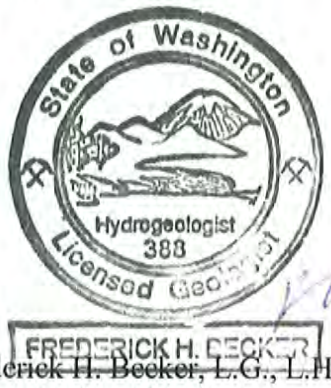
This report is the property of The Riley Group, Inc., Snoqualmie Summit Inn, and their authorized representatives and was prepared in a manner consistent with the level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions. This report intends for specific application to the Snoqualmie Summit Inn Village Center property, Kittitas County, Snoqualmie Pass, Washington. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based upon data obtained from our review of available information at the time of preparing this report, our test pits excavated on-site, or other noted data sources. Conditional changes may occur through time by natural or man-made process on this or adjacent properties. Additional change may

occur in legislative standards, which may or may not be applicable to this report. These changes, beyond RGI's control, may render this report invalid, partially or wholly. If variations appear evident, RGI should be requested to reevaluate the recommendations in this report prior to proceeding with construction.

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

Sincerely,
THE RILEY GROUP, INC.

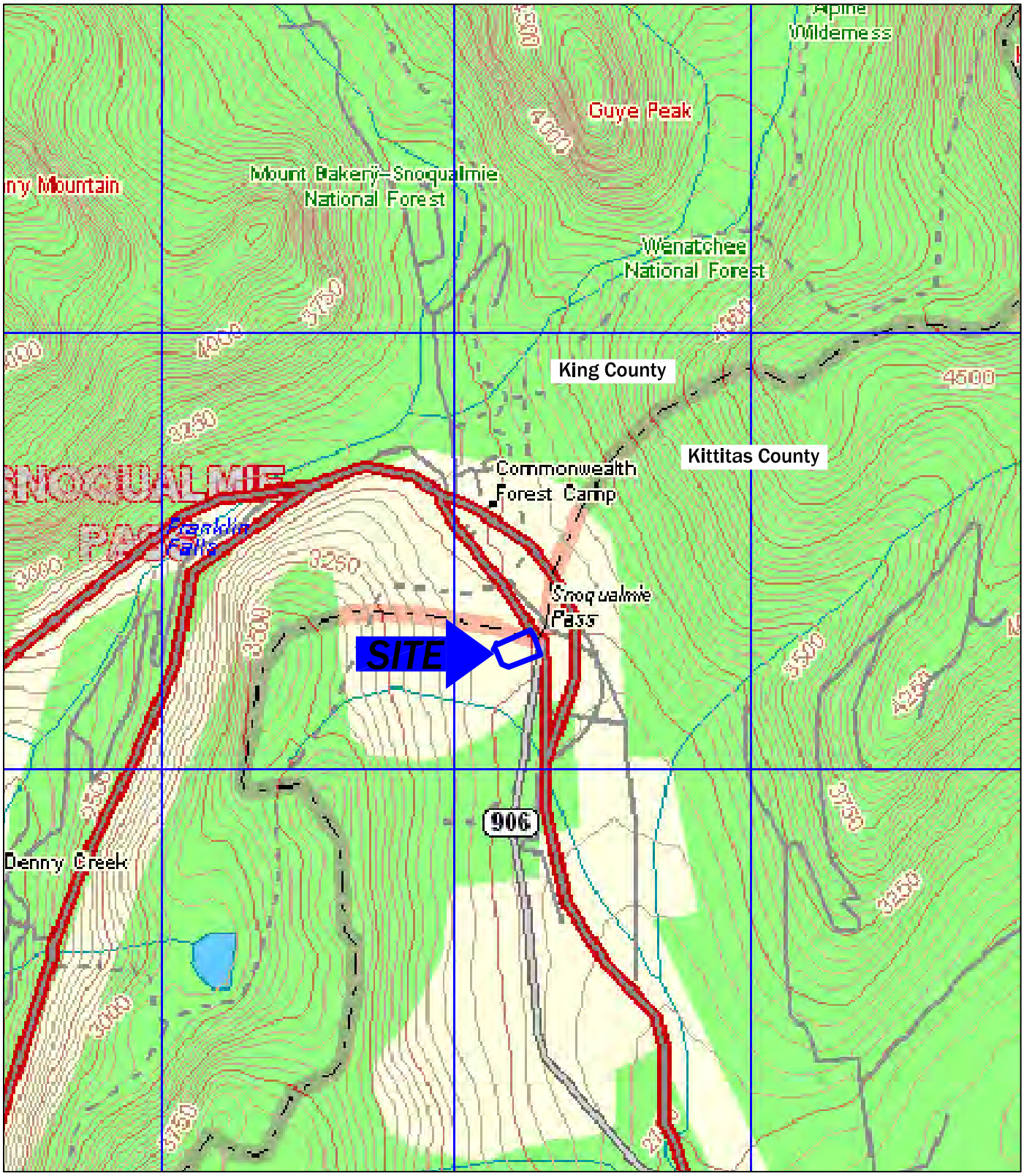


Frederick H. Becker, L.G., L.H.G.
Senior Project Manager

cc: Mr. Bob Johns; Johns Monroe Mitsunaga & Kolousková
Mr. Norm Hepner, Washington Department of Ecology – Central Region

Attachment

Figure 1.	*Site and Vicinity Map*
Figure 2.	*Site Plan and Monitoring Well Locations*
Table 1	*Analytical Summary – Groundwater*
Appendix A	*Analytical Laboratory Certificates*



USGS, 1989 Snoqualmie, Washington
7.5-Minute Quadrangle

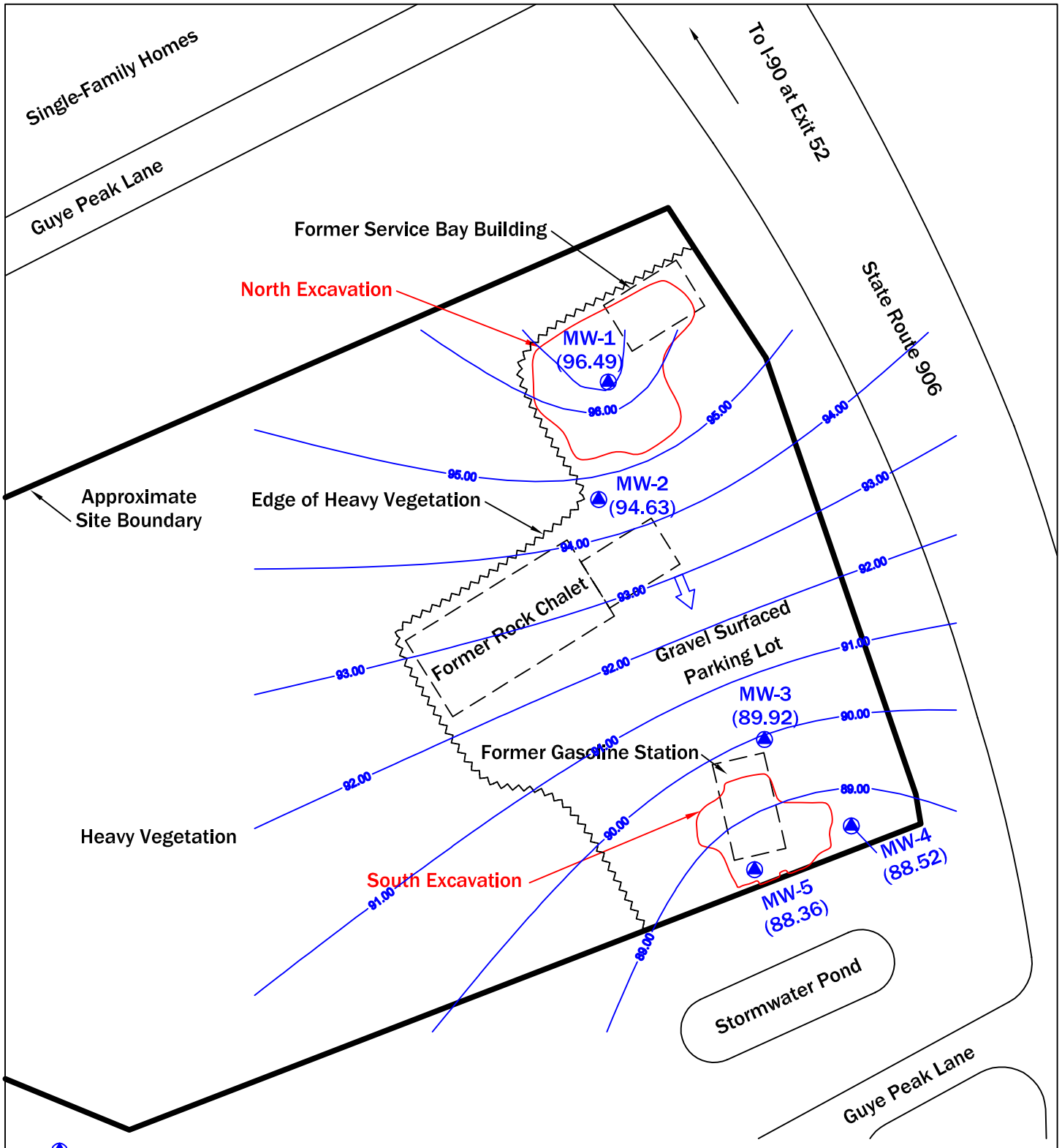
Approximate Scale: 1"=2000'

