PNG ENVIRONMENTAL, INC.

March 26, 2007

1052-01

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

Subject: **Groundwater Monitoring Report - March 5, 2007**
Fife Metroplex Card Lock Fuel Sales Facility
3200 20th Street East
Fife, Washington
VCP Site# SW0610

Dear Mr. Grenley:

This letter documents the results of surface water and groundwater sampling conducted at the above referenced site (Figure 1) on March 5, 2007. This work was conducted under the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program.

PNG Environmental, Inc. (PNG) performed the following scope of work:

- Collected depth to water measurements at the seven site monitoring wells and the drainage ditch.
- Collected groundwater samples from the seven site monitoring wells and a surface water sample from the drainage ditch.

GROUNDWATER AND SURFACE WATER SAMPLING

PNG collected groundwater samples from the seven site monitoring wells and a surface water sample at the drainage ditch (Figure 2). This sampling event represents the third quarterly groundwater sampling event after the fourth injection of ORC into 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 each well was then calculated, and a minimum of three casing volumes of water was removed prior to sample collection using a peristaltic pump equipped with a new length of LDPE tubing and from a disposable bailer. The surface water sample was collected directly from the ditch. Samples were carefully transferred into laboratory-prepared sample containers and placed in a chilled cooler. Chain-of-custody documentation accompanied the samples and was delivered to Friedman and Bruya, Inc. in Seattle, Washington.

The water purged from each well was relatively clear and there was no noticeable sheen or chemical odor observed during sampling activities. *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.

GROUNDWATER CONDITIONS

Water levels were measured prior to sample collection. Depth to water measurements in the site wells and drainage ditch ranged between 2.06 to 7.72 feet bgs, as summarized on

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Table 1. In general, groundwater flow is towards the southwest with a gradient of approximately 0.033 feet per foot (ft/ft). A plot of groundwater elevation contours for March 5, 2007 is shown on Figure 2.

LABORATORY RESULTS

This section describes the results of the groundwater and surface water sampling conducted at the site on March 5, 2007. The complete laboratory report is included as Attachment B. The samples were analyzed for the following constituents:

- Gasoline range organics (GRO) using Method NWTPH-Gx.
- Volatile organic compounds (VOCs) using EPA Method 8260B.
- Total lead using EPA Method 6010.
- Field parameters: pH, conductivity, temperature, dissolved oxygen, and oxidation reduction potential (ORP).

Groundwater Analytical Results

Groundwater analytical results are reported as micrograms per liter (ug/L). The groundwater data is summarized on Table 2 and the results are discussed below:

GRO: GRO was not detected above the method reporting limit (MRL) of 100 ug/L in any of the wells or in the surface water ditch.

VOCs: Acetone (140 ug/L), MEK (15 ug/L), and benzene (1.3 ug/L) were detected in MW-3. Chloroform (18 ug/L) was detected in MW-5. Toluene (12 ug/L) was detected in MW-7. The MTCA Method A cleanup level for benzene (5 ug/L) and toluene (1,000 ug/L) were not exceeded in any sample. Acetone, chloroform, and MEK are chemicals that are not commonly associated with gasoline.

MTBE: MTBE was detected above the MRL of 1 ug/L in two samples including MW-3 (9.6 ug/L), and MW-4 (12 ug/L).

Total Lead: Total lead was detected above the MRL of 1 ug/L in one sample (MW-7 at 2.5 ug/L).

Dissolved oxygen and ORP: Dissolved oxygen levels in the wells ranged between 0.62 to greater than 19.9 parts per million. ORP ranged from -155 to -36 millivolts. Field measurements are found in the Groundwater Sample Collection Forms (Attachment A).

Surface Water Analytical Results

A surface water sample was collected from the drainage ditch sampling location shown on Figure 3. Surface water analytical results are reported as micrograms per liter (ug/L). The surface water data is summarized on Table 3 and the results are discussed below:

GRO: GRO was not detected above the MRL of 100 ug/L in the sample.

VOCs: There was no detection of VOCs above the their respective MRLs in the sample.

MTBE: There was no detection of MTBE above the MRL of 1 ug/L in the sample.

Discussion of Laboratory Results

The results of this quarterly groundwater monitoring event indicates that all contaminants of concern at all site wells and surface water sampling location are below their respective MTCA Method A Cleanup Levels. This is the first quarterly groundwater sampling event where this has been observed. Ecology requires that these groundwater conditions (below cleanup levels) be demonstrated for four consecutive quarters before an opinion for a no further action determination for the site can be considered.

