

Golder Associates Inc.

18300 NE Union Hill Road, Suite 200
Redmond, WA USA 98052-3333
Telephone (425) 883-0777
Fax (425) 882-5498
www.golder.com



July 16, 2003

Our Ref: 013-1622.100

John Bails
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Attention: Mr. John Bails

**RE: JUNE 2003 GROUNDWATER SAMPLING RESULTS,
FRONTIER BANK - KIRKLAND BRANCH
132 KIRKLAND AVE., KIRKLAND
ECOLOGY UST#368819**

RELEASE # 368821
KEY BANK, KIRKLAND
FRONTIER BANK
KIRKLAND
UST # 368819

Dear Mr. Bails:

This letter provides the results of groundwater monitoring conducted at the Frontier Bank, Kirkland Branch site (formerly Key Bank), located at 132 Kirkland Avenue, Kirkland, Washington. Groundwater monitoring is being conducted in accordance with the Washington Department of Ecology (Ecology) "No Further Action (NFA)" letter dated April 11, 1997, and the WDOE letter dated February 14, 2000, which recommended groundwater monitoring be continued beyond the initial three year period required in the NFA letter. Frontier Bank has contracted with Golder Associates Inc. (Golder) to perform groundwater monitoring at the site.

On June 25, 2003, Golder personnel collected groundwater quality samples from the three existing site monitoring wells (Figure 1). Static water levels were measured in the three wells prior to sample collection activities. The monitoring wells were purged and sampled using a Grundfos® submersible pump following Golder Technical Procedure TP 1.2-20, "Collection of Groundwater Quality Samples" and EPA guidance procedures for low-flow sampling¹. Static water levels and field parameter readings at the time of sample collection are provided on Table 1. Table 1 also contains static water levels and field measurements from previous sampling events.

After sample collection, labels were affixed to the sample vials, and the vials were placed into a cooler with ice. Golder personnel transported the samples under chain of custody procedures to OnSite Environmental Inc., located in Redmond, Washington. Samples were analyzed for total petroleum hydrocarbons (TPH) in the gasoline range, benzene, toluene, ethylbenzene and xylenes (BTEX) by method NWTPH-Gx/BTEX.

RECEIVED

JUL 18 2003

¹ USEPA. 1995. *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedure*. EPA/540/S-95/504, December 1995.

DEPT OF ECOLOGY



A copy of the laboratory analytical results is attached. Table 2 provides a compilation of historical groundwater sampling results collected since issuance of the NFA letter.

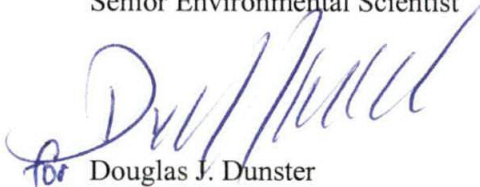
The next groundwater sampling at the site is scheduled for June 2004. If you have any questions please contact Gary Zimmerman or Douglas Dunster at (425) 883-0777.

Sincerely,

GOLDER ASSOCIATES INC.



Gary L. Zimmerman
Senior Environmental Scientist



Douglas J. Dunster
Principal

cc: Mr. David J. Lawson, Frontier Bank

Attachments: Table 1, Table 2, Figure 1, OnSite Environmental Inc., Laboratory Results

TABLES

SUMMARY OF FIELD PARAMETERS
FRONTIER BANK/132 KIRKLAND AVE/WA

MW-1

Date	W.L. (ft BMP)	pH	Temp (deg C)	Cond (mS/cm)	D.O. (mg/L)	Relative SWL Elev.
6/26/1997	8.49	5.95	16.5	0.473	1.6	6.51
12/16/1997	7.77	6.30	17.1	0.389	1.4	7.23
7/1/1998	9.00	6.39	17.2	0.448	-	6
12/17/1998	7.12	6.33	16.3	0.458	1.3	7.88
7/18/1999	8.89	6.29	16.6	0.429	1.1	6.11
12/23/1999	7.76	6.01	16.2	0.386	1.55	7.24
9/20/2001	10.7	6.39	17.6	0.211	-	4.30
6/12/2002	9.06	6.23	15.9	0.557	0.5	5.94
6/25/2003	9.60	6.41	16.7	0.122	0.20	5.40