0 100 2000 4000

N

The Riley Group, Inc.
17522 Bothell Way Northeast, Suite A
Bothell, Washington 98011
Phone: 425.415.0551 ♦ Fax: 425.415.0311

Snoqualmie Summit Inn Property		Figure 1
Project Number 2008-321C	Site Vicinity Map	Date Drawn: 02/2011
Address: SR 906, Snoqualmie Pass, Washington		



(96.49) = Groundwater Monitoring Well Location by RGI 07/29/10 & 07/30/10
Groundwater elevation measured on January 26, 2011 given in parenthesis.

— (90.00) — = Groundwater contours generated using Surfer Software (based on Kriging method). Contours based on January 26, 2011 water level measurements.

⇨ = Groundwater Flow Direction

Approximate Scale: 1"=80'

0 40 80 160

N

The Riley Group, Inc.
17522 Bothell Way Northeast, Suite A
Bothell, Washington 98011
Phone: 425.415.0551 ♦ Fax: 425.415.0311

Snoqualmie Summit Inn Property		Figure 2
Project Number 2008-321C	Site Plan with Groundwater Contours, January 2011	Date Drawn: 02/2011
Address: SR 906, Snoqualmie Pass, Washington		

Table 1 Summary of Groundwater Grab Sample Results.
Snoqualmie Summit Inn Property, SR 906, Snoqualmie Pass, Washington
The Riley Group, Inc. Project #2008-321C

Sample Number	Sample Date	TOC	DTW	GW Elev	PID (ppmv)	Gasoline range TPH	BTEX				Diesel TPH	Oil TPH	Other VOCs	cPAH	PCBs	Total Arsenic	Dissolved Arsenic	Total Lead	Dissolved Lead
							B	T	E	X									
MW-1																			
MW-1	01/26/11	97.11	0.62	96.49	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	1.04	ND<1	ND<1	ND<1
MW-1	10/28/10	97.11	1	96.11	0.00	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	1.53	ND<1	ND<1	ND<1
MW-1	07/30/10	97.11	5.98	91.13	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<100	ND<500	ND	Naphthalene = 0.32	ND<0.1	**32.2**	**18.1**	**73.7**	ND<1
MW-2																			
MW-2	01/26/11	95.20	0.57	94.63	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	ND<1	ND<1	1.17	ND<1
MW-2	10/28/10	95.20	0.71	94.49	0.00	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	ND<1	ND<1	ND<1	ND<1
MW-2	07/30/10	95.20	4.61	90.59	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<100	ND<500	Acetone = 30	Naphthalene = 0.26 Phenanthrene = 0.11	ND<0.1	**91.6**	1.43	**104**	ND<1
MW-3																			
MW-3	01/26/11	94.97	5.05	89.92	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	**15.2**	**10.4**	ND<1	ND<1
MW-3	10/28/10	94.97	5.28	89.69	0.00	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	**18.4**	**16.6**	ND<1	ND<1
MW-3	07/30/10	94.97	6.90	88.07	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<100	ND<500	ND	ND<0.1	ND<0.1	**69.9**	**5.55**	**81.1**	ND<1
MW-4																			
MW-4	01/26/11	94.12	5.6	88.52	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	**12.7**	**7.25**	3.69	ND<1
MW-4	10/28/10	94.12	5.85	88.27	0.00	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	**32.6**	4.88	**15.3**	ND<1
MW-4	07/30/10	94.12	7.02	87.10	---	ND<100	0.35	ND<1	ND<1	ND<2	ND<100	ND<500	Acetone = 45 p-Isopropyltoluene = 6.4	ND<0.1	ND<0.1	**123**	**16.8**	**69.9**	ND<1
MW-5																			
MW-5	01/26/11	94.16	5.8	88.36	---	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	1.63	1.7	ND<1	ND<1
MW-5	10/28/10	94.16	6.05	88.11	0.00	ND<100	0.84	ND<1	ND<1	ND<2	ND<50	ND<250	ND	ND<0.1	---	2.41	1.9	ND<1	ND<1
MW-5	07/30/10	94.16	7.14	87.02	---	ND<100	0.92	ND<1	ND<1	ND<2	ND<100	ND<500	ND	ND<0.1	ND<0.1	3.00	2.72	ND<1	ND<1
MTCA Method A/B Groundwater Cleanup Levels						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**Acetone = 800***	**Naphthalene = 160 Phenanthrene = n/a**	**Analyte Specific**	**5**	**5**	**15**	**15**