The next sampling event is tentatively scheduled for June 2007. 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 (ug/L)
Table 3 - Surface Water Analytical Results Summary (ug/L)
Figure 1 - Site Location Map
Figure 2 - Groundwater Elevation Contour Plot - March 5, 2007
Attachment A - Groundwater Collection Sampling Forms
Attachment B - Laboratory Report and Chain-of-Custody Documentation

cc: Mr. Scott Rose, Ecology
Mr. Terry Dahl, Markel

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	MW-7	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	13.95	7.50
05/20/2003	6.49	7.10	8.15	7.18	5.90	7.16	NM	2.30
08/20/2003	7.11	7.74	8.82	7.84	6.73	7.88	NM	2.82
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	NM	2.03
02/23/2004	5.76	6.46	7.52	6.45	5.07	6.44	NM	1.76
05/13/2004	6.37	6.99	7.99	7.06	5.76	7.01	NM	2.03
08/16/2004	7.05	7.62	8.61	7.56	6.22	7.48	NM	2.74
11/09/2004	6.34	6.85	7.97	6.89	5.62	6.88	NM	2.32
02/02/2005	5.92	6.58	7.81	6.58	4.95	6.56	NM	2.16
05/09/2005	5.82	6.56	7.82	6.58	3.00	6.56	NM	2.20
08/23/2005	6.97	7.59	8.54	7.57	6.23	7.50	8.77	2.32
11/14/2005	6.17	6.62	7.63	6.70	5.35	6.71	7.87	2.25
02/16/2006	5.61	6.26	7.31	6.22	4.28	6.24	7.56	1.65
05/16/2006	6.21	6.79	7.77	6.83	4.00	6.76	8.09	2.05
08/15/2006	7.30	7.98	8.97	8.03	6.50	8.03	9.34	2.85
12/04/2006	5.72	6.38	7.37	6.35	2.74	6.33	7.76	2.05
03/05/2007	5.51	6.20	7.37	6.24	2.76	6.17	7.72	2.06

Water Level Elevation

Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	Ditch
Casing Elevation[a]	12.01	12.48	13.65	12.87	11.62	12.90	13.95	7.50
05/20/2003	5.52	5.38	5.50	5.69	5.72	5.74	NM	5.20
08/20/2003	4.90	4.74	4.83	5.03	4.89	5.02	NM	4.68
11/17/2003	6.59	6.99	7.91	7.07	5.99	7.04	NM	2.03
02/23/2004	6.25	6.02	6.13	6.42	6.55	6.46	NM	5.74
05/13/2004	5.64	5.49	5.66	5.81	5.86	5.89	NM	5.47
08/16/2004	4.96	4.86	5.04	5.31	5.40	5.42	NM	4.76
11/09/2004	5.67	5.63	5.68	5.98	6.00	6.02	NM	5.18
02/02/2005	6.09	5.90	5.84	6.29	6.67	6.34	NM	5.34
05/09/2005	6.19	5.92	5.83	6.29	8.62	6.34	NM	5.30
08/23/2005	5.04	4.89	5.11	5.30	5.39	5.40	5.18	5.18
11/14/2005	5.84	5.86	6.02	6.17	6.27	6.19	6.08	5.25
02/16/2006	6.40	6.22	6.34	6.65	7.34	6.66	6.39	5.85
05/16/2006	5.80	5.69	5.88	6.04	7.62	6.14	5.86	5.45
08/15/2006	4.71	4.50	4.68	4.84	5.12	4.87	4.61	4.65
12/04/2006	6.29	6.10	6.28	6.52	8.88	6.57	6.19	5.45
03/05/2007	6.50	6.28	6.28	6.63	8.86	6.73	6.23	5.44

Notes:
[a] Elevations are relative to a City of Tacoma control point in NE 20th Street, relative to NGVD29.
NM = Not measured (location was not installed or was not accessible at time of measurement).

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

Sample Identification / Date Sampled / Parameters	MTCA Method A Cleanup Level	MW-1								
		02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	1 U	1 U	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	NA	1 U	10 U	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B

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

Sample Identification / Date Sampled / Parameters	MTCA Method A Cleanup Level	MW-2								
		02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	50 U	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	250 U	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	1 U	1 U	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	NA	1 U	1 U	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B

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

Sample Identification / Date Sampled / Parameters	MTCA Method A Cleanup Level	MW-3								
		02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	50 U	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	250 U	NA	NA	NA	NA	NA	NA
Benzene	**5**	5	4	4.5	2.5	1.8	1.5	2	1.4	1.3
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	**21**	**22**	**33**	12	9.5	7.8	8.6	7.6	9.7
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	1 U	1 U	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		3	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	1	1 U	1 UJ	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B

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

Sample Identification / Date Sampled / Parameters	MTCA Method A Cleanup Level	MW-4								
		02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	50 U	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	250 U	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	1	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	**72**	**50**	**50**	**65**	**29**	**20**	**20**	**21**	12
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	10 L	10 L	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		2	1 U	1.7	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	1 U	1 U	1 UJ	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs 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	02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Parameters	Cleanup Level									
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	10 L	1 U	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	NA	1 U	1 U	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs 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	02/02/2005	05/09/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Parameters	Cleanup Level									
Gasoline Range Organics	**800**	50 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	10 L	1 U	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	NA	NA	NA	1 U	1 UJ	1 U	1 U	2 U	1 U