MW-2

Date	W.L. (ft BMP)	pH	Temp (deg C)	Cond (mS/cm)	D.O. (mg/L)	Relative SWL Elev.
6/26/1997	6.58	6.16	19.5	0.553	1.7	4.79
12/16/1997	6.64	6.50	15.7	0.537	1.6	4.73
7/1/1998	6.91	6.36	18.9	0.517	-	4.46
12/17/1998	5.55	6.47	16.8	0.541	0.94	5.82
7/18/1999	6.48	6.19	17.5	0.544	2.2	4.89
12/23/1999	5.9	6.47	16.5	0.468	1.03	5.47
9/20/2001	7.27	6.48	20.1	0.379	-	4.10
6/12/2002	6.26	6.45	18.1	0.745	0.34	5.11
6/25/2003	7.20	6.6	21.5	0.210	0.20	4.17

MW-3

Date	W.L. (ft BMP)	pH	Temp (deg C)	Cond (mS/cm)	D.O. (mg/L)	Relative SWL Elev.
6/26/1997	11.38	5.85	16.0	0.880	1.4	1.84
12/16/1997	11.70	6.09	16.6	0.788	1.4	1.52
7/1/1998	11.76	6.03	16.6	0.759	-	1.46
12/17/1998	11.11	6.20	17.2	0.915	0.96	2.11
7/18/1999	11.64	5.93	16.1	0.625	1.5	1.58
12/23/1999	11.1	6.23	16.3	0.684	1.1	2.12
9/20/2001	11.53	6.08	17.4	0.277	-	1.69
6/12/2002	9.91	6.08	15.7	0.822	0.3	3.31
6/25/2003	11.51	6.08	15.4	0.136	0.08	1.71

Notes:

W.L. (ft BMP) - Static Water Level in feet below measuring point (top of casing)

Relative SWL Elevation - Based upon relative top of casing elevations of:

MW-1 15
MW-2 11.37
MW-3 13.22

SUMMARY OF SAMPLE ANALYSIS
FRONTIER BANK/132 KRIKLAND AVE/WA

MW-1

Date Sampled	Gasoline Range Hydrocarbons ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	Xylenes ($\mu\text{g/L}$)
MTCA Method A	800	5	1,000	700	1,000
6/26/1997	2,050	134	6.84	16.3	15.0
12/16/1997	2,100	48.9	3.2	14.1	10.6
7/1/1998	2,700	138	< 7.5	< 15	< 15
12/17/1998	1,460	26.6	< 3	13.8	< 8
7/18/1999	1,850	158	< 6.5	< 14	< 16.5
12/23/1999	1,090	56.4	3.07	< 8.52	< 10.4
9/20/2001	2,300	140	<10	15	15
6/12/2002	2,200	140	<10	14	<10
6/25/2003	2,800	190	<10	13	13

MW-2

Date Sampled	Gasoline Range Hydrocarbons ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	Xylenes ($\mu\text{g/L}$)
MTCA Method A	800	5	1,000	700	1,000
6/26/1997	399	1.35	0.849	1.47	1.68
12/16/1997	689	< 2	< 2	< 2	< 4
7/1/1998	494	< 2	< 0.5	< 0.5	< 2.5
12/17/1998	712	< 2	< 1	< 0.5	< 3
7/18/1999	413	< 1	< 2.4	< 0.8	< 2.8
12/23/1999	416	< 1.82	< 0.675	< 1.2	< 4.2
9/20/2001	470	<1.0	<1.0	<1.0	<1.0
6/12/2002	430	<1.0	<1.0	<1.0	1.3
6/25/2003	560	<1.0	<1.0	<1.0	3

MW-3

Date Sampled	Gasoline Range Hydrocarbons ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	Xylenes ($\mu\text{g/L}$)
MTCA Method A	800	5	1,000	700	1,000
6/26/1997	199	56.9	2.18	1.70	5.01
12/16/1997	109	45.2	2.05	1.04	4.43
7/1/1998	109	50.1	1.82	0.654	3.68
12/17/1998	79.9	34.4	1.20	< 0.5	3.04
7/18/1999	72.8	43.4	< 0.6	< 0.5	< 1.0
12/23/1999	65.8	28.7	< 0.5	< 0.5	1.59
9/20/2001	<100	42	<1.0	<1.0	1.2
6/12/2002	<100	27	<1.0	<1.0	1
6/25/2003	<100	42	<1.0	<1.0	1.2

Notes:

MTCA Method A - Model Toxics Control Act Method A Cleanup Levels for Groundwater Table 720-1 of WAC 173-340-900

"<" Indicates compound was not detected.

The number following the "<" is the analysis practical quantitation limit.

