PNG ENVIRONMENTAL, INC.

February 16, 2005

1052-01

Mr. Rob Grenley
Grenley Stewart Resources
1019 Pacific Avenue, 13th Floor
Tacoma, Washington 98402-4443

Subject: **Quarterly Groundwater Monitoring Report - February 2, 2005**
Fife Metroplex Card Lock Fuel Sales Facility
3200 20th Street East
Fife, Washington
VCP Identification Number SW0610

Dear Mr. Grenley:

This letter documents the results of the quarterly groundwater sampling event at the above referenced site (Figure 1). This work was conducted under Washington State Department of Ecology's Voluntary Cleanup Program.

The scope of work included:

- Collecting depth to water measurements at the six site monitoring wells.
- Collecting groundwater samples from each of the six site monitoring wells.

GROUNDWATER CONDITIONS

Water levels were measured prior to sample collection on February 2, 2005. Groundwater measurements in the site wells and drainage ditch ranged between 2.16 to 7.81 feet below ground surface, as summarized on Table 1. Groundwater flow is towards the drainage ditch with a gradient of approximately 0.010 feet per foot (ft/ft). A plot of groundwater elevation contours for February 2, 2005 is shown on Figure 1.

Groundwater Sampling

On February 2, 2005, PNG Environmental, Inc. (PNG) collected groundwater samples from the six site monitoring wells. This sampling event represents the third quarterly groundwater sampling event after the second application of ORC in to the subsurface at the site. Prior to sampling, the cap of each well was removed and the water was allowed to stabilize prior to collecting depth to water measurements. The volume of water in the wells that were sampled was calculated and water was purged with a peristaltic pump. A minimum of three casing volumes of water was removed from the wells prior to sample collection. A new length of LDPE tubing was used in each well. The water purged from each well was relatively clear and there was no noticeable sheen or chemical odor observed during sampling activities. All purge water generated during sampling activities was placed in a 55-gallon drum.

Groundwater samples from the wells were collected with new, disposable polyethylene bailers. Samples were carefully transferred into laboratory-prepared sample containers. The samples were placed in an iced cooler and delivered to Friedman and Bruya Laboratory (Friedman) and were accompanied by chain-of-custody documentation.

1339 Commerce Avenue, Suite 313
Longview, Washington 98632
TEL (360) 414-0669
FAX (360) 414-0663

Groundwater Sample Collection Forms documenting field activities are included in Attachment A. A copy of the laboratory report and chain-of-custody documentation for this sampling event is included in Attachment B.

The samples were analyzed for the following constituents:

- Gasoline range organics (GRO) using Method NWTPH-Gx.
- Volatile organic compounds using EPA Method 8260B.
- Field parameters: pH, conductivity, temperature, dissolved oxygen, and oxidation reduction potential (ORP).

Analytical Results

GRO (Table 2): GRO was not detected above the laboratory's method reporting limit (MRL) of 50 ug/L in any of the samples collected from the site monitoring wells.

VOCs (Table 2 and Attachment B): Up to six VOCs were detected above the respective MRLs in two wells at the site. Benzene (5 ug/L), MTBE (21 ug/L), Acetone (160 ug/L), 2-Butanone (26 ug/L), 4-Methyl-2-pentanone (10 ug/L), and 1,2,4-trimethylbenzene (3 ug/L) were detected in MW-3. MTBE (72 ug/L) and 1,2,4-trimethylbenzene (2 ug/L) were detected in MW-4. There was no detection of BTEX above the respective MRLs in the trip blank sample.

Dissolved oxygen and ORP (Groundwater Sample Collection Form): Dissolved oxygen levels in the wells ranged between 0.8 to 2.0 parts per million. ORP ranged between -31 to –99 millivolts (Mv).

DISCUSSION

Results of this quarterly groundwater sampling event indicates that the MTCA Method A Cleanup Level for MTBE (20 ug/L) was exceeded in monitoring wells MW-3 (21 ug/L) and MW-4 (72 ug/L). The concentration of benzene at MW-3 (5 ug/L) meets but does not exceed the MTCA Method A Cleanup Level of 5 ug/L. In general, an improving trend in groundwater quality is evident compared to the previous quarterly groundwater sampling events. PNG will continue to perform quarterly groundwater monitoring at the site to monitor remediation progress and see if this trend continues. The next sampling event is tentatively scheduled for May 2005.

PNG appreciates the opportunity to assist you on this project. Please call (360) 414-0669 if you have any questions or comments.

Sincerely,

PNG ENVIRONMENTAL, INC.

Craig Hultgren, R.G.
Project Manager

John Kuhlman, R.G.
Vice President

Attachments: Table 1 - Depth to Groundwater Measurements
Table 2 - Groundwater Analytical Results Summary
Figure 1 - Groundwater Elevation Contour - February 2, 2005
Attachment A - Groundwater Collection Sampling Forms
Attachment B - Laboratory Report and Chain-of-Custody Documentation

cc: Mr. Chuck Cline, Ecology
Ms. Beth Muhler, IUM

Table 1
Depth to Groundwater Measurements
Card Lock Fuel Sales Facility
Fife, Washington

Depth to Groundwater

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	7.50
10/10/2002[b]	9.05	9.24	10.44	9.48	8.75	9.50	NM
1/9/2003[b]	6.22	6.83	7.88	6.91	5.51	6.78	NM
5/20/2003	6.49	7.10	8.15	7.18	5.90	7.16	2.30
8/20/2003	7.11	7.74	8.82	7.84	6.73	7.88	2.82
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	2.03
2/23/2004	5.76	6.46	7.52	6.45	5.07	6.44	1.76
5/13/2004	6.37	6.99	7.99	7.06	5.76	7.01	2.03
8/16/2004	7.05	7.62	8.61	7.56	6.22	7.48	2.74
11/9/2004	6.34	6.85	7.97	6.89	5.62	6.88	2.32
2/2/2005	5.92	6.58	7.81	6.58	4.95	6.56	2.16

Water Elevation

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	7.50
10/10/2002[b]	2.96	3.24	3.21	3.39	2.87	3.40	NM
1/9/2003[b]	5.79	5.65	5.77	5.96	6.11	6.12	NM
5/20/2003	5.52	5.38	5.50	5.69	5.72	5.74	5.20
8/20/2003	4.90	4.74	4.83	5.03	4.89	5.02	4.68
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	2.03
2/23/2004	6.25	6.02	6.13	6.42	6.55	6.46	5.74
5/13/2004	5.64	5.49	5.66	5.81	5.86	5.89	5.47
8/16/2004	4.96	4.86	5.04	5.31	5.40	5.42	4.76
11/9/2004	5.67	5.63	5.68	5.98	6.00	6.02	5.18
2/2/2005	6.09	5.90	5.84	6.29	6.67	6.34	5.34

Notes:
[a] Elevations are relative to a City of Tacoma control point in NE 20th Street
The elevation of the control point is relative to the NGVD29 vertical datum
[b] Measurements collected by Saltbush Environmental Services, Inc.
NM = Not measured

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

le Identification	MTCA	MW-1								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/04
e Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U	50 U
	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	2.4	NA	1 U	1 U	1 U	5 U	1 U	1 U
	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	4.3	NA	2 U	2 U	3 U	15 U	3 U	3 U
ther (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
		NM	NM	NM	NM	NM	NM	NM	10 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

1052

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

ole Identification	MTCA	MW-2								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/0
e Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U	50 U
	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U	3 U
ther (MTBE)	20	1 U	**32**	NA	1	1	1 U	5 U	1 U	1 U
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
		NM	NM	NM	NM	NM	NM	NM	10 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ibenzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

le Identification	MTCA	MW-3								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/0
e Organics	800	**1,300**	**3,900**	**1,600**	680	310	250	300	250 U	51
	5	**360**	**2,900**	**700**	**80**	**390**	**11**	5 U	**14**	**7**
	1,000	1 U	1.1	10 U	1 U	1 U	1 U	5 U	**2** U	1 U
	700	1 U	ND	10 U	1 U	1 U	1 U	5 U	2 U	1 U
	1,000	42	5.4	20 U	2	2	2	15 U	6 U	3 U
ther (MTBE)	20	1 U	**140**	**160**	**170**	**130**	**80**	**73**	**59**	**31**
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	2 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	2 U	1 U
		NM	NM	NM	NM	NM	NM	NM	20 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	2 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	8	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	2 U	4