Samples collected by RGI field staff using a peristaltic pump under low flow conditions.
Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).
TOC = Top of Casing Elevation in feet. Relative to arbitrary datum.
DTW = Depth to Water below TOC in feet
PID = Photoionization Detector - ppmv (parts per million volumetric)
TPH = total petroleum hydrocarbons.
Gasoline TPH determined using Ecology Test Method NWTPH Gx.
Diesel and Oil TPH determined using Ecology Test Method NWTPH Dx with silica gel cleanup
BTEX (benzene, toluene, ethylbenzene, and xylenes) and VOCs (Volatile Organic Compounds) determined using EPA Test Method 8260C.
cPAH (carcinogenic Polynuclear Aromatic Hydrocarbons) determined using EPA Test Method 8270D SIM.
PCBs (Polychlorinated Biphenyls) determined using EPA Test Method 8082A.
Arsenic and Lead determined using EPA Method 200.8.
ND = Not Detected at noted analytical detection limit.
--- Not analyzed or not applicable.
[1] The higher cleanup level is applicable if no benzene is detected in groundwater.
* Groundwater Cleanup Level for Acetone is a Method B value.
MTCA Cleanup Level = Ecology Model Toxics Control Act Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).
Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Groundwater Cleanup Levels.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
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3012 16th Avenue West
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February 8, 2011

Fred Becker, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr. Becker:

Included are the results from the testing of material submitted on January 27, 2011 from the Snoqualmie Pass, 2008-321C, F&BI 101277 project. There are 35 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
TRG0208R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 27, 2011 by Friedman & Bruya, Inc. from the The Riley Group Snoqualmie Pass, 2008-321C project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
101277-01	MW-1
101277-02	MW-2
101277-03	MW-3
101277-04	MW-4
101277-05	MW-5

All quality control requirements were acceptable.

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted: 02/07/11
Date Analyzed: 02/07/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW-1 101277-01	<100	83
MW-2 101277-02	<100	82
MW-3 101277-03	<100	69
MW-4 101277-04	<100	83
MW-5 101277-05	<100	86
Method Blank 01-0243 MB	<100	80

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted: 02/01/11
Date Analyzed: 02/01/11

RESULTS FROM THE ANALYSIS OF 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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-1 101277-01	<50	<250	89
MW-2 101277-02	<50	<250	87
MW-3 101277-03	<50	<250	102
MW-4 101277-04	<50	<250	87
MW-5 101277-05	<50	<250	93
Method Blank 01-0175 MB	<50	<250	90

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-01
Date Analyzed:	01/31/11	Data File:	101277-01.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-02
Date Analyzed:	01/31/11	Data File:	101277-02.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-3	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-03
Date Analyzed:	01/31/11	Data File:	101277-03.058
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	10.4
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-04
Date Analyzed:	01/31/11	Data File:	101277-04.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	7.25
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-05
Date Analyzed:	01/31/11	Data File:	101277-05.059
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	87	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.70
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	I1-61 mb
Date Analyzed:	01/31/11	Data File:	I1-61 mb.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	101277-01
Date Analyzed:	01/31/11	Data File:	101277-01.061
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.04
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	101277-02
Date Analyzed:	01/31/11	Data File:	101277-02.062
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	1.17