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B

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

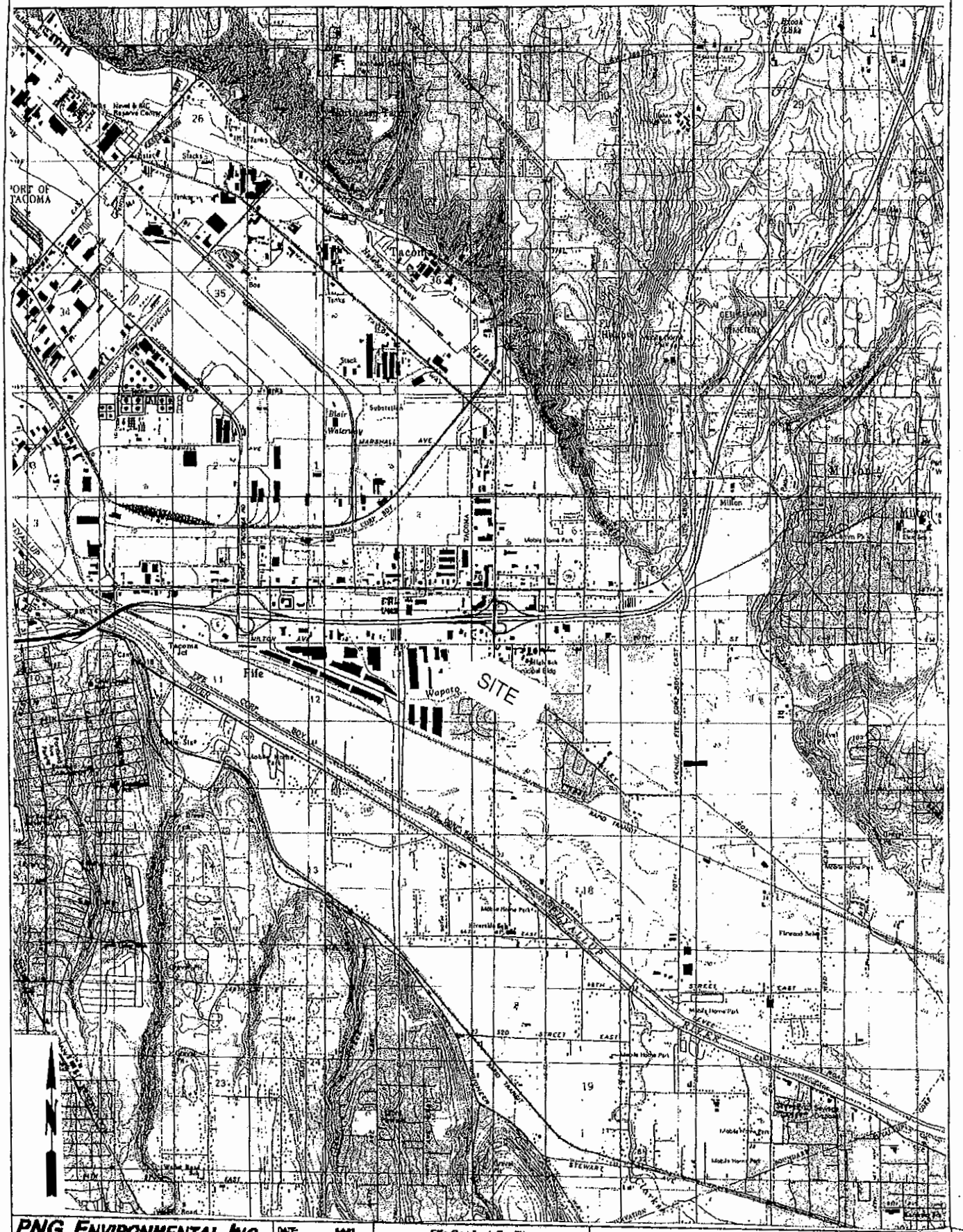
Sample Identification / Date Sampled / Parameters	MTCA Method A Cleanup Level	MW-7 08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Gasoline Range Organics	**800**	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	**500**	50 U	NA	NA	NA	NA	NA	NA
TRPH		250 U	NA	NA	NA	NA	NA	NA
Benzene	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	**1,000**	1 U	1 U	1 U	1 U	1 U	2.8	12
Ethylbenzene	**700**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	**20**	**20**	2	4.6	5.2	**11**	1 U	1 U
1,2-Dibromoethane (EDB)	**0.01**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	**5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane		10 L	10 L	10 L	10 L	1 U	1 U	1 U
Naphthalene	**160**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	**15**	3	3.68	1.38	1 U	4.51	**16.5**	2.5

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
J = Estimated value by laboratory
NA = Not analyzed
L = Not detected (from a library search)
Values in bold exceeds referenced Cleanup Level
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B