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

ole Identification	MTCA	MW-4								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/0
e Organics	800	100 U	ND	50 U	250 U	50 U	200	250 U	250 U	50 U
	5	14	**33**	**11**	4	1	**7**	5 U	1 U	1 U
	1,000	1 U	ND	1 U	1 U	6	6	5 U	1 U	1 U
	700	1 U	ND	1 U	1 U	1 U	9	7	2	1 U
	1,000	2	ND	2 U	2 U	6	56	39	11	1
ther (MTBE)	20	1 U	**160**	**130**	**140**	**140**	**90**	**93**	**110**	**110**
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
		NM	NM	NM	NM	NM	NM	NM	10 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	3	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

ole Identification	MTCA	MW-5								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/0
e Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U	50 U
	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U	3 U
ther (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
		NM	NM	NM	NM	NM	NM	NM	10 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U

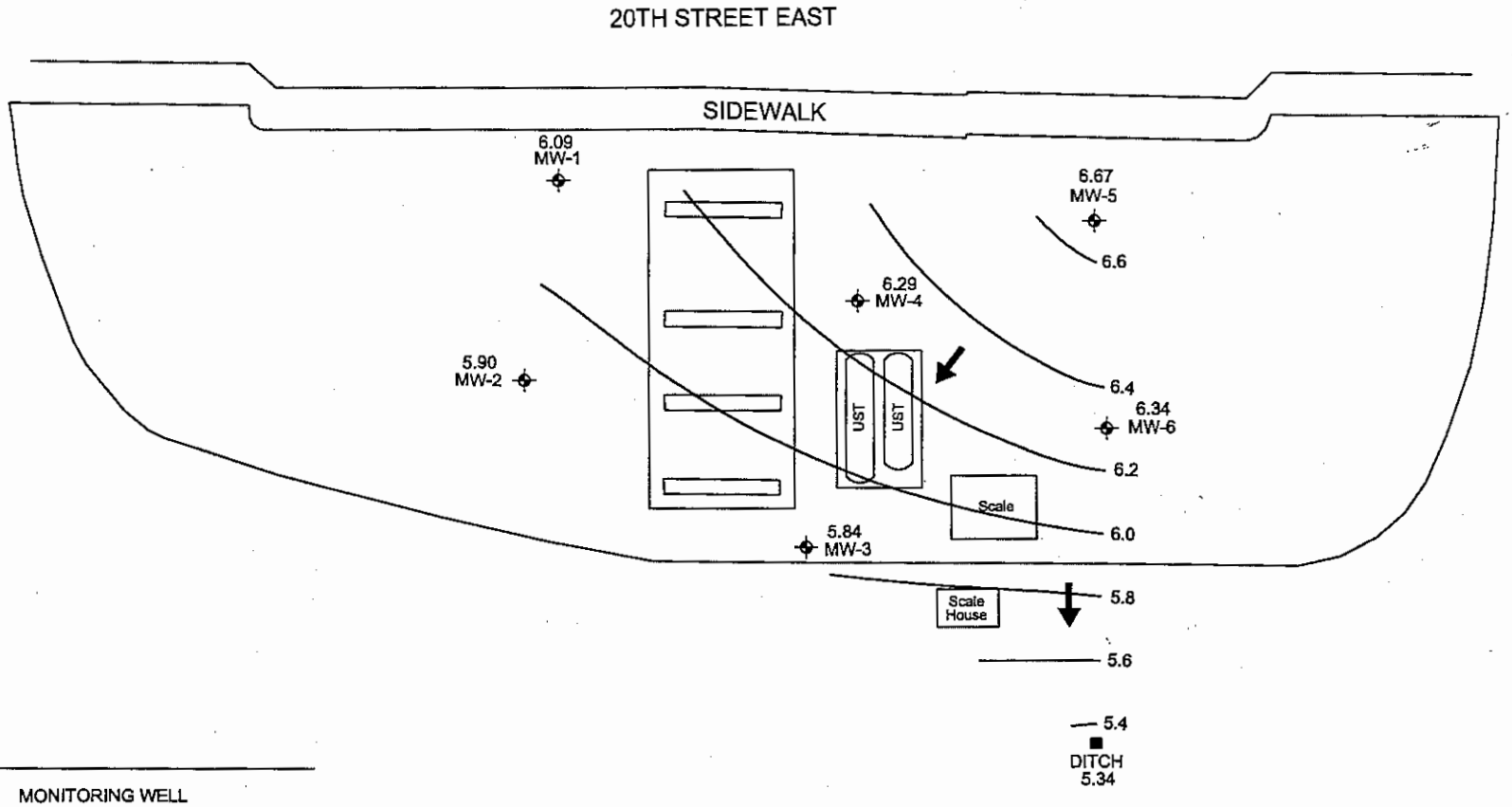
Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

le Identification	MTCA	MW-6								
Date Sampled	Method A Cleanup Standard	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04	11/09/04
e Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U	50 U
	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U	3 U
ther (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U	1 U
ane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
ane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
		NM	NM	NM	NM	NM	NM	NM	10 L	10 L
	160	NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U
benzene		NM	NM	NM	NM	NM	NM	NM	1 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range organics NWTPH-Gx
VOCs by EPA Method 8260B

1052



MONITORING WELL

GROUNDWATER ELEVATION CONTOUR

GROUNDWATER ELEVATION

PUMP ISLAND

DITCH

GROUNDWATER FLOW DIRECTION

NOTE:
BASE MAP FROM BLUHM & ASSOCIATES
LAND SURVEYORS, INC. JUNE 13, 2003.

APPROXIMATE SCALE IN FEET

0 40

PNG ENVIRONMENTAL INC. 1339 Commerce Avenue, Suite 313 TEL (360) 414-0669 Longview, Washington 98632 FAX (360) 414-0663	DATE: 2-15-05 FILE NAME: 1052-01 DRAWN BY: JJT APPROVED BY: CH	FIFE CARDLOCK FUEL FACILITY 3200 20TH ST. EAST FIFE, WASHINGTON	GROUNDWATER ELEVATION CONTOUR FEBRUARY 2, 2005	

ATTACHMENT A
GROUNDWATER SAMPLE COLLECTION FORMS

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW- 1 | Project name FIFE
Sample no. MW- 1 | Project no. 1052-01
Date 02/02/05 | Collector JMG

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter ✱ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 5.92 ft
Casing volume 9.08 ft (H_2O) X 0.16 gpf = 1.45 X 3 = 4.35
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ✱ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ✱ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1204 Purge stop time 1210 Purge rate <1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✱ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	7.23	61.8	1741 µs	Yellow H2S odor
2	7.25	58.2	1742	clearing
3	6.97	56.0	1333	
4.5+	7.02	57.0	1666	

Dissolved Oxygen 0.8 Oxygen Reduction Potential -99 mV

Sampling Device

Bailer ✱ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used ✱ Monofilament ☐ Other

Bottles Filled Time 1215

Number	Type			Preservative					Filtration
3	✱ VOA	☐ Amber	☐ Poly	✱ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No

Comments:

Sampler's Signature JMG Date 02/02/05

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW- 2
Sample no. MW- 2
Date 02/02/05

Project name FIFE
Project no. 1052-01
Collector JMG

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm. ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter * 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 6.58 ft
Casing volume 8.42 ft (H_2O) X 0.16 gpf = 1.34 X 3 = 4.04
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type * Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing * New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1221 Purge stop time 1226 Purge rate [illegible]

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester * Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.74	53.0	2325 [illegible]	[illegible]
2	6.91	57.6	2353	" "
3	6.91	58.4	2323	" "
4+	6.94	58.2	2357	" "

Dissolved Oxygen 1.2 Oxygen Reduction Potential -39

Sampling Device

Bailer * Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used * Monofilament ☐ Other

Bottles Filled Time 1231

Number	Type			Preservative					Filtration
3	* VOA	☐ Amber	☐ Poly	* HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No

Comments:

Sampler's Signature JMG Date 02/02/05

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW- 3
Sample no. MW- 3
Date 02/02/05

Project name FIFE
Project no. 1052-01
Collector JMG

Well Information
Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter * 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data
Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product – ft
Depth to water 7.81 ft
Casing volume 7.19 ft (H_2O) X 0.16 gpf = 1.15 X 3 = 3.45
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method
Pump type * Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing * New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1235 Purge stop time 1240 Purge rate <1 gpm

Field Parameters
Meter used ☐ HYDAC ☐ pH2Tester * Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	+14.00	59.5	+3999 µs	white/Cloudy
2	+14.00	56.6	+3999	" / " dry
~~3~~				
~~4~~				

Dissolved Oxygen >20 Oxygen Reduction Potential < -1000 mV

Sampling Device
Bailer * Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used * Monofilament ☐ Other

Bottles Filled Time 1244

Number	Type			Preservative					Filtration
3	* VOA	☐ Amber	☐ Poly	* HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No

Comments:
dry @ 2 gallons RC

Sampler's Signature JMG Date 02/02/05

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-4 | Project name FIFE
Sample no. MW-4 | Project no. 1052-01
Date 02/02/05 | Collector JMG

