



FIFTH QUARTERLY REPORT GROUNDWATER MONITORING RITE-AID SITE

**Previous P&K Auto Facility
1415 Gillespie
Richland, WA**

Facility/
VCP Site ID 38448497

UST# 11232

April 18, 2007



Prepared By:

**GeoPro Geologic Services LLC
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Project Number 060322D

TABLE OF CONTENTS

	<u>Page</u>
LIST OF ILLUSTRATIONS	2
1. INTRODUCTION	3
1.1. PURPOSE AND SCOPE OF WORK	3
1.2. SITE DESCRIPTION	3
2. GROUNDWATER MONITOR WELLS.....	4
2.1. LOCATION MAP	4
3. GROUNDWATER GRADIENT	5
4. GROUNDWATER SAMPLING	5
4.1. SAMPLE COLLECTION	5
4.2. LABORATORY ANALYSIS	5
5. CONCLUSIONS	6
6. LIMITATIONS.....	6

LIST OF ILLUSTRATIONS

TABLES

Table 1 - Monitor Wells Static Water Levels	4
Table 2 – Summary Laboratory Groundwater Analysis	5

FIGURES

Figure 1 – Location Topographic Map (Richland USGS 7.5' Quad)	3
Figure 2 – Monitor Well Location Image	4
Figure 3 – Groundwater Gradient	5

APPENDICES

Appendix A – Laboratory Report

1. INTRODUCTION

1.1. PURPOSE AND SCOPE OF WORK

The purpose of this report is to summarize the fifth quarterly groundwater sampling of three (3) groundwater monitoring wells installed on Rite-Aid's (previously P&K Auto Facility) property ("Site") located at 1415 Gillespie, Richland, Benton County, Washington. The three wells were installed on September 12, 2005 pursuant to a request by Rite-Aid to pursue a Voluntary Cleanup Program ("VCP") to be reviewed by the Washington Department of Ecology ("DOE"). The Site is assigned VCP Number 38448497. Previous work included the excavation and removal of underground storage tanks in April 2005.

1.2. SITE DESCRIPTION

The Rite-Aid property lies approximately one-half mile west of the Columbia River within downtown Richland (see Figure 1 - "Location Topographic Map"). The Site is bounded by commercial businesses and is on the southwest corner of the intersection of Gillespie and Lee Boulevard.