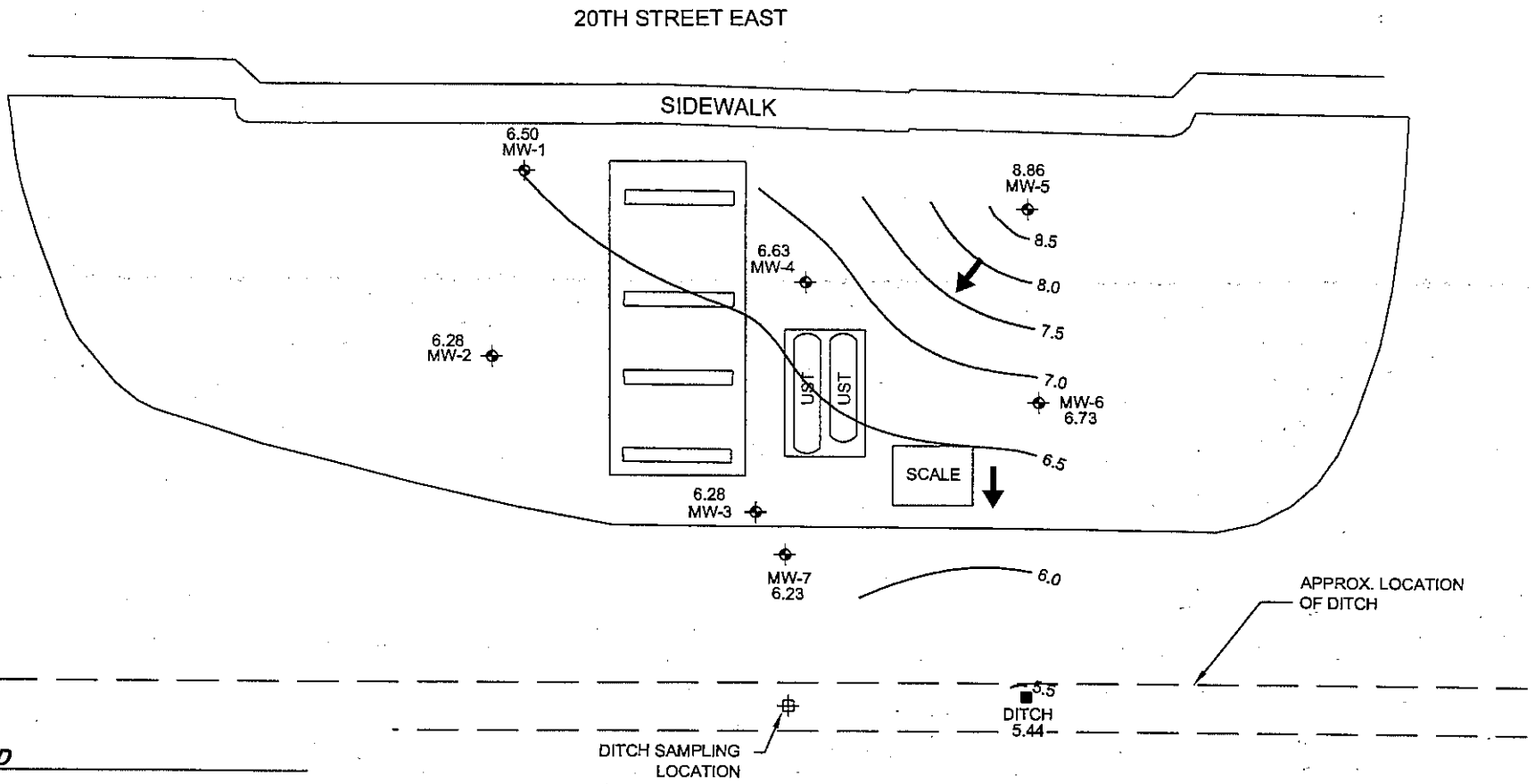
Table 3
Surface Water Analytical Results Summary (ug/L)
Card Lock Fuels Sales Facility
Fife, Washington

Sample Identification	DITCH							
Date Sampled	07/21/2005	08/23/2005	11/14/2005	02/16/2006	05/16/2006	08/15/2006	12/04/2006	03/05/2007
Parameters								
Gasoline Range Organics	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	50 U	50 U	NA	NA	NA	NA	NA	NA
TRPH	250 U	250 U	NA	NA	NA	NA	NA	NA
Benzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Methyl t-butyl ether (MTBE)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane (EDC)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexane	10 L	10 L	10 L	1 U	1 U	1 U	1 U	1 U
Naphthalene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Lead	1 U	1 U	NA	NA	NA	NA	NA	NA

Notes:
ug/L = Micrograms per liter
U = Undetected at method reporting limit shown
L = Not detected (from a library search)
NA = Not analyzed
Gasoline range organics by NWTPH-Gx
Diesel range organics by NWTPH-Dx
Total range petroleum hydrocarbons (TRPH) by NWTPH-Dx
Total lead by EPA Method 200.8
VOCs by EPA Method 8260B



PNG ENVIRONMENTAL INC. 1706 Commerce Avenue, Suite 206 Longview, Washington 98632 TEL (360) 414-0688 FAX (360) 414-0883	DATE: 1-4-03 FILE NAME: Fig1 DRAWN BY: AA APPROVED BY: CH	Fife Cardlock Facility Fife, Washington Chanley Stewart	Site Location Map	Project No. 1062-01 Figure No. 1



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

DATE: 3-21-07 FILE NAME: 1052-01 DRAWN BY: JJT APPROVED BY:CH	FIFE CARDLOCK FUEL FACILITY 3200 20TH ST. EAST FIFE, WASHINGTON	GROUNDWATER ELEVATION CONTOUR PLOT MARCH 5, 2007	Project No. 1052-01 Figure No. 2