Well Information

Monument condition	☑ Good	☐ Needs repair		
Well cap condition	☑ Good	☐ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☐ Not measured	0 ppm		☐ Odor
Elevation mark	☑ Yes	☐ Added	☐ Other	
Well diameter	✱ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other

Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 6.58 ft
Casing volume 8.42 ft (H_2O) X 0.16 gpf = 1.34 X 3 = 4.04
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type	✱ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other	
Purge tubing	✱ New LDPE	☐ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other

Purge start time 1054 Purge stop time 1300 Purge rate <1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✱ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	7.11	61.7	2074 µS	~~[illegible]~~ clear (yellow)
2	6.86	59.0	2080	clearing
3	6.76	58.2	2089	"
~~4~~ 4	6.79	57.9	2143	"

Dissolved Oxygen ______ Oxygen Reduction Potential −25

Sampling Device

Bailer	✱ Disposable	☐ Stainless	☐ Teflon	☐ Other
Filter	Type	Size	(micron)	☐ Other
Bailer cord used		✱ Monofilament		☐ Other

Bottles Filled Time 1306

Number	Type			Preservative					Filtration
3	✱ VOA	☐ Amber	☐ Poly	✱ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No

Comments:

Sampler's Signature ______ Date 02/02/05

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-5
Sample no. MW-5
Date 02/02/05

Project name FIFE
Project no. 1052-01
Collector JMG

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter * 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 4.95 ft
Casing volume 10.05 ft (H_2O) X 0.16 gpf = 1.60 X 3 = 4.82
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type * Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing * New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1146 Purge stop time 1152 Purge rate <1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester * Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	12.79	58.0	1460 mS	clear/sl yellow
3	12.87	56.5	1469	"
4	13.78	55.4	568	"
5	13.54	56.0	543	"

Dissolved Oxygen 0.9 Oxygen Reduction Potential < - off scale - 100K

Sampling Device

Bailer * Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used * Monofilament ☐ Other

Bottles Filled Time 1200

Number	Type			Preservative					Filtration
3	* VOA	☐ Amber	☐ Poly	* HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No

Comments: no odor or sheen. ll Col pH = OK

Sampler's Signature JMG Date 02/02/05

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW- 6   Project name FIFE
Sample no. MW- 6   Project no. 1052-01
Date 02/02/05   Collector JMG

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter * 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 6.56 ft
Casing volume 8.44 ft (H_2O) X 0.16 gpf = 1.35 X 3 = 4.05
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type * Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing * New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1130 Purge stop time 1135 Purge rate 1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester * Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.72	53.8	1530	sl. yellow/clear
2	6.66	54.4	1526	"
3	6.71	54.6	1563	clear
4+	6.44	55.1	1621	"

Dissolved Oxygen 1.4   Oxygen Reduction Potential -31

Sampling Device

Bailer * Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type ___ Size ___ (micron) ☐ Other
Bailer cord used * Monofilament ☐ Other

Bottles Filled Time 1140

Number	Type			Preservative					Filtration
3	* VOA	☐ Amber	☐ Poly	* HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
___	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No

Comments:

No odor or sheen

Sampler's Signature JMG   Date 02/02/05

PNG Environmental

SAMPLE CHAIN OF CUSTODY

nd Report To Craig Holtgren
mpany PUG Environmental Inc.
ddress 1339 Commerce Ave
ty, State, ZIP Longview, WA
hone # 3604140609 Fax #

SAMPLERS (signature) Jay Griffith
PROJECT NAME/NO FIFE 1052-01
PO # 1052
REMARKS

Page # 1 of
TURNAROUND TI
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized
SAMPLE DISPOS
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instruct

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Not
TB-020205		02-02-05	1008	Water	1			X									
MW-1			1215		3		X		X								
MW-2			1231				X		X								
MW-3			1244				X		X								
MW-4			1306				X		X								
MW-5			1208				X		X								
MW-6			1140				X		X								

SIGNATURE	PRINT NAME	COMPANY	DATE
Relinquished by: Jay Griffith	Jay Griffith	PUG	02/08/05
Received by:			
Relinquished by:			
Received by:			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

ATTACHMENT B

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

February 14, 2005

Craig Hultgren, Project Manager
PNG Environmental
1339 Commerce Ave., Suite 313
Longview, WA 98632

Dear Mr. Hultgren:

Included are the results from the testing of material submitted on February 2, 2005 from the Fife, 1052-01, F&BI 502028 project. There are 14 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.

Eric Young
Chemist

Enclosures
PNG0214R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028
Date Extracted: 02/07/05
Date Analyzed: 02/07/05

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES USING EPA METHOD 8021B

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) Limit (50-150)
TB-020205 502028-01	<1	<1	<1	<3	
Method Blank	<1	<1	<1	<3	

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028
Date Extracted: 02/07/05
Date Analyzed: 02/07/05 and 02/09/05

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

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range (C_6-C_{10})	Surrogate (% Recovery) (Limit 52-150)
MW-1 502028-02	<50	104
MW-2 502028-03	<50	102
MW-3 502028-04	<50	100
MW-4 502028-05	<50	103
MW-5 502028-06	<50	101
MW-6 502028-07	<50	106
Method Blank	<50	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-1	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-02
Date Analyzed:	02/09/05	Data File:	020925.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	50	150
1,2-Dichloroethane-d4	118	67	133
Toluene-d8	132	73	140
4-Bromofluorobenzene	132	84	136

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-2	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-03
Date Analyzed:	02/10/05	Data File:	020926.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	50	150
1,2-Dichloroethane-d4	118	67	133
Toluene-d8	134	73	140
4-Bromofluorobenzene	131	84	136

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-3	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-04
Date Analyzed:	02/10/05	Data File:	020927.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	83	50	150
1,2-Dichloroethane-d4	121	67	133
Toluene-d8	132	73	140
4-Bromofluorobenzene	127	84	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<1	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	160	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<10	m,p-Xylene	<2
Methylene chloride	<1	o-Xylene	<1
Methyl t-butyl ether (MTBE)	21	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)	26	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	5	1,2,4-Trimethylbenzene	3
Trichloroethene	<1	sec-Butylbenzene	
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1
Hexane	<10 L		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-4	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-05
Date Analyzed:	02/10/05	Data File:	020928.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	106	50	150
1,2-Dichloroethane-d4	116	67	133
Toluene-d8	132	73	140
4-Bromofluorobenzene	127	84	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<1	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)	72	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon Tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	2
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1
Hexane	<10 L		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-5	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-06
Date Analyzed:	02/10/05	Data File:	020929.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	110	50	150
1,2-Dichloroethane-d4	118	67	133
Toluene-d8	134	73	140
4-Bromofluorobenzene	133	84	136

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-6	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	502028-07
Date Analyzed:	02/10/05	Data File:	020930.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	108	50	150
1,2-Dichloroethane-d4	115	67	133
Toluene-d8	133	73	140
4-Bromofluorobenzene	130	84	136

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	PNG Environmental
Date Received:	02/02/05	Project:	Fife, 1052-01, F&BI 502028
Date Extracted:	02/09/05	Lab ID:	05-179 mb
Date Analyzed:	02/09/05	Data File:	020917.D
Matrix:	water	Instrument:	GC/MS #5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	107	50	150
1,2-Dichloroethane-d4	111	67	133
Toluene-d8	133	73	140
4-Bromofluorobenzene	128	84	136

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 502078-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
Xylenes	µg/L (ppb)	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
	µg/L (ppb)	25	92	79-121
	µg/L (ppb)	25	80	78-120
	µg/L (ppb)	25	87	74-122
	µg/L (ppb)	75	90	67-121

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028

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

Laboratory Code: 502078-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	µg/L (ppb)	<50	<50	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	µg/L (ppb)	1,000	91	

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

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028

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

Laboratory Code: 502027-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,1-Dichloroethene	µg/L (ppb)	<1	<1	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
1,1-Dichloroethane	µg/L (ppb)	<1	<1	nm
2,2-Dichloropropane	µg/L (ppb)	<1	<1	nm
Chloroform	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,1,1-Trichloroethane	µg/L (ppb)	<1	<1	nm
1,1-Dichloropropene	µg/L (ppb)	<1	<1	nm
Carbon Tetrachloride	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Trichloroethene	µg/L (ppb)	<1	<1	nm
1,2-Dichloropropane	µg/L (ppb)	<1	<1	nm
Dibromomethane	µg/L (ppb)	<1	<1	nm
cis-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	µg/L (ppb)	<1	<1	nm
1,3-Dichloropropane	µg/L (ppb)	<1	<1	nm
Tetrachloroethene	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm
Chlorobenzene	µg/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
Bromoform	µg/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	µg/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	µg/L (ppb)	<1	<1	nm
Hexachlorobutadiene	µg/L (ppb)	<1	<1	nm