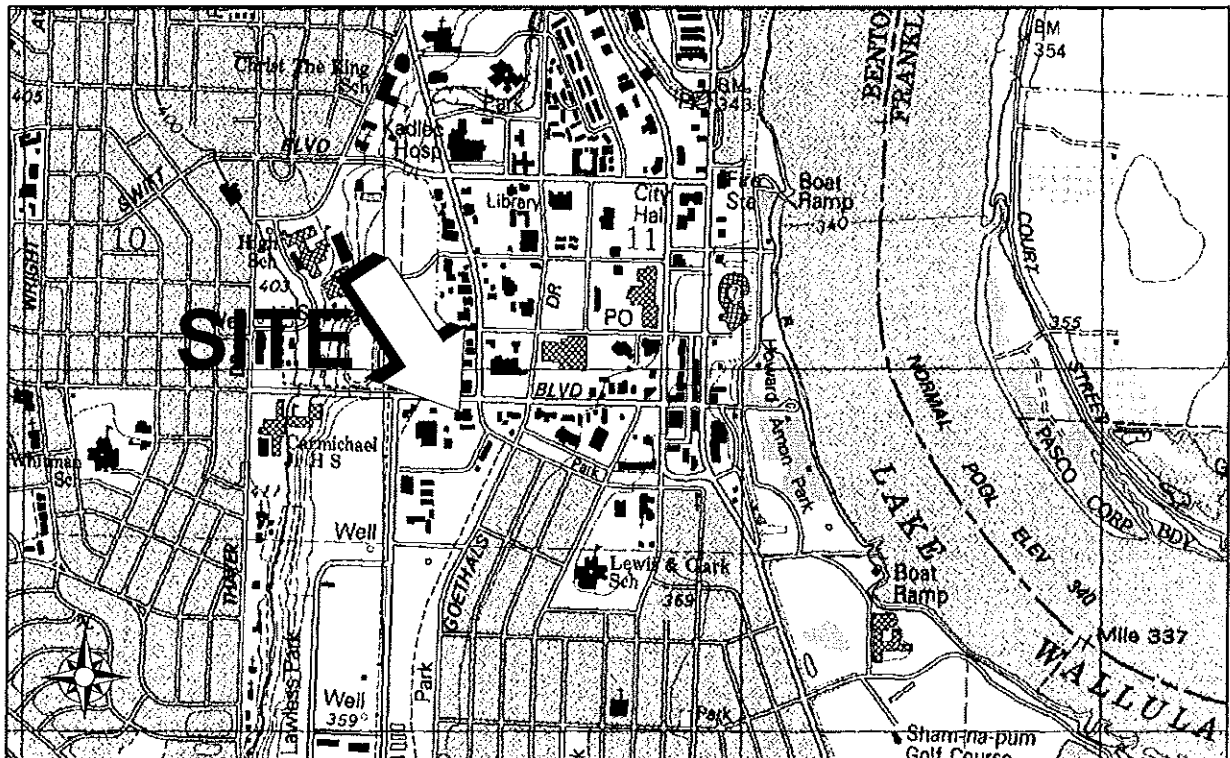


Figure 1 – Location Topographic Map (Richland USGS 7.5' Quad)

2. GROUNDWATER MONITOR WELLS

2.1. LOCATION MAP

The location of monitor wells MW-1, MW-2 and MW-3 are shown in Figure 2 - "Monitor Well Location Image".



Figure 2 – Monitor Well Location Image

The following Table 1 summarizes the static water levels on March 16, 2007, the surveyed elevations of the wells, and the State of Washington well tag numbers.

Table 1 - Monitor Wells Static Water Levels

Monitor Well No.	Well Elevation (MSL)	Static Water Level	Static Water Elevation	WA-DOE Well Tag No.
MW-1	356.33	13.094	343.24	AKY221
MW-2	357.16	14.25	342.91	AKY222
MW-3	355.54	13.50	342.04	AKY223

Note: Elevations are surveyed to a mark on the north side of each PVC monitor pipe. The elevations are based on City of Richland vertical datum monument at intersection of Lee and Stevens at 354.88 ft. MSL.

3. GROUNDWATER GRADIENT

The groundwater gradient is southerly at about 3.0°, as measured from water levels obtained in MW-1, MW-2 and MW-3 (see Figure 3 – “Groundwater Gradient”). The gradient remains southerly since the last quarterly monitoring.