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
Date 03/06/07 Collector JMG

Well Information
Monument condition ☐ Good ☐ Needs repair N/O bolts, 1 tab gone, 2 stripped
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 5.51 ft
Casing volume 9.49 ft (H_2O) X 0.16 gpf = 1.51 X 3 = 4.55
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 1228 Purge stop time 1241 Purge rate ≤ 0.25 gpm 0-5

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

Gallons	pH	Temperature	Conductivity	Comments
2	7.62	55.9	753	yellow
3	7.16	57.2	960	"
4	7.11	55.6	1001	"
4.5+	7.06	55.0	1030	"

Dissolved Oxygen 0.65 **Oxidation Reduction Potential** -117

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

Bottles Filled Time 1245

Number	Type			Preservative					Filtration	
5	✱ VOA	☐ Amber	☐ Poly	✱ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐Yes	☐No
1	☐ 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 03/06/07

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW- 2 | Project name Fife
Sample no. MW- 2 | Project no. 1052
Date 03/06/07 | Collector JMG

Well Information

Monument condition ☐ Good ☐ Needs repair 3 bolts good, 1 stripped = 3/4
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 6.20 ft
Casing volume 8.80 ft (H_2O) X 0.16 gpf = 1.40 X 3 = 4.22
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 1300 Purge stop time 1309 Purge rate 0.25+ gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✳ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	7.04	60.1	1476	Clear
2	7.01	55.9	1114	"
3	7.06	54.2	1106	"
4+	7.03	54.4	1099	"

Dissolved Oxygen 0.62 **Oxidation Reduction Potential** -51

Sampling Device

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

Bottles Filled Time 1313

Number	Type		Preservative					Filtration	
5	✳ VOA	☐ Amber ☐ Poly	✳ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
1	☐ 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 03/06/07

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-3
Sample no. MW-3
Date 03/06/07

Project name Fife
Project no. 1052
Collector JMG

Well Information

Monument condition ☐ Good ☐ Needs repair 1 tab gone - 2 stripped
Well cap condition ☒ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☒ Not measured ____ 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 7.37 ft
Casing volume 7.63 ft (H_2O) X 0.16 gpf = 1.22 X 3 = 3.66
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 1330 Purge stop time 1343 Purge rate 0.25+ gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✱ Hanna ☐ Other ____

Gallons	pH	Temperature	Conductivity	Comments
1	12.38	61.6	13999	Clear
2	12.57	57.4	"	"
3.75	12.54	57.1		5V lower tubing 13' bgs

Dissolved Oxygen 714.9 **Oxidation Reduction Potential** -66

Sampling Device

Bailer ☐ Disposable ☐ Stainless ☐ Teflon ☐ Other ____
Filter Type ____ Size ____ (micron) ☐ Other ____
Bailer cord used ☐ Monofillament ☐ Other ____

Bottles Filled Time 1346

Number	Type			Preservative					Filtration
5	✱ VOA	☐ Amber	☐ Poly	✱ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other__	☐Yes ☐No
1	☐ 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:
ORC granules noted in purge water

Sampler's Signature ____ Date 03/06/07

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW- 4 | Project name Fife
Sample no. MW- 4 | Project no. 1052
Date 03/06/07 | Collector JMG

Well Information

Monument condition ☐ Good ☐ Needs repair bolts ok - stripped => 3/4
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 6.24 ft
Casing volume 8.76 ft (H_2O) X 0.16 gpf = 1.40 X 3 = 4.20
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 1351 Purge stop time 1407 Purge rate 0.25 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester * Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	7.78	56.4	1453	Clear - Yellow
2	7.21	56.3	1427	" "
3	7.07	56.2	1446	" "
4+	6.97	55.5	1618	

Dissolved Oxygen 1.26 **Oxidation Reduction Potential** -155

Sampling Device

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

Bottles Filled Time 1410

Number	Type	Preservative	Filtration
5	* VOA ☐ Amber ☐ Poly	* HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐Yes ☐No
1	☐ 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 03/06/07

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW- 5 | Project name Fife
Sample no. MW- 5 | Project no. 1052
Date 03/06/07 | Collector JMG

Well Information
Monument condition ☐ Good ☒ Needs repair [illegible] valves
Well cap condition ☐ Good ☐ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☐ Not measured ____ 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 2.76 ft
Casing volume 12.24 ft (H_2O) X 0.16 gpf = 1.95 X 3 = 5.87
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 1152 Purge stop time 1217 Purge rate 0.25 gpm

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

Gallons	pH	Temperature	Conductivity	Comments
1	11.12	56.9	660	Clear
3	11.50	53.7	767	"
5	11.32	52.4	759	"
6	11.12	51.6	773	"

Dissolved Oxygen 2.09 **Oxidation Reduction Potential** -76

Sampling Device
Bailer ☐ Disposable ☐ Stainless ☐ Teflon ☐ Other____
Filter Type____ Size____ (micron) ☐ Other____
Bailer cord used ☐ Monofilament ☐ Other____