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

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028

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

Laboratory Code: 502027-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	<1	91	50-150
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	<1	103	50-150
1,1-Dichloroethane	µg/L (ppb)	50	<1	106	50-150
2,2-Dichloropropane	µg/L (ppb)	50	<1	80	50-150
Chloroform	µg/L (ppb)	50	<1	104	50-150
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	110	50-150
1,1,1-Trichloroethane	µg/L (ppb)	50	<1	105	50-150
1,1-Dichloropropene	µg/L (ppb)	50	<1	110	50-150
Carbon Tetrachloride	µg/L (ppb)	50	<1	104	50-150
Benzene	µg/L (ppb)	50	<1	99	50-150
Trichloroethene	µg/L (ppb)	100	<1	109	50-150
1,2-Dichloropropane	µg/L (ppb)	50	<1	105	50-150
Dibromomethane	µg/L (ppb)	50	<1	104	50-150
cis-1,3-Dichloropropene	µg/L (ppb)	50	<1	109	50-150
Toluene	µg/L (ppb)	50	<1	116	50-150
trans-1,3-Dichloropropene	µg/L (ppb)	50	<1	118	50-150
1,1,2-Trichloroethane	µg/L (ppb)	50	<1	115	50-150
1,3-Dichloropropane	µg/L (ppb)	50	<1	116	50-150
Tetrachloroethene	µg/L (ppb)	50	<1	107	50-150
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	<1	116	50-150
Chlorobenzene	µg/L (ppb)	50	<1	105	50-150
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	<1	112	50-150
Bromoform	µg/L (ppb)	50	<1	103	50-150
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	<1	101	50-150
1,2,3-Trichloropropane	µg/L (ppb)	50	<1	115	50-150
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	<1	112	50-150
Hexachlorobutadiene	µg/L (ppb)	50	<1	104	50-150

Date of Report: 02/14/05
Date Received: 02/02/05
Project: Fife, 1052-01, F&BI 502028

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	86	70-130
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	106	70-130
1,1-Dichloroethane	µg/L (ppb)	50	99	70-130
2,2-Dichloropropane	µg/L (ppb)	50	105	70-130
Chloroform	µg/L (ppb)	50	101	70-130
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	103	70-130
1,1,1-Trichloroethane	µg/L (ppb)	50	103	70-130
1,1-Dichloropropene	µg/L (ppb)	50	108	70-130
Carbon Tetrachloride	µg/L (ppb)	50	101	70-130
Benzene	µg/L (ppb)	50	99	70-130
Trichloroethene	µg/L (ppb)	100	98	70-130
1,2-Dichloropropane	µg/L (ppb)	50	104	70-130
Dibromomethane	µg/L (ppb)	50	103	70-130
cis-1,3-Dichloropropene	µg/L (ppb)	50	115	70-130
Toluene	µg/L (ppb)	50	111	70-130
trans-1,3-Dichloropropene	µg/L (ppb)	50	120	70-130
1,1,2-Trichloroethane	µg/L (ppb)	50	113	70-130
1,3-Dichloropropane	µg/L (ppb)	50	112	70-130
Tetrachloroethene	µg/L (ppb)	50	107	70-130
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	113	70-130
Chlorobenzene	µg/L (ppb)	50	102	70-130
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	109	70-130
Bromoform	µg/L (ppb)	50	107	70-130
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	113	70-130
1,2,3-Trichloropropane	µg/L (ppb)	50	108	70-130
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	115	70-130
Hexachlorobutadiene	µg/L (ppb)	50	108	70-130

PNG ENVIRONMENTAL, INC.

Letter of Transmittal

Date: February 16, 2005 Job No: 1052-01

To: Mr. Rob Grenley

From: Craig Hultgren

Re: Quarterly Groundwater Monitoring Report - February 2, 2005

The following is enclosed: ☐ for your use ☒ for your files ☐ per your request

(3) copies of the Quarterly Groundwater Monitoring Report

Remarks:

If you have any questions, please feel free to call our office.

Sent via: ☒ U.S. Mail ☐ Federal Express
☐ Fax ☐ Courier

cc: Mr. Chuck Cline, Ecology
Ms. Beth Muhler, IUM

1339 Commerce Avenue, Suite 313
Longview, Washington 98632

TEL (360) 414-0669
FAX (360) 414-0663

2004

November 29, 2004 1052-01

Mr. Rob Grenley
Grenley Stewart Resources
1019 Pacific Avenue, 13th Floor
Tacoma, Washington 98402-4443

Subject: **Quarterly Groundwater Monitoring Report – November 9, 2004**
Fife Metroplex Card Lock Fuel Sales Facility
3200 20th Street East
Fife, Washington
VCP Identification Number SW0610

Dear Mr. Grenley:

This letter documents the results of the quarterly groundwater sampling event at the above referenced site (Figure 1). This work was conducted under Washington State Department of Ecology's Voluntary Cleanup Program.

The scope of work included:

- Collecting depth to water measurements at the six site monitoring wells.
- Collecting groundwater samples from each of the six site monitoring wells.

GROUNDWATER CONDITIONS

Water levels were measured prior to sample collection on November 9, 2004. Groundwater measurements in the site wells and drainage ditch ranged between 2.32 to 7.97 feet below ground surface, as summarized on Table 1. Groundwater flow is towards the drainage ditch with a gradient of approximately 0.011 feet per foot (ft/ft). A plot of groundwater elevation contours for November 9, 2004 is shown on Figure 1.

Groundwater Sampling

On November 9, 2004, PNG collected groundwater samples from the six site monitoring wells. This sampling event represents the second quarterly groundwater sampling event after the second application of ORC in to the subsurface at the site. Prior to sampling, the cap of each well was removed and the water was allowed to stabilize prior to collecting depth to water measurements. The volume of water in the wells that were sampled was calculated and water was purged with a peristaltic pump. A minimum of three casing volumes of water was removed from the wells prior to sample collection. A new length of LDPE tubing was used in each well. The water purged from each well was relatively clear and there was no noticeable sheen or chemical odor observed during sampling activities. All purge water generated during sampling activities was placed in a 55-gallon drum.

Groundwater samples from the wells were collected with new, disposable polyethylene bailers. Samples were carefully transferred into laboratory-prepared sample containers. The samples were placed in an iced cooler and delivered to Friedman and Bruya Laboratory (Friedman) and were accompanied by chain-of-custody documentation. Groundwater Sample Collection Forms documenting field activities are included in

Attachment A. A copy of the laboratory report and chain-of-custody documentation for this sampling event is included in Attachment B.

The samples were analyzed for the following constituents:

- Gasoline range organics (GRO) using Method NWTPH-Gx.
- Volatile organic compounds using EPA Method 8260B.
- Field parameters: pH, conductivity, temperature, dissolved oxygen, and oxidation reduction potential (ORP).

Analytical Results

GRO (Table 2): GRO was detected slightly above the laboratory's method reporting limit (MRL) of 50 ug/L in monitoring well MW-3 at a concentration of 51 ug/L. There was no detection of GRO in any of the other wells above the MRL.

VOCs (Table 3): Up to five VOCs were detected above the respective MRLs in two wells at the site. Benzene (7 ug/L), MTBE (31 ug/L), Acetone (estimated at 180 ug/L), 2-Butanone (32 ug/L), and 1,2,4-trimethylbenzene (4 ug/L) were detected in MW-3. Xylenes (1 ug/L) and MTBE (110 ug/L) were detected in MW-4. There was no detection of BTEX above the respective MRLs in the trip blank sample.

Dissolved oxygen and ORP (Groundwater Sample Collection Form): Dissolved oxygen levels in the wells ranged between 0.2 to 2.0 parts per million. ORP ranged between 4.1 to –99 millivolts (Mv). In general, a negative ORP reading may indicate that a low oxygen (reducing) condition exists at the site.

DISCUSSION

Results of this quarterly groundwater sampling event indicated that the MTCA Method A Cleanup Standard for MTBE (20 ug/L) was exceeded in monitoring wells MW-3 and MW-4 and benzene (5 ug/L) was exceeded in MW-3. In general, an improving trend in groundwater quality is occurring at MW-3, with the concentrations of MTBE and benzene being almost 50% less than the previous quarterly sampling event. There was no change in the MTBE concentration at MW-4. PNG will continue to perform quarterly groundwater monitoring at the site to monitor remediation progress and see if this trend continues. The next sampling event is tentatively scheduled for February 2005.

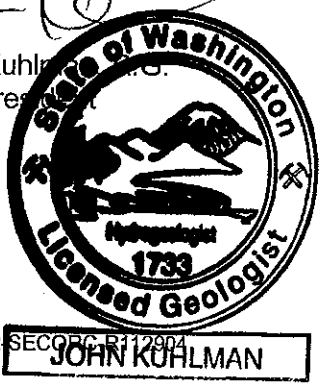
PNG appreciates the opportunity to assist you on this project. Please call (360) 414-0669 if you have any questions or comments.