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-3	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	101277-03
Date Analyzed:	01/31/11	Data File:	101277-03.063
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	15.2
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	101277-04
Date Analyzed:	01/31/11	Data File:	101277-04.064
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	12.7
Lead	3.69

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	101277-05
Date Analyzed:	01/31/11	Data File:	101277-05.065
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.63
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/31/11	Lab ID:	I1-65 mb
Date Analyzed:	01/31/11	Data File:	I1-65 mb.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-01
Date Analyzed:	01/29/11	Data File:	012832.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

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

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-02
Date Analyzed:	01/29/11	Data File:	012833.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	63	127
Toluene-d8	97	65	127
4-Bromofluorobenzene	100	69	127

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-3	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-03
Date Analyzed:	01/29/11	Data File:	012834.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	99	65	127
4-Bromofluorobenzene	105	69	127

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-04
Date Analyzed:	01/29/11	Data File:	012835.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	63	127
Toluene-d8	96	65	127
4-Bromofluorobenzene	100	69	127

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	101277-05
Date Analyzed:	01/29/11	Data File:	012836.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	98	65	127
4-Bromofluorobenzene	106	69	127

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/28/11	Lab ID:	01147 mb
Date Analyzed:	01/29/11	Data File:	012831.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	63	127
Toluene-d8	97	65	127
4-Bromofluorobenzene	103	69	127

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

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	101277-01
Date Analyzed:	01/28/11	Data File:	012817.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	96	50	150
Benzo(a)anthracene-d12	117	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	101277-02
Date Analyzed:	01/28/11	Data File:	012818.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	106	50	150
Benzo(a)anthracene-d12	131 vo	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-3	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	101277-03
Date Analyzed:	01/31/11	Data File:	013108.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	103	50	150
Benzo(a)anthracene-d12	123	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	101277-04
Date Analyzed:	01/28/11	Data File:	012820.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	50	150
Benzo(a)anthracene-d12	121	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5	Client:	The Riley Group
Date Received:	01/27/11	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	101277-05
Date Analyzed:	01/28/11	Data File:	012821.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	50	150
Benzo(a)anthracene-d12	122	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Snoqualmie Pass, 2008-321C, F&BI 101277
Date Extracted:	01/27/11	Lab ID:	01171 mb
Date Analyzed:	01/31/11	Data File:	013107.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	99	50	150
Benzo(a)anthracene-d12	118	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING NWTPH-Gx

Laboratory Code: 101277-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	81	69-134

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	93	107	58-134	14

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

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

Laboratory Code: 101277-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	7.25	109 b	110 b	56-167	1 b
Lead	ug/L (ppb)	10	<1	100	100	76-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	101	55-128
Lead	ug/L (ppb)	10	100	67-135

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

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

Laboratory Code: 101270-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	1.70	110	102	56-167	8
Lead	ug/L (ppb)	10	1.10	101	98	76-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	106	55-128
Lead	ug/L (ppb)	10	106	67-135