Bottles Filled Time 1222

Number	Type	Preservative	Filtration
5	* VOA ☐ Amber ☐ Poly	* HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other__	☐Yes ☐No
1	☐ 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 03/06/07

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. MW-6 | Project name Fife
Sample no. MW-6 | Project no. 1052
Date 03/06/07 | Collector JMG

Well Information

Monument condition ☐ Good ☒ Needs repair all 3 tabs broken off
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 6.17 ft
Casing volume 8.83 ft (H_2O) X 0.16 gpf = 1.41 X 3 = 4.23
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 1125 Purge stop time 1144 Purge rate 0.25 gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✳ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
1	6.82	56.7	1096	Yellow
2	6.69	55.1	1042	"
3	7.12	57.8 54.8	1005	" Cleaning
4+	7.03	54.7	1021	

Dissolved Oxygen 0.76 Oxidation Reduction Potential -37

Sampling Device

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

Bottles Filled Time 1150

Number	Type			Preservative					Filtration	
5	✳ VOA	☐ Amber	☐ Poly	✳ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes	☐ No
1	☐ 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 03/06/07

GROUNDWATER SAMPLE COLLECTION FORM

Well ID no MW-7 Project name Fife
Sample no. MW-7 Project no. 1052
Date 03/06/07 Collector JMG

Well Information

Monument condition	☒ Good	☐ Needs repair		
Well cap condition	☒ Good	☐ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☒ Not measured	___ ppm		☐ Odor
Elevation mark	☒ Yes	☐ Added	☐ Other	
Well diameter	☐ 2-inch	☐ 4-inch	☐ 6-inch	✱ Other 1"

Comments

Purge Data

Total well depth 15.15 ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product ___ ft
Depth to water 7.72 ft
Casing volume 7.43 ft (H_2O) X 0.04 gpf = 0.29 X 3 = 0.89
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 1321 Purge stop time 1324 Purge rate 0.25gpm

Field Parameters

Meter used ☐ HYDAC ☐ pH2Tester ✱ Hanna ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
0.5	6.86	56.4	767	TWD-tubed
1	7.01	57.2	612	dry-clear, almost 1L

Dissolved Oxygen 1.41 **Oxidation Reduction Potential** -36

Sampling Device

Bailer	☐ Disposable	☐ Stainless	☐ Teflon	☐ Other
Filter	Type___	Size___	(micron)	☐ Other
Bailer cord used		☐ Monofilament		☐ Other

Bottles Filled Time 1327

Number	Type			Preservative					Filtration
5	✱ VOA	☐ Amber	☐ Poly	✱ HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other	☐ Yes ☐ No
1	☐ 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:
Clear tubing ~10'

Sampler's Signature [signature] Date 03/06/07

ATTACHMENT B

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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March 27, 2007

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 March 6, 2007 from the Fife 1052-01, F&BI 703051 project. There are 27 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

Eric Young
Chemist

Enclosures
PNG0327R

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051
Date Extracted: 03/08/07
Date Analyzed: 03/08/07

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	Surrogate (% Recovery) (Limit 50-150)
Ditch 703051-02	<100	92
MW-1 703051-03	<100	93
MW-2 703051-04	<100	93
MW-3 703051-05	<100	92
MW-4 703051-06	<100	92
MW-5 703051-07	<100	92
MW-6 703051-08	<100	91
MW-7 703051-09	<100	90
Method Blank	<100	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051
Date Extracted: 03/08/07
Date Analyzed: 03/08/07

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES 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)
TB030607 703051-01	<1	<1	<1	<3	84
Method Blank	<1	<1	<1	<3	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	TB030607	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-03
Date Analyzed:	03/09/07	Data File:	703051-01.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	71	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-04
Date Analyzed:	03/09/07	Data File:	703051-04.013
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	67	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-3	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-05
Date Analyzed:	03/09/07	Data File:	703051-05.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	63	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-06
Date Analyzed:	03/09/07	Data File:	703051-06.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	68	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-07
Date Analyzed:	03/09/07	Data File:	703051-07.054
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	93	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-08
Date Analyzed:	03/09/07	Data File:	703051-08.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	74	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	703051-09
Date Analyzed:	03/09/07	Data File:	703051-09.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	76	60	125

Analyte:	Concentration ug/L (ppb)
Lead	2.50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	PNG Environmental
Date Received:	NA	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/08/07	Lab ID:	I7-85 mb
Date Analyzed:	03/09/07	Data File:	I7-85 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Bismuth	78	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Ditch	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-02
Date Analyzed:	03/07/07	Data File:	030715.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	85	67	133
Toluene-d8	90	79	129
4-Bromofluorobenzene	106	76	145

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

Note: The reporting limit for vinyl chloride is equal to the MDL.