Sincerely,

PNG ENVIRONMENTAL, INC.

Craig Hultgren, R.G.
Project Manager

John Kuhlman, R.G.
Vice President



Attachments: Table 1 - Depth to Groundwater Measurements
Table 2 - Groundwater Analytical Results Summary
Figure 1 - Groundwater Elevation Contour - November 9, 2004
Attachment A - Groundwater Collection Sampling Forms
Attachment B - Laboratory Report and Chain-of-Custody Documentation

cc: Ms. Beth Muhler, IUM
Mr. Chuck Cline, Ecology

Table 1
Depth to Groundwater Measurements
Card Lock Fuel Sales Facility
Fife, Washington

Depth to Groundwater

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	7.50
10/10/2002[b]	9.05	9.24	10.44	9.48	8.75	9.50	NM
1/9/2003[b]	6.22	6.83	7.88	6.91	5.51	6.78	NM
5/20/2003	6.49	7.10	8.15	7.18	5.90	7.16	2.30
8/20/2003	7.11	7.74	8.82	7.84	6.73	7.88	2.82
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	2.03
2/23/2004	5.76	6.46	7.52	6.45	5.07	6.44	1.76
5/13/2004	6.37	6.99	7.99	7.06	5.76	7.01	2.03
8/16/2004	7.05	7.62	8.61	7.56	6.22	7.48	2.74
11/9/2004	6.34	6.85	7.97	6.89	5.62	6.88	2.32

Water Elevation

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	7.50
10/10/2002[b]	2.96	3.24	3.21	3.39	2.87	3.40	NM
1/9/2003[b]	5.79	5.65	5.77	5.96	6.11	6.12	NM
5/20/2003	5.52	5.38	5.50	5.69	5.72	5.74	5.20
8/20/2003	4.90	4.74	4.83	5.03	4.89	5.02	4.68
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	2.03
2/23/2004	6.25	6.02	6.13	6.42	6.55	6.46	5.74
5/13/2004	5.64	5.49	5.66	5.81	5.86	5.89	5.47
8/16/2004	4.96	4.86	5.04	5.31	5.40	5.42	4.76
11/9/2004	5.67	5.63	5.68	5.98	6.00	6.02	5.18

Notes:
[a] Elevations are relative to a City of Tacoma control point in NE 20th Street
The elevation of the control point is relative to the NGVD29 vertical datum
[b] Measurements collected by Saltbush Environmental Services, Inc.
NM = Not measured

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	MTCA	MW-1							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
eters	Cleanup Standard								
ne Range Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U
ne	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
e	1,000	1 U	2.4	NA	1 U	1 U	1 U	5 U	1 U
enzene	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
ylenes	1,000	1 U	4.3	NA	2 U	2 U	3 U	15 U	3 U
t-butyl ether (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
romoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U
hloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U
e		NM	NM	NM	NM	NM	NM	NM	10 L
aalene	160	NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	MTCA	MW-2							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
eters	Cleanup Standard								
ne Range Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U
ne	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
e	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
enzene	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
Xylenes	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U
t-butyl ether (MTBE)	20	1 U	**32**	NA	1	1	1 U	5 U	1 U
promoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U
chloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U
e		NM	NM	NM	NM	NM	NM	NM	10 L
halene	160	NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	MTCA	MW-3							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
eters	Cleanup Standard								
ne Range Organics	800	**1,300**	**3,900**	**1,600**	680	310	250	300	250 U
ne	5	**360**	**2,900**	**700**	**80**	**390**	**11**	5 U	**14**
e	1,000	1 U	1.1	10 U	1 U	1 U	1 U	5 U	2 U
enzene	700	1 U	ND	10 U	1 U	1 U	1 U	5 U	2 U
ylenes	1,000	42	5.4	20 U	2	2	2	15 U	6 U
t-butyl ether (MTBE)	20	1 U	**140**	**160**	**170**	**130**	**80**	**73**	**59**
romoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	2 U
chloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	2 U
e		NM	NM	NM	NM	NM	NM	NM	20 L
nalene	160	NM	NM	NM	NM	NM	NM	NM	2 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	8
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	2 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B
BTEX and MTBE by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	MTCA	MW-4							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
eters	Cleanup Standard								
e Range Organics	800	100 U	ND	50 U	250 U	50 U	200	250 U	250 U
e	5	**14**	**33**	**11**	4	1	**7**	5 U	1 U
e	1,000	1 U	ND	1 U	1 U	6	6	5 U	1 U
nzene	700	1 U	ND	1 U	1 U	1 U	9	7	2
ylenes	1,000	2	ND	2 U	2 U	6	56	39	11
t-butyl ether (MTBE)	20	1 U	**160**	**130**	**140**	**140**	**90**	**93**	**110**
romoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U
hloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U
e		NM	NM	NM	NM	NM	NM	NM	10 L
alene	160	NM	NM	NM	NM	NM	NM	NM	1 U
rimethylbenzene		NM	NM	NM	NM	NM	NM	NM	3
rimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B
BTEX and MTBE by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

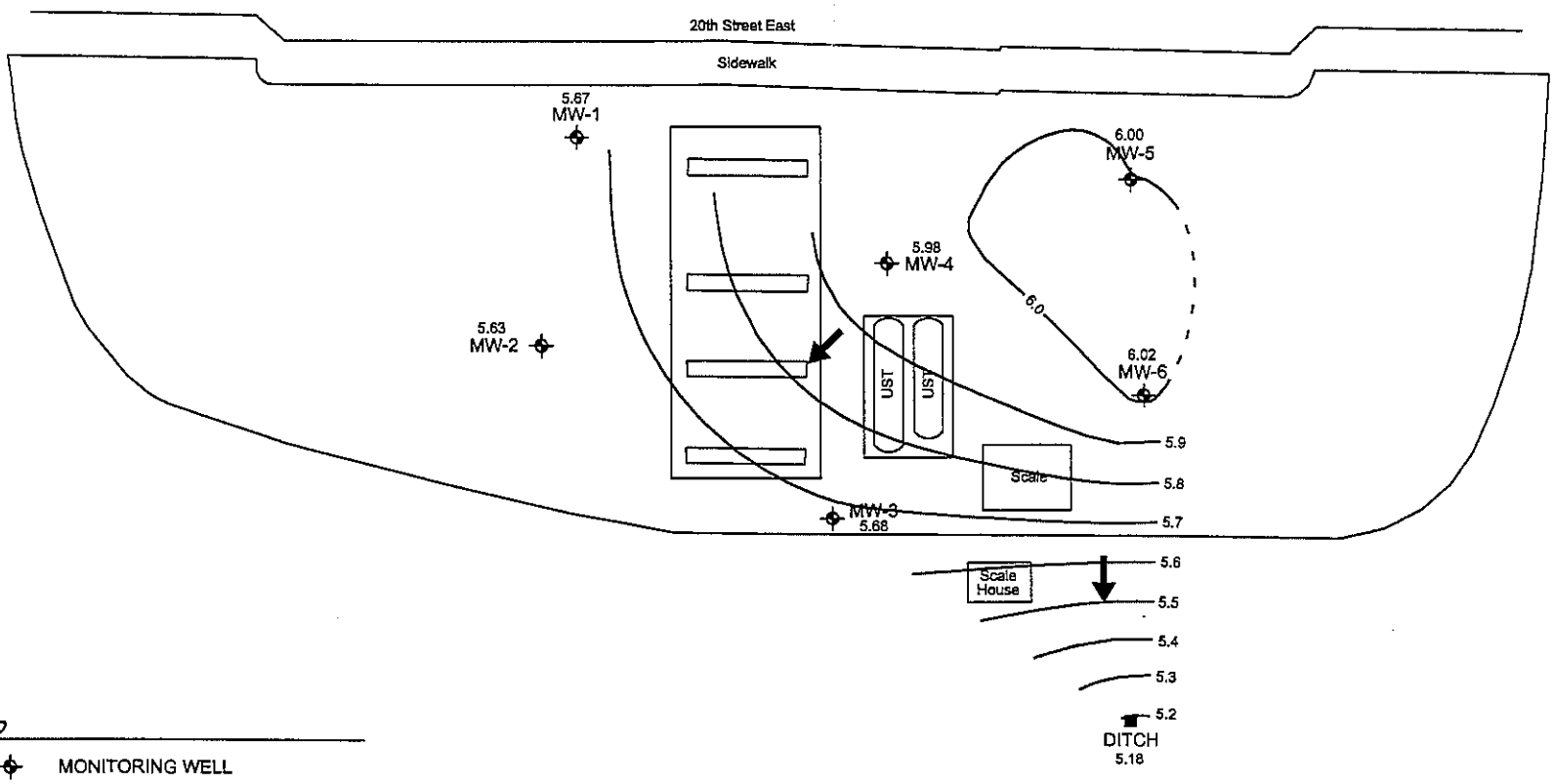
Sample Identification	MTCA	MW-5							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
ters	Cleanup Standard								
e Range Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U
e	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
e	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
nzene	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
ylenes	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U
t-butyl ether (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
romoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U
hloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U
e		NM	NM	NM	NM	NM	NM	NM	10 L
alene	160	NM	NM	NM	NM	NM	NM	NM	1 U
rimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U
rimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B
BTEX and MTBE by EPA Method 8260B

Table 2
Groundwater Analytical Results Summary - (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	MTCA	MW-6							
Date Sampled	Method A	10/10/02	01/09/03	05/20/03	08/20/03	11/17/03	02/23/04	05/13/04	08/16/04
eters	Cleanup Standard								
ne Range Organics	800	100 U	ND	NA	250 U	50 U	50 U	250 U	250 U
ne	5	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
e	1,000	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
enzene	700	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
ylenes	1,000	1 U	ND	NA	2 U	2 U	3 U	15 U	3 U
t-butyl ether (MTBE)	20	1 U	ND	NA	1 U	1 U	1 U	5 U	1 U
promoethane (EDB)	0.01	NM	NM	NM	NM	NM	NM	NM	1 U
chloroethane (EDC)	5	NM	NM	NM	NM	NM	NM	NM	1 U
e		NM	NM	NM	NM	NM	NM	NM	10 L
nalene	160	NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U
Trimethylbenzene		NM	NM	NM	NM	NM	NM	NM	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method limit shown
NA = Not analyzed
ND = Not detected (from Salt Bush Environmental Report)
NM = Not Measured
L = Not detected (from a library search)
Values in bold indicate the concentration exceeds the referenced Cleanup Standard
Gasoline range hydrocarbons by NWTPH-Gx
VOCs by EPA Method 8260B
BTEX and MTBE by EPA Method 8260B



LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER ELEVATION
- PUMP ISLAND
- DITCH
- GROUNDWATER FLOW DIRECTION

NOTE:
BASE MAP FROM BLUHM & ASSOCIATES
LAND SURVEYORS, INC. JUNE 13, 2003.

APPROXIMATE SCALE IN FE

0 20 40

PNG ENVIRONMENTAL INC.
1339 Commerce Avenue, Suite 313
Longview, Washington 98632
TEL (360) 414-0669
FAX (360) 414-0663

DATE:	11-9-04
FILE NAME:	1052-01
DRAWN BY:	JJT
APPROVED BY:	CH

FIFE CARDLOCK FUEL FACILITY
3200 20TH ST. EAST
FIFE, WASHINGTON

GROUNDWATER ELEVATION CONTOUR
NOVEMBER 9, 2004

ATTACHMENT A
GROUNDWATER SAMPLE COLLECTION FORMS

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-1
Sample no. MW-1
Date 11-09-04

Project name F&H
Project no. 1052
Collector [signature]

Well Information

Monument condition ☑ Good ☐ Needs repair ______
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor ______
Elevation mark ☑ Yes ☐ Added ☐ Other ______
Well diameter ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other ______
Comments ______

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product – ft
Depth to water 6.34 ft
Casing volume 8.66 ft (H_2O) X .16 gpf = 1.38 X 3 = 4.15
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other ______
Purge tubing ☐ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other ______
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other ______
Purge start time 1052 Purge stop time 1058 Purge rate .6 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ☑ Hanna ☐ Other ______

Gallons	pH	Temperature	Conductivity	Comments
1	6.76	61.6	1.40	clear yellow
2	6.57	63.7	1.30	yellow
3	6.66	64.5	1.32	
4+	6.68	64.9	1.31	

Dissolved Oxygen 0.2 Oxygen Reduction Potential -77

Sampling Device

Bailer ☑ Disposable ☐ Stainless ☐ Teflon ☐ Other ______
Filter Type______ Size______ (micron) ☐ Other ______
Bailer cord used ☑ Monofilament ☐ Other ______

Bottles Filled Time 1106

Number	Type	Preservative	Filtration
4	☑ VOA ☐ Amber ☐ Poly	☑ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐ Yes ☐ No
___	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐ Yes ☐ No
___	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐ Yes ☐ No
___	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐ Yes ☐ No
___	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐ Yes ☐ No

Comments:
Sheen on purge water
~~[illegible]~~ JZ

Sampler's Signature [signature] Date 11-09-04

GROUNDWATER SAMPLE COLLECTION FORM

Well ID no. MW-2 | Project name Fy
Sample no. MW-2 | Project no. 1852
Date 11-09-04 | Collector [illegible]

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured .00 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 6.85 ft
Casing volume 8.15 ft (H_2O) X .16 gpf = 1.3 X 3 = 3.9
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ☑ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1116 Purge stop time 1124 Purge rate <1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ☑ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.92	61.9	1.30	sl yellow, sl turb
2	6.98	63.3	1.25	"
3	6.81	64.3	1.25	"
4	6.72	63.9	1.24	

Dissolved Oxygen 0.2 **Oxygen Reduction Potential** -7

Sampling Device

Bailer ☑ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used ☑ Monofilament ☐ Other

Bottles Filled Time 1135

Number	Type	Preservative	Filtration
4	☑ VOA ☐ Amber ☐ Poly	☑ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No

Comments:
Sheen on purge water (misty)

Sampler's Signature [signature] Date 11/09/04

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-3 | Project name PY
Sample no. MW-3 | Project no. 1058
Date 11-09-04 | Collector JMZ

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 7.98 ft
Casing volume 7.02 ft (H_2O) X .16 gpf = 1.12 X 3 = 3.36
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ☑ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1225 Purge stop time 1235 Purge rate <1 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ☑ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	11.77	61.6	1.91	white/orange
2	12.12	63.2	3.23	clearing to dry
3.5+	12.36	63.2	3.18	dry, clear, sl

Dissolved Oxygen 7.28 **Oxygen Reduction Potential** -99

Sampling Device

Bailer ☑ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used ☐ Monofilament ☐ Other

Bottles Filled Time 1240

Number	Type	Preservative	Filtration
4	☑ VOA ☐ Amber ☐ Poly	☑ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No
	☐ VOA ☐ Amber ☐ Poly	☐ HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No

Comments:

Sampler's Signature JMZ Date 11-09-04

GROUNDWATER SAMPLE COLLECTION FORM

Well ID no. MW-4 Project name FYE
Sample no. MW-4 Project no. 1052
Date 11-09-04 Collector JWZ

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0.0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 6.90 ft
Casing volume 8.10 ft (H_2O) X .16 gpf = 1.29 X 3 = 3.88
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ☑ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1211 Purge stop time 1216 Purge rate [illegible]

Field Parameters

Meter used ☐ HYDAC ☐ pH2Taster ☑ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.66	62.2	1.00	sl yellow
2	6.63	64.3	1.01	"
3	6.60	64.6	1.03	"
4	6.65	65.3	1.01	"

Dissolved Oxygen 0.5 Oxygen Reduction Potential -24

Sampling Device

Bailer ☑ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used ☐ Monofiliament ☐ Other

Bottles Filled Time 1219

Number	Type			Preservative					Filtration
4	☑ VOA	☐ Amber	☐ Poly	☑ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No

Comments:

Sampler's Signature [signature] Date 11-09-04

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-5 — Project name Fife
Sample no. MW-5 — Project no. 1052
Date 11-09-04 — Collector [illegible]

Well Information

Monument condition ☑ Good ☐ Needs repair
Well cap condition ☑ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured 0 ppm ☐ Odor
Elevation mark ☑ Yes ☐ Added ☐ Other
Well diameter ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Comments

Purge Data

Total well depth 15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product ft
Depth to water 6.56 ft
Casing volume 8.44 ft (H_2O) X .16 gpf = 1.35 X 3 = 4.05
Casing volumes 3/4"=0.02 gpf 1"=0.04 gpf 2"=0.16 gpf 4"=0.65 gpf 6"=1.47 gpf

Purge Method

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ☑ New LDPE ☐ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time 1031 Purge stop time 1035 Purge rate [illegible]

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ☑ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	8.40	59.3	0.43	clear/lt yellow
2	9.47	61.9	0.41	" "
3	9.82	63.0	0.419	" " "
4	9.61	64.7	0.56	" "

Dissolved Oxygen 0.4 Oxygen Reduction Potential 4.1

Sampling Device

Bailer ☑ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type Size (micron) ☐ Other
Bailer cord used ☐ Monofilament ☐ Other