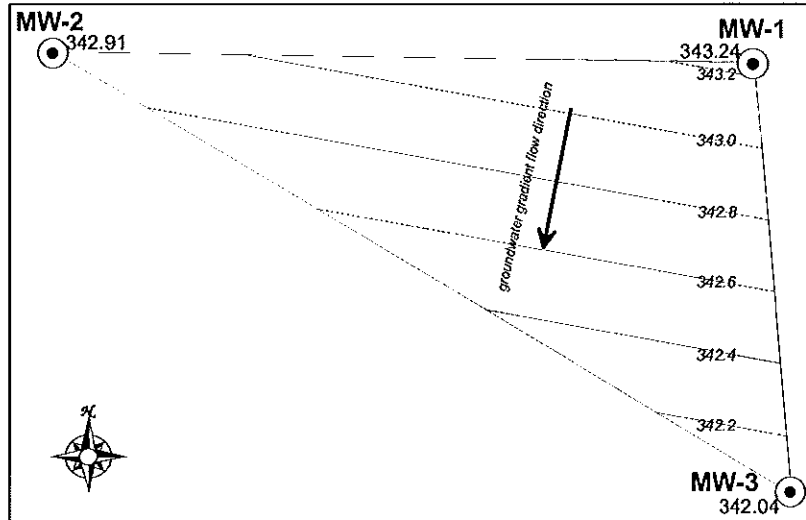


Figure 3 – Groundwater Gradient Map

4. GROUNDWATER SAMPLING

4.1. SAMPLE COLLECTION

Groundwater samples from the monitor wells were collected on March 16, 2007. Samples were collected with new pump tubing and placed in new, lab-furnished, containers with appropriate preservatives where required. Disposable latex gloves were used during sampling. The containers were filled to prevent air-entrapment, labeled, and placed in an ice chest with blu-ice for transport to the laboratory.

4.2. LABORATORY ANALYSIS

The following Table 2 summarizes the results of testing groundwater samples from Monitor Wells MW-1, MW-2 and MW-3 for NWTPH-Gx/BTEX. The laboratory report is included in Appendix A - “Laboratory Report”. Gasoline and gasoline constituents in groundwater continue to be detected in Monitoring Well MW-1 since the last quarterly monitoring.

Table 2 – Summary Laboratory Groundwater Analysis

Monitor Well	Benzene $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Ethyl Benzene $\mu\text{g/L}$	m,p-Xylene $\mu\text{g/L}$	o-Xylene $\mu\text{g/L}$	TPH-Gas $\mu\text{g/L}$
MW-1	<1.0	11	4.1	14	9.6	190
MW-2	<1.0	<1.0	<1.0	<1.0	<1.0	<100
MW-3	<1.0	<1.0	<1.0	<1.0	<1.0	<100

“<” - Not Detected at Practical Quantification Limit (“PQL”) shown

5. CONCLUSIONS

Since September 2005, quarterly groundwater samples collected from monitor well MW-1 contains detectable gasoline or gasoline constituents benzene (except Q2/Q4), toluene, ethylbenzene (except Q4), or xylenes. Groundwater samples from Monitor Wells MW-2 and MW-3 have not contained detectable gasoline or gasoline constituents. The groundwater gradient is southerly at approximately 3.0 degrees.

The detection of gasoline and gasoline constituents in MW-1, and the non-detection of these constituents in the downgradient well MW-3, may indicate a relatively localized zone of contamination, either vertical or horizontal, or both. The variation in gasoline constituents, including the increases and decreases over time by comparing quarterly samples, may indicate a flux system and could mean a fairly rapid dissolution and/or degradation in the geologic environment near MW-1.

6. LIMITATIONS

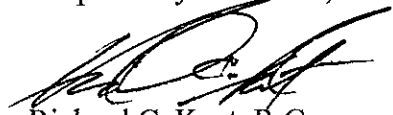
This report is restricted to environmental investigations as presented herein. Drilling and excavation services were performed under separate agreement with the landowner and Consultant makes no claim of responsibility for services provided by drilling services or others.

This report has been prepared for the landowner(s) or landowner's agents and Consultant does not accept liability or responsibility for detachment, partial use or separation by third parties and such use shall be at user's sole risk. Services have been performed, findings obtained, and recommendations prepared in a manner generally exercised by members of the profession under similar conditions at the time services were rendered. Findings apply only to present conditions, and opinions expressed are subject to revision when additional or new information is submitted in writing by the landowner or Client. This warranty is in lieu of all other warranties, either expressed or implied.

It is possible that explorations failed to reveal the presence of hazardous materials at areas where hazardous materials were assumed, suspected or expected to exist (hazardous as used herein shall also mean contaminated and polluted). Landowner and Client understand that failure to sample soil or install groundwater monitoring well locations through appropriate and mutually agreed-upon techniques does not guarantee that hazardous materials have, or will be, detected at such locations. Similarly, areas which in fact are unaffected by hazardous materials at the time of this report, may later, due to natural causes or human intervention, become contaminated. Consultant is not responsible for failing to locate hazardous materials which have not discovered at the time of this report or in the future.