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-1	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-03
Date Analyzed:	03/07/07	Data File:	030717.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	82	67	133
Toluene-d8	90	79	129
4-Bromofluorobenzene	106	76	145

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

Note: The reporting limit for vinyl chloride is equal to the MDL.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-2	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-04
Date Analyzed:	03/07/07	Data File:	030718.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	84	67	133
Toluene-d8	90	79	129
4-Bromofluorobenzene	105	76	145

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

Note: The reporting limit for vinyl chloride is equal to the MDL.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-3	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/20/07	Lab ID:	703051-05
Date Analyzed:	03/20/07	Data File:	032016.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	64	114
1,2-Dichloroethane-d4	82	61	115
Toluene-d8	82	61	114
4-Bromofluorobenzene	80	56	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	130	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	10	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	11	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon Tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	1.5	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<1
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Note: The reporting limit for vinyl chloride is equal to the MDL.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-4	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-06
Date Analyzed:	03/08/07	Data File:	030722.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	83	67	133
Toluene-d8	91	79	129
4-Bromofluorobenzene	108	76	145

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	12	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon Tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<1	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<1
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Note: The reporting limit for vinyl chloride is equal to the MDL.

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-5	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-07
Date Analyzed:	03/08/07	Data File:	030723.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	85	75	125
1,2-Dichloroethane-d4	83	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	105	76	145

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	18	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon Tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<1	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<1
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Note: The reporting limit for vinyl chloride is equal to the MDL.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-6	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-08
Date Analyzed:	03/08/07	Data File:	030724.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	83	75	125
1,2-Dichloroethane-d4	81	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	107	76	145

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

Note: The reporting limit for vinyl chloride is equal to the MDL.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-7	Client:	PNG Environmental
Date Received:	03/06/07	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	703051-09
Date Analyzed:	03/08/07	Data File:	030725.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	83	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	108	76	145

Compounds:	Concentration ug/L (ppb)		
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon Tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<1	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<1
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	12	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Note: The reporting limit for vinyl chloride is equal to the MDL.

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 1052-01, F&BI 703051
Date Extracted:	03/07/07	Lab ID:	07-299 mb
Date Analyzed:	03/07/07	Data File:	030710.D
Matrix:	Water	Instrument:	GCMS5
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	75	125
1,2-Dichloroethane-d4	82	67	133
Toluene-d8	89	79	129
4-Bromofluorobenzene	108	76	145

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

Note: The reporting limit for vinyl chloride is equal to the MDL.

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	PNG Environmental
Date Received:	Not Applicable	Project:	Fife 1052-01, F&BI 703051
Date Extracted:	03/20/07	Lab ID:	07-382 mb
Date Analyzed:	03/20/07	Data File:	032015.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	64	114
1,2-Dichloroethane-d4	81	61	115
Toluene-d8	82	61	114
4-Bromofluorobenzene	80	56	127

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<1	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon Tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<1	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<1
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	1.0 c
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	1.2 c
2-Hexanone	<10		

Note: The reporting limit for vinyl chloride is equal to the MDL.

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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

Laboratory Code: 703051-02 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	70-130

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: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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

Laboratory Code: 703051-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	103	70-130
Toluene	ug/L (ppb)	50	99	70-130
Ethylbenzene	ug/L (ppb)	50	99	70-130
Xylenes	ug/L (ppb)	150	97	70-130

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: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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

Laboratory Code: 703051-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Lead	ug/L (ppb)	<1	<1	nm	0-20

Laboratory Code: 703051-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Lead	ug/L (ppb)	10	<1	118	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	111	70-130

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: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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