Bottles Filled Time 1042

Number	Type			Preservative					Filtration	
4	☑ VOA	☐ Amber	☐ Poly	☑ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No

Comments:

Sampler's Signature [illegible] Date 11-09-04

GROUNDWATER SAMPLE COLLECTION FORM

Well ID no. MW-6　　Project name Fife
Sample no. MW-6　　Project no. 1052
Date 11-09-04　　Collector JWJ

Well Information

Monument condition	☑ Good	☐ Needs repair		
Well cap condition	☑ Good	☐ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☐ Not measured	010	ppm	☐ Odor
Elevation mark	☑ Yes	☐ Added	☐ Other	
Well diameter	☑ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other

Comments

Purge Data

Total well depth 15 ft　☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product ft
Depth to water 6.90 ft
Casing volume 8.1 ft (H_2O) X .16 gpf = 1.29 X 3 = 3.88
Casing volumes 3/4"=0.02 gpf　1"=0.04 gpf　2"=0.16 gpf　4"=0.65 gpf　6"= 1.47 gpf

Purge Method

Pump type	☑ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other	
Purge tubing	☑ New LDPE	☐ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other

Purge start time 1155　Purge stop time 1200　Purge rate 6 1gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ☑ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.81	62.5	1.04	Sl. yellow
2	6.59	64.2	1.02	clearing
3	6.65	65.0	1.01	"
4	6.61	65.3	1.01	"

Dissolved Oxygen 0.3　　Oxygen Reduction Potential -26

Sampling Device

Bailer	☑ Disposable	☐ Stainless	☐ Teflon	☐ Other
Filter	Type	Size	(micron)	☐ Other
Bailer cord used		☑ Monofilament		☐ Other

Bottles Filled　Time 1203

Number	Type			Preservative					Filtration
4	☑ VOA	☐ Amber	☐ Poly	☑ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No
	☐ VOA	☐ Amber	☐ Poly	☐ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes ☐No

Comments:

Sampler's Signature JWJ　　Date 11/09/04

ATTACHMENT B

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
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November 23, 2004

Craig Hultgren, Project Manager
PNG Environmental
1339 Commerce Ave., Suite 313
Longview, WA 98632

Dear Mr. Hultgren:

Included are the results from the testing of material submitted on November 11, 2004 from the Fife CFN PO#1052-01, F&BI 411122 project. There are 17 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.

Eric Young
Chemist

Enclosures
PNG1123R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122
Date Extracted: 11/19/04
Date Analyzed: 11/20/04

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

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 61-150)
MW-1 411122-02	<50	94
MW-2 411122-03	<50	95
MW-3 411122-04	51	91
MW-4 411122-05	<50	94
MW-5 411122-06	<50	90
MW-6 411122-07	<50	92
Method Blank	<50	72

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	TB110904	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-01
Date Analyzed:	11/13/04	Data File:	111222.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	116	50	150
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	111	50	150
4-Bromofluorobenzene	118	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Benzene	<1		
Toluene	<1		
Ethylbenzene	<1		
m,p-Xylene	<2		
o-Xylene	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-1	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-02
Date Analyzed:	11/16/04	Data File:	111614.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	122	50	150
1,2-Dichloroethane-d4	115	50	150
Toluene-d8	117	50	150
4-Bromofluorobenzene	113	50	150

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-2	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-03
Date Analyzed:	11/16/04	Data File:	111615.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	122	50	150
1,2-Dichloroethane-d4	113	50	150
Toluene-d8	117	50	150
4-Bromofluorobenzene	114	50	150

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-3	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-04
Date Analyzed:	11/16/04	Data File:	111618.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	122	50	150
1,2-Dichloroethane-d4	112	50	150
Toluene-d8	115	50	150
4-Bromofluorobenzene	111	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<1	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	180 ve	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)	31	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)	32	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	7	1,2,4-Trimethylbenzene	4
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1
Hexane	<10 L		

L - The reported concentration was generated from a library search.
ve - The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-4	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-05
Date Analyzed:	11/16/04	Data File:	111619.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	120	50	150
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	112	50	150
4-Bromofluorobenzene	113	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<1	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)	110	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon Tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<1	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<1
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1
Hexane	<10 L		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-5	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-06
Date Analyzed:	11/16/04	Data File:	111620.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	122	50	150
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	114	50	150
4-Bromofluorobenzene	115	50	150

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-6	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	411122-07
Date Analyzed:	11/16/04	Data File:	111621.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	124	50	150
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	113	50	150
4-Bromofluorobenzene	116	50	150

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	PNG Environmental
Date Received:	11/11/04	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/12/04	Lab ID:	041385 mb
Date Analyzed:	11/16/04	Data File:	111211.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	111	50	150
1,2-Dichloroethane-d4	106	50	150
Toluene-d8	110	50	150
4-Bromofluorobenzene	115	50	150

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	PNG Environmental
Date Received:	Not Applicable	Project:	Fife CFN PO#1052-01, F&BI 411122
Date Extracted:	11/16/04	Lab ID:	041386 mb
Date Analyzed:	11/16/04	Data File:	111604.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	117	50	150
1,2-Dichloroethane-d4	113	50	150
Toluene-d8	115	50	150
4-Bromofluorobenzene	112	50	150

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

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

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	µg/L (ppb)	500	96	94	65-120	2

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: 411119-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,1-Dichloroethene	µg/L (ppb)	<1	<1	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,1-Dichloropropene	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Trichloroethene	µg/L (ppb)	<1	<1	nm
1,2-Dichloropropane	µg/L (ppb)	<1	<1	nm
cis-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	µg/L (ppb)	<1	<1	nm
1,3-Dichloropropane	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm
Chlorobenzene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm
Styrene	µg/L (ppb)	<1	<1	nm
Bromobenzene	µg/L (ppb)	<1	<1	nm
1,3,5-Trimethylbenzene	µg/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	µg/L (ppb)	<1	<1	nm
1,2,4-Trimethylbenzene	µg/L (ppb)	<1	<1	nm
p-Isopropyltoluene	µg/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	µg/L (ppb)	<1	<1	nm
1,2,4-Trichlorobenzene	µg/L (ppb)	<1	<1	nm
Hexachlorobutadiene	µg/L (ppb)	<1	<1	nm
Naphthalene	µg/L (ppb)	<1	<1	nm
1,2,3-Trichlorobenzene	µg/L (ppb)	<1	<1	nm

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

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: 411119-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	<1	107	50-150
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	<1	97	50-150
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	121	50-150
1,1-Dichloropropene	µg/L (ppb)	50	<1	94	50-150
Benzene	µg/L (ppb)	100	<1	96	50-150
Trichloroethene	µg/L (ppb)	100	<1	96	50-150
1,2-Dichloropropane	µg/L (ppb)	50	<1	95	50-150
cis-1,3-Dichloropropene	µg/L (ppb)	50	<1	96	50-150
Toluene	µg/L (ppb)	100	<1	102	50-150
trans-1,3-Dichloropropene	µg/L (ppb)	50	<1	101	50-150
1,1,2-Trichloroethane	µg/L (ppb)	50	<1	99	50-150
1,3-Dichloropropane	µg/L (ppb)	50	<1	100	50-150
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	<1	101	50-150
Chlorobenzene	µg/L (ppb)	50	<1	99	50-150
Ethylbenzene	µg/L (ppb)	50	<1	108	50-150
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	<1	108	50-150
m,p-Xylene	µg/L (ppb)	50	<2	105	50-150
Styrene	µg/L (ppb)	50	<1	91	50-150
Bromobenzene	µg/L (ppb)	50	<1	95	50-150
1,3,5-Trimethylbenzene	µg/L (ppb)	50	<1	99	50-150
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	<1	97	50-150
1,2,3-Trichloropropane	µg/L (ppb)	50	<1	98	50-150
1,2,4-Trimethylbenzene	µg/L (ppb)	50	<1	101	50-150
p-Isopropyltoluene	µg/L (ppb)	50	<1	104	50-150
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	<1	95	50-150
1,2,4-Trichlorobenzene	µg/L (ppb)	50	<1	97	50-150
Hexachlorobutadiene	µg/L (ppb)	50	<1	91	50-150
Naphthalene	µg/L (ppb)	50	<1	104	50-150
1,2,3-Trichlorobenzene	µg/L (ppb)	50	<1	103	50-150