This report should not be construed as presenting a value to the Site nor the condition as to construction capabilities. In the event of changes in future development plans as understood at the time of this report, the conclusions and recommendations made herein shall be invalid until given the opportunity to review and modify this report in writing. Portions of an Agreement to perform professional services for the Client may or may not be disclosed in this report.

Respectfully submitted,


Richard C. Kent, R.G.
GeoPro Geologic Services LLC



APPENDIX A

LABORATORY REPORT



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 23, 2007

Peter Trabusiner
Blue Mountain Environmental, Inc.
1500 Adair Drive
Richland, WA 99352

Re: Analytical Data for Project E2007/0204
Laboratory Reference No. 0703-154

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on March 20, 2007.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", followed by a long horizontal line.

David Baumeister
Project Manager

Enclosures

Date of Report: March 23, 2007
Samples Submitted: March 20, 2007
Laboratory Reference: 0703-154
Project: E2007/0204

Case Narrative

Samples were collected on March 16, 2007 and received by the laboratory on March 20, 2007. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 23, 2007
Samples Submitted: March 20, 2007
Laboratory Reference: 0703-154
Project: E2007/0204

NWTPH-Gx/BTEX

Date Extracted: 3-20-07
Date Analyzed: 3-20-07

Matrix: Water
Units: ug/L (ppb)

Client ID:	316-01	316-02
Lab ID:	03-154-01	03-154-02

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	11		1.0	ND		1.0
Ethyl Benzene	4.1		1.0	ND		1.0
m,p-Xylene	14		1.0	ND		1.0
o-Xylene	9.6		1.0	ND		1.0
TPH-Gas	190		100	ND		100
Surrogate Recovery:						
Fluorobenzene	107%			107%		

Date of Report: March 23, 2007
Samples Submitted: March 20, 2007
Laboratory Reference: 0703-154
Project: E2007/0204

NWTPH-Gx/BTEX

Date Extracted: 3-20-07
Date Analyzed: 3-20-07

Matrix: Water
Units: ug/L (ppb)

Client ID: 316-03
Lab ID: 03-154-03

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		1.0
o-Xylene	ND		1.0
TPH-Gas	ND		100
Surrogate Recovery:			
Fluorobenzene	108%		

Date of Report: March 23, 2007
Samples Submitted: March 20, 2007
Laboratory Reference: 0703-154
Project: E2007/0204

**NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL**

Date Extracted: 3-20-07
Date Analyzed: 3-20-07

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0320W2

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		1.0
o-Xylene	ND		1.0
TPH-Gas	ND		100
Surrogate Recovery:			
Fluorobenzene	108%		

Date of Report: March 23, 2007
Samples Submitted: March 20, 2007
Laboratory Reference: 0703-154
Project: E2007/0204

**NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL**

Date Extracted: 3-20-07
Date Analyzed: 3-20-07

Matrix: Water
Units: ug/L (ppb)

Lab ID:	03-133-21 Original	03-133-21 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	ND	ND	NA	
Surrogate Recovery: Fluorobenzene	108%	107%		

Date of Report: March 23, 2007
 Samples Submitted: March 20, 2007
 Laboratory Reference: 0703-154
 Project: E2007/0204

**NWTPH-Gx/BTEX
 MS/MSD QUALITY CONTROL**

Date Extracted: 3-20-07
 Date Analyzed: 3-20-07

Matrix: Water
 Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	03-123-03 MS	Percent Recovery	03-123-03 MSD	Percent Recovery	RPD	Flags
Benzene	53.4	107	54.1	108	1	
Toluene	53.9	108	54.5	109	1	
Ethyl Benzene	54.4	109	54.5	109	0	
m,p-Xylene	55.0	110	55.2	110	0	
o-Xylene	55.2	110	54.9	110	1	

Surrogate Recovery:
 Fluorobenzene 108% 109%



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference