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

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

Laboratory Code: 101277-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	92	28-164
Chloromethane	ug/L (ppb)	50	<10	109	26-167
Vinyl chloride	ug/L (ppb)	50	<0.2	66	37-171
Bromomethane	ug/L (ppb)	50	<1	102	24-165
Chloroethane	ug/L (ppb)	50	<1	110	10-172
Trichlorofluoromethane	ug/L (ppb)	50	<1	42	30-199
Acetone	ug/L (ppb)	250	<10	96	19-168
1,1-Dichloroethene	ug/L (ppb)	50	<1	92	35-149
Methylene chloride	ug/L (ppb)	50	<5	95	61-124
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	95	49-139
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	65-128
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	67-127
2,2-Dichloropropane	ug/L (ppb)	50	<1	92	23-163
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	65-139
Chloroform	ug/L (ppb)	50	<1	101	71-127
2-Butanone (MEK)	ug/L (ppb)	250	<10	103	47-162
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	68-132
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	103	63-135
1,1-Dichloropropene	ug/L (ppb)	50	<1	104	65-127
Carbon tetrachloride	ug/L (ppb)	50	<1	98	55-139
Benzene	ug/L (ppb)	50	<0.35	103	62-144
Trichloroethene	ug/L (ppb)	50	<1	102	68-134
1,2-Dichloropropane	ug/L (ppb)	50	<1	107	73-130
Bromodichloromethane	ug/L (ppb)	50	<1	106	65-135
Dibromomethane	ug/L (ppb)	50	<1	104	65-135
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	56-143
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	104	55-146
Toluene	ug/L (ppb)	50	<1	102	68-131
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	109	63-147
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	106	63-143
2-Hexanone	ug/L (ppb)	250	<10	116	51-149
1,3-Dichloropropane	ug/L (ppb)	50	<1	104	72-126
Tetrachloroethene	ug/L (ppb)	50	<1	101	64-132
Dibromochloromethane	ug/L (ppb)	50	<1	104	65-135
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	104	77-127
Chlorobenzene	ug/L (ppb)	50	<1	105	72-118
Ethylbenzene	ug/L (ppb)	50	<1	105	51-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	72-129
m,p-Xylene	ug/L (ppb)	100	<2	107	72-137
o-Xylene	ug/L (ppb)	50	<1	105	67-133
Styrene	ug/L (ppb)	50	<1	107	73-126
Isopropylbenzene	ug/L (ppb)	50	<1	104	65-135
Bromoform	ug/L (ppb)	50	<1	108	60-136
n-Propylbenzene	ug/L (ppb)	50	<1	104	66-133
Bromobenzene	ug/L (ppb)	50	<1	103	70-129
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	104	72-130
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	109	65-137
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	109	66-135
2-Chlorotoluene	ug/L (ppb)	50	<1	104	62-131
4-Chlorotoluene	ug/L (ppb)	50	<1	103	62-132
tert-Butylbenzene	ug/L (ppb)	50	<1	102	64-135
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	103	69-139
sec-Butylbenzene	ug/L (ppb)	50	<1	101	64-134
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	69-134
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	102	65-126
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	101	65-121
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	107	64-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	114	54-133
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	92	63-141
Hexachlorobutadiene	ug/L (ppb)	50	<1	87	53-140
Naphthalene	ug/L (ppb)	50	<1	100	40-166
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	93	55-148

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	97	102	27-138	5
Chloromethane	ug/L (ppb)	50	101	104	49-125	3
Vinyl chloride	ug/L (ppb)	50	103	108	53-131	5
Bromomethane	ug/L (ppb)	50	95	99	62-148	4
Chloroethane	ug/L (ppb)	50	83	88	30-176	6
Trichlorofluoromethane	ug/L (ppb)	50	101	106	65-172	5
Acetone	ug/L (ppb)	250	102	104	32-177	2
1,1-Dichloroethene	ug/L (ppb)	50	100	104	68-131	4
Methylene chloride	ug/L (ppb)	50	91	95	17-177	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	100	103	54-156	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	105	71-128	3
1,1-Dichloroethane	ug/L (ppb)	50	102	105	74-118	3
2,2-Dichloropropane	ug/L (ppb)	50	100	105	65-150	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	105	74-126	2
Chloroform	ug/L (ppb)	50	102	103	76-118	1
2-Butanone (MEK)	ug/L (ppb)	250	106	104	52-152	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	101	102	77-118	1
1,1,1-Trichloroethane	ug/L (ppb)	50	105	109	77-123	4
1,1-Dichloropropene	ug/L (ppb)	50	102	103	75-122	1
Carbon tetrachloride	ug/L (ppb)	50	110	114	76-126	4
Benzene	ug/L (ppb)	50	101	102	77-121	1
Trichloroethene	ug/L (ppb)	50	102	102	74-119	0
1,2-Dichloropropane	ug/L (ppb)	50	104	104	77-121	0
Bromodichloromethane	ug/L (ppb)	50	107	107	77-129	0
Dibromomethane	ug/L (ppb)	50	102	104	79-121	2
4-Methyl-2-pentanone	ug/L (ppb)	250	107	106	65-135	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	107	108	79-129	1
Toluene	ug/L (ppb)	50	103	102	81-113	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	113	112	90-128	1
1,1,2-Trichloroethane	ug/L (ppb)	50	105	103	89-113	2
2-Hexanone	ug/L (ppb)	250	110	106	58-160	4
1,3-Dichloropropane	ug/L (ppb)	50	103	102	89-113	1
Tetrachloroethene	ug/L (ppb)	50	106	105	77-126	1
Dibromochloromethane	ug/L (ppb)	50	107	107	89-128	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	106	104	88-122	2
Chlorobenzene	ug/L (ppb)	50	102	101	86-118	1
Ethylbenzene	ug/L (ppb)	50	104	103	83-116	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	112	113	86-124	1
m,p-Xylene	ug/L (ppb)	100	107	105	84-120	2
o-Xylene	ug/L (ppb)	50	106	105	83-120	1
Styrene	ug/L (ppb)	50	109	106	87-119	3
Isopropylbenzene	ug/L (ppb)	50	106	105	83-120	1
Bromoform	ug/L (ppb)	50	111	110	77-119	1
n-Propylbenzene	ug/L (ppb)	50	103	101	83-118	2
Bromobenzene	ug/L (ppb)	50	104	100	88-117	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	104	103	85-121	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	106	104	83-115	2
1,2,3-Trichloropropane	ug/L (ppb)	50	106	102	83-114	4
2-Chlorotoluene	ug/L (ppb)	50	103	102	81-116	1
4-Chlorotoluene	ug/L (ppb)	50	103	101	83-117	2
tert-Butylbenzene	ug/L (ppb)	50	102	102	84-118	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	103	102	86-119	1
sec-Butylbenzene	ug/L (ppb)	50	103	103	84-121	0
p-Isopropyltoluene	ug/L (ppb)	50	102	103	85-118	1
1,3-Dichlorobenzene	ug/L (ppb)	50	102	102	85-118	0
1,4-Dichlorobenzene	ug/L (ppb)	50	100	101	85-119	1
1,2-Dichlorobenzene	ug/L (ppb)	50	101	101	81-117	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	110	114	62-136	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	98	101	75-129	3
Hexachlorobutadiene	ug/L (ppb)	50	96	99	72-138	3
Naphthalene	ug/L (ppb)	50	101	104	66-135	3
1,2,3-Trichlorobenzene	ug/L (ppb)	50	101	103	70-133	2