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	110	70-130
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	106	70-130
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	113	70-130
1,1-Dichloropropene	µg/L (ppb)	50	104	70-130
Benzene	µg/L (ppb)	100	101	70-130
Trichloroethene	µg/L (ppb)	100	100	70-130
1,2-Dichloropropane	µg/L (ppb)	50	102	70-130
cis-1,3-Dichloropropene	µg/L (ppb)	50	107	70-130
Toluene	µg/L (ppb)	100	108	70-130
trans-1,3-Dichloropropene	µg/L (ppb)	50	110	70-130
1,1,2-Trichloroethane	µg/L (ppb)	50	104	70-130
1,3-Dichloropropane	µg/L (ppb)	50	105	70-130
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	108	70-130
Chlorobenzene	µg/L (ppb)	50	105	70-130
Ethylbenzene	µg/L (ppb)	50	112	70-130
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	111	70-130
m,p-Xylene	µg/L (ppb)	50	111	70-130
Styrene	µg/L (ppb)	50	98	70-130
Bromobenzene	µg/L (ppb)	50	104	70-130
1,3,5-Trimethylbenzene	µg/L (ppb)	50	106	70-130
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	102	70-130
1,2,3-Trichloropropane	µg/L (ppb)	50	102	70-130
1,2,4-Trimethylbenzene	µg/L (ppb)	50	109	70-130
p-Isopropyltoluene	µg/L (ppb)	50	111	70-130
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	96	70-130
1,2,4-Trichlorobenzene	µg/L (ppb)	50	108	70-130
Hexachlorobutadiene	µg/L (ppb)	50	95	70-130
Naphthalene	µg/L (ppb)	50	110	70-130
1,2,3-Trichlorobenzene	µg/L (ppb)	50	108	70-130

Note: The calibration verification result associated with sample 411122-01 for Acetone exceeded 15% deviation. The average deviation for all compounds was less than 15%, therefore the initial calibration is considered valid.

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: 411122-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
1,1-Dichloroethene	µg/L (ppb)	<1	<1	nm
Methyl t-butyl ether (MTBE)	µg/L (ppb)	<1	<1	nm
1,2-Dichloroethane (EDC)	µg/L (ppb)	<1	<1	nm
1,1-Dichloropropene	µg/L (ppb)	<1	<1	nm
Benzene	µg/L (ppb)	<1	<1	nm
Trichloroethene	µg/L (ppb)	<1	<1	nm
1,2-Dichloropropane	µg/L (ppb)	<1	<1	nm
cis-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
Toluene	µg/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	µg/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	µg/L (ppb)	<1	<1	nm
1,3-Dichloropropane	µg/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	µg/L (ppb)	<1	<1	nm
Chlorobenzene	µg/L (ppb)	<1	<1	nm
Ethylbenzene	µg/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
m,p-Xylene	µg/L (ppb)	<2	<2	nm
Styrene	µg/L (ppb)	<1	<1	nm
Bromobenzene	µg/L (ppb)	<1	<1	nm
1,3,5-Trimethylbenzene	µg/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	µg/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	µg/L (ppb)	<1	<1	nm
1,2,4-Trimethylbenzene	µg/L (ppb)	<1	<1	nm
p-Isopropyltoluene	µg/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	µg/L (ppb)	<1	<1	nm
1,2,4-Trichlorobenzene	µg/L (ppb)	<1	<1	nm
Hexachlorobutadiene	µg/L (ppb)	<1	<1	nm
Naphthalene	µg/L (ppb)	<1	<1	nm
1,2,3-Trichlorobenzene	µg/L (ppb)	<1	<1	nm

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

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: 411122-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	<1	103	50-150
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	<1	95	50-150
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	<1	113	50-150
1,1-Dichloropropene	µg/L (ppb)	50	<1	92	50-150
Benzene	µg/L (ppb)	100	<1	90	50-150
Trichloroethene	µg/L (ppb)	100	<1	92	50-150
1,2-Dichloropropane	µg/L (ppb)	50	<1	90	50-150
cis-1,3-Dichloropropene	µg/L (ppb)	50	<1	94	50-150
Toluene	µg/L (ppb)	100	<1	95	50-150
trans-1,3-Dichloropropene	µg/L (ppb)	50	<1	98	50-150
1,1,2-Trichloroethane	µg/L (ppb)	50	<1	91	50-150
1,3-Dichloropropane	µg/L (ppb)	50	<1	92	50-150
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	<1	95	50-150
Chlorobenzene	µg/L (ppb)	50	<1	92	50-150
Ethylbenzene	µg/L (ppb)	50	<1	100	50-150
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	<1	102	50-150
m,p-Xylene	µg/L (ppb)	50	<2	97	50-150
Styrene	µg/L (ppb)	50	<1	85	50-150
Bromobenzene	µg/L (ppb)	50	<1	89	50-150
1,3,5-Trimethylbenzene	µg/L (ppb)	50	<1	92	50-150
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	<1	88	50-150
1,2,3-Trichloropropane	µg/L (ppb)	50	<1	90	50-150
1,2,4-Trimethylbenzene	µg/L (ppb)	50	<1	94	50-150
p-Isopropyltoluene	µg/L (ppb)	50	<1	97	50-150
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	<1	88	50-150
1,2,4-Trichlorobenzene	µg/L (ppb)	50	<1	93	50-150
Hexachlorobutadiene	µg/L (ppb)	50	<1	91	50-150
Naphthalene	µg/L (ppb)	50	<1	95	50-150
1,2,3-Trichlorobenzene	µg/L (ppb)	50	<1	95	50-150

Date of Report: 11/23/04
Date Received: 11/11/04
Project: Fife CFN PO#1052-01, F&BI 411122

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,1-Dichloroethene	µg/L (ppb)	50	106	70-130
Methyl t-butyl ether (MTBE)	µg/L (ppb)	50	111	70-130
1,2-Dichloroethane (EDC)	µg/L (ppb)	50	113	70-130
1,1-Dichloropropene	µg/L (ppb)	50	103	70-130
Benzene	µg/L (ppb)	100	99	70-130
Trichloroethene	µg/L (ppb)	100	100	70-130
1,2-Dichloropropane	µg/L (ppb)	50	100	70-130
cis-1,3-Dichloropropene	µg/L (ppb)	50	109	70-130
Toluene	µg/L (ppb)	100	103	70-130
trans-1,3-Dichloropropene	µg/L (ppb)	50	108	70-130
1,1,2-Trichloroethane	µg/L (ppb)	50	103	70-130
1,3-Dichloropropane	µg/L (ppb)	50	102	70-130
1,2-Dibromoethane (EDB)	µg/L (ppb)	50	109	70-130
Chlorobenzene	µg/L (ppb)	50	102	70-130
Ethylbenzene	µg/L (ppb)	50	109	70-130
1,1,1,2-Tetrachloroethane	µg/L (ppb)	50	110	70-130
m,p-Xylene	µg/L (ppb)	50	108	70-130
Styrene	µg/L (ppb)	50	95	70-130
Bromobenzene	µg/L (ppb)	50	103	70-130
1,3,5-Trimethylbenzene	µg/L (ppb)	50	103	70-130
1,1,2,2-Tetrachloroethane	µg/L (ppb)	50	101	70-130
1,2,3-Trichloropropane	µg/L (ppb)	50	102	70-130
1,2,4-Trimethylbenzene	µg/L (ppb)	50	106	70-130
p-Isopropyltoluene	µg/L (ppb)	50	109	70-130
1,2-Dibromo-3-chloropropane	µg/L (ppb)	50	98	70-130
1,2,4-Trichlorobenzene	µg/L (ppb)	50	106	70-130
Hexachlorobutadiene	µg/L (ppb)	50	102	70-130
Naphthalene	µg/L (ppb)	50	107	70-130
1,2,3-Trichlorobenzene	µg/L (ppb)	50	107	70-130

Note: The calibration verification result associated with samples 411122-02, -03, -04, -05, -06, -07 for Methylene chloride exceeded 15% deviation. The average deviation for all compounds was less than 15%, therefore the initial calibration is considered valid.

rt To Craig Hultgren
PUB Environmental, Inc.
339 Commerce Ave
e, ZIP Longview, WA
6034142669 Fax #

SAMPLERS (signature) Jay Hafer
PROJECT NAME/NO. FIFB CAN
PO # 1052-01
REMARKS

Page # 1
TURNAROUND
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authoriz

SAMPLE DISPO
☐ Dispose after 30 day
☐ Return samples
☐ Will call with instru

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							N
0904	01	11/09/04	0919	Water	1			X										
1	02 A-D	"	1106	"	4		X		X									
2	03 A-D	"	1135	"	"		X		X									
3	04 A-D	"	1240	"	"		X		X									
4	05 A-D	"	1219	"	"		X		X									
5	06 A-D	"	1042	"	"		X		X									
6	07 A-D	"	1203	"	"		X		X									

ANALYSES REQUESTED

	SIGNATURE	PRINT NAME	COMPANY	DATE
Relinquished by:		Jay Hafer	PUB	11/10/04
Received by:		Nhan Pham	FBI	11/11/04
Relinquished by:				
Received by:				

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WA 98119-2029
6) 285-8282
6) 283-5044
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