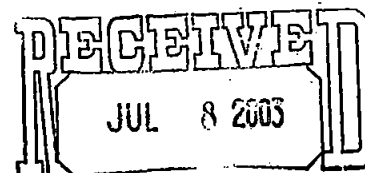
FIGURES



APPENDIX A



**OnSite
Environmental Inc.**
Analytical Testing and Mobile Laboratory Services



Golder Associates

July 3, 2003

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Road
Suite 200
Redmond, WA 98052-3333

Re: Analytical Data for Project 013-1622.100
Laboratory Reference No. 0306-197

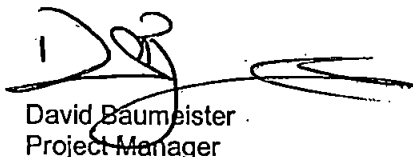
Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on June 25, 2003.

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,



David Baumeister
Project Manager

Enclosures

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Traveler: 06-197
Project: 013-1622.100

Case Narrative

Samples were collected on June 25, 2003, and received by the laboratory on June 25, 2003. They were maintained at the laboratory at a temperature of 4°C.

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

Date of Report: July 3, 2003
 Samples Submitted: June 25, 2003
 Lab Reference: 06-197
 Project: 013-1622.100

NWTPH-Gx/BTEX

Date Extracted: 6-25&26-03
 Date Analyzed: 6-25&26-03

Matrix: Water
 Units: ug/L (ppb)

Client ID: **MW-01**
 Lab ID: 06-197-01

MW-02
 06-197-02

	Result	Flags	PQL	Result	Flags	PQL
Benzene	190		10	ND		1.0
Toluene	ND		10	ND		1.0
Ethyl Benzene	13		10	ND		1.0
m,p-Xylene	13		10	3.0		1.0
o-Xylene	ND		10	ND		1.0
TPH-Gas	2800		1000	560		100
Surrogate Recovery:						
Fluorobenzene	105%			104%		

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Reference: 06-197
Project: 013-1622.100

NWTPH-Gx/BTEX

Date Extracted: 6-25-03
Date Analyzed: 6-25-03

Matrix: Water
Units: ug/L (ppb)

Client ID: MW-03
Lab ID: 06-197-03

Trip Blank
06-197-04

	Result	Flags	PQL	Result	Flags	PQL
Benzene	42		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	1.2		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery: Fluorobenzene	106%			99%		

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Reference: 06-197
Project: 013-1622.100

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

Date Extracted: 6-25-03
Date Analyzed: 6-25-03

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0625W1

	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	99%		

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Reference: 06-197
Project: 013-1622.100

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

Date Extracted: 6-26-03
Date Analyzed: 6-26-03

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0626W1

	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 101%

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Reference: 06-197
Project: 013-1622.100

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

Date Extracted: 6-25-03
Date Analyzed: 6-25-03

Matrix: Water
Units: ug/L (ppb)

Lab ID:	06-182-23 Original	06-182-23 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	103%	106%		

Date of Report: July 3, 2003
Samples Submitted: June 25, 2003
Lab Reference: 06-197
Project: 013-1622.100

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

Date Extracted: 6-25-03
Date Analyzed: 6-25-03

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	06-182-23 MS	Percent Recovery	06-182-23 MSD	Percent Recovery	RPD	Flags
Benzene	54.5	109	55.6	111	2	
Toluene	55.3	111	56.4	113	2	
Ethyl Benzene	56.0	112	57.2	114	2	
m,p-Xylene	55.9	112	56.9	114	2	
o-Xylene	55.5	111	56.6	113	2	

Surrogate Recovery:

Fluorobenzene	109%	108%
---------------	------	------



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.
- D - Data from 1:___ dilution.
- 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 outside the defined gasoline range are present in the sample.
- 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 is outside control limits due to sample inhomogeneity.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with a silica gel/acid cleanup procedure.
- Z -
- ND - Not Detected at PQL
- MRL - Method Reporting Limit
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Page 1 of 1

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day



☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

☐ _____
(other)

06-197

Requested Analysis

Signature		Company	Date	Time	Comments/Special Instructions
Relinquished by		Golder	6-25-03	1420	
Received by		OSB	6/25/03	1420	
Relinquished by					
Received by					
Relinquished by					
Received by					
Reviewed by/Date		Reviewed by/Date			Chromatograms with final report <input type="checkbox"/>

DISTRIBUTION LEGEND: White - Original Copy Yellow - Read Only Copy Client