Date of Report: 02/08/11
Date Received: 01/27/11
Project: Snoqualmie Pass, 2008-321C, F&BI 101277

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	91	90	64-100	1
Acenaphthylene	ug/L (ppb)	5	97	95	67-104	2
Acenaphthene	ug/L (ppb)	5	90	90	65-103	0
Fluorene	ug/L (ppb)	5	97	95	64-106	2
Phenanthrene	ug/L (ppb)	5	90	89	66-106	1
Anthracene	ug/L (ppb)	5	95	93	67-112	2
Fluoranthene	ug/L (ppb)	5	102	100	69-116	2
Pyrene	ug/L (ppb)	5	102	100	68-115	2
Benz(a)anthracene	ug/L (ppb)	5	97	93	59-100	4
Chrysene	ug/L (ppb)	5	92	89	66-103	3
Benzo(b)fluoranthene	ug/L (ppb)	5	108	107	59-114	1
Benzo(k)fluoranthene	ug/L (ppb)	5	94	92	55-111	2
Benzo(a)pyrene	ug/L (ppb)	5	109	108	54-111	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	104	115	35-124	10
Dibenz(a,h)anthracene	ug/L (ppb)	5	96	100	35-116	4
Benzo(g,h,i)perylene	ug/L (ppb)	5	94	96	39-114	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

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

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

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

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

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

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

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

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

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

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

10/277

SAMPLE CHAIN OF CUSTODY

ME 01/27/11

Page # 1 of 1

AI3/1B04/VL4

Send Report To FRED BECKER

Company THE RILEY GROUP, INC.

Address 17522 BOTHELL WAY NE

City, State, ZIP BOTHELL WA 98011

Phone #425-415-0551 Fax #425-415-0311

SAMPLERS (signature)

PROJECT NAME/NO. SNOQUALMIE PASS 2008-321C

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	LEAD Pb	ARSENIC As					Notes
						ANALYSES REQUESTED												
MW-1	01 A-I	1/26/11	17:15	H_2O	9	X	X		X	X		X	X					
MW-2	02 A-I	"	15:50	"	9	X	X		X	X		X	X					
MW-3	03 A-I	"	10:50	"	9	X	X		X	X		X	X					FILTER TOTAL
MW-4	04 A-I	"	12:20	"	9	X	X		X	X		X	X					AND DISSOLVED
MW-5	05 A-I	"	14:00	"	9	X	X		X	X		X	X.					Pb AND As
											Samples received at 3 °C							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	ERIC L. WOODS	RGI	1/27/11	8:51
Received by:	ERIC YOUNG	F&B	1/27/11	13:00
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
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