Laboratory Code: 703051-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	<1	<1	nm
Chloromethane	ug/L (ppb)	<1	<1	nm
Vinyl chloride	ug/L (ppb)	<0.2	<0.2	nm
Bromomethane	ug/L (ppb)	<1	<1	nm
Chloroethane	ug/L (ppb)	<1	<1	nm
Trichlorofluoromethane	ug/L (ppb)	<1	<1	nm
Acetone	ug/L (ppb)	<10	<10	nm
1,1-Dichloroethene	ug/L (ppb)	<1	<1	nm
Hexane	ug/L (ppb)	<1	<1	nm
Methylene chloride	ug/L (ppb)	<5	<5	nm
Methyl t-butyl ether (MTBE)	ug/L (ppb)	<1	<1	nm
trans-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
1,1-Dichloroethane	ug/L (ppb)	<1	<1	nm
2,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
cis-1,2-Dichloroethene	ug/L (ppb)	<1	<1	nm
Chloroform	ug/L (ppb)	<1	<1	nm
2-Butanone (MEK)	ug/L (ppb)	<10	<10	nm
1,2-Dichloroethane (EDC)	ug/L (ppb)	<1	<1	nm
1,1,1-Trichloroethane	ug/L (ppb)	<1	<1	nm
1,1-Dichloropropene	ug/L (ppb)	<1	<1	nm
Carbon Tetrachloride	ug/L (ppb)	<1	<1	nm
Benzene	ug/L (ppb)	<1	<1	nm
Trichloroethene	ug/L (ppb)	<1	<1	nm
1,2-Dichloropropane	ug/L (ppb)	<1	<1	nm
Bromodichloromethane	ug/L (ppb)	<1	<1	nm
Dibromomethane	ug/L (ppb)	<1	<1	nm
4-Methyl-2-pentanone	ug/L (ppb)	<10	<10	nm
cis-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
trans-1,3-Dichloropropene	ug/L (ppb)	<1	<1	nm
1,1,2-Trichloroethane	ug/L (ppb)	<1	<1	nm
2-Hexanone	ug/L (ppb)	<10	<10	nm
1,3-Dichloropropane	ug/L (ppb)	<1	<1	nm
Tetrachloroethene	ug/L (ppb)	<1	<1	nm
Dibromochloromethane	ug/L (ppb)	<1	<1	nm
1,2-Dibromoethane (EDB)	ug/L (ppb)	<1	<1	nm
Chlorobenzene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,1,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
m,p-Xylene	ug/L (ppb)	<2	<2	nm
o-Xylene	ug/L (ppb)	<1	<1	nm
Styrene	ug/L (ppb)	<1	<1	nm
Isopropylbenzene	ug/L (ppb)	<1	<1	nm
Bromoform	ug/L (ppb)	<1	<1	nm
n-Propylbenzene	ug/L (ppb)	<1	<1	nm
Bromobenzene	ug/L (ppb)	<1	<1	nm
1,3,5-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
1,1,2,2-Tetrachloroethane	ug/L (ppb)	<1	<1	nm
1,2,3-Trichloropropane	ug/L (ppb)	<1	<1	nm
2-Chlorotoluene	ug/L (ppb)	<1	<1	nm
4-Chlorotoluene	ug/L (ppb)	<1	<1	nm
tert-Butylbenzene	ug/L (ppb)	<1	<1	nm
1,2,4-Trimethylbenzene	ug/L (ppb)	<1	<1	nm
sec-Butylbenzene	ug/L (ppb)	<1	<1	nm
p-Isopropyltoluene	ug/L (ppb)	<1	<1	nm
1,3-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,4-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dichlorobenzene	ug/L (ppb)	<1	<1	nm
1,2-Dibromo-3-chloropropane	ug/L (ppb)	<1	<1	nm
1,2,4-Trichlorobenzene	ug/L (ppb)	<1	<1	nm
Hexachlorobutadiene	ug/L (ppb)	<1	<1	nm
Naphthalene	ug/L (ppb)	<1	<1	nm
1,2,3-Trichlorobenzene	ug/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: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	98	92	54-127	6
Chloromethane	ug/L (ppb)	50	102	94	49-159	8
Vinyl chloride	ug/L (ppb)	50	98	92	45-168	7
Bromomethane	ug/L (ppb)	50	113	106	37-161	7
Chloroethane	ug/L (ppb)	50	122	112	28-161	8
Trichlorofluoromethane	ug/L (ppb)	50	112	104	41-163	7
Acetone	ug/L (ppb)	50	113	110	13-174	3
1,1-Dichloroethene	ug/L (ppb)	50	96	90	48-136	6
Hexane	ug/L (ppb)	50	102	103	60-141	1
Methylene chloride	ug/L (ppb)	50	89	87	70-110	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	88	88	61-133	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	94	90	78-121	5
1,1-Dichloroethane	ug/L (ppb)	50	99	95	75-121	4
2,2-Dichloropropane	ug/L (ppb)	50	122	113	74-139	8
cis-1,2-Dichloroethene	ug/L (ppb)	50	95	91	79-125	4
Chloroform	ug/L (ppb)	50	90	86	80-122	4
2-Butanone (MEK)	ug/L (ppb)	50	110	110	58-156	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	103	101	71-123	2
1,1,1-Trichloroethane	ug/L (ppb)	50	105	100	78-124	5
1,1-Dichloropropene	ug/L (ppb)	50	100	95	66-124	6
Carbon Tetrachloride	ug/L (ppb)	50	106	100	71-124	6
Benzene	ug/L (ppb)	50	96	92	74-120	4
Trichloroethene	ug/L (ppb)	50	95	90	74-119	5
1,2-Dichloropropane	ug/L (ppb)	50	101	98	76-123	3
Bromodichloromethane	ug/L (ppb)	50	103	100	78-125	3
Dibromomethane	ug/L (ppb)	50	104	103	71-124	1
4-Methyl-2-pentanone	ug/L (ppb)	50	107	107	72-132	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	103	100	73-131	3
Toluene	ug/L (ppb)	50	91	87	69-125	5
trans-1,3-Dichloropropene	ug/L (ppb)	50	101	99	81-130	2
1,1,2-Trichloroethane	ug/L (ppb)	50	94	91	81-120	3
2-Hexanone	ug/L (ppb)	50	102	102	70-146	1
1,3-Dichloropropane	ug/L (ppb)	50	94	93	80-120	1
Tetrachloroethene	ug/L (ppb)	50	90	86	79-117	5
Dibromochloromethane	ug/L (ppb)	50	99	96	89-124	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	92	90	80-120	2
Chlorobenzene	ug/L (ppb)	50	92	88	78-114	5
Ethylbenzene	ug/L (ppb)	50	94	88	77-119	6
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	96	92	80-123	6
m,p-Xylene	ug/L (ppb)	100	97	92	65-129	6
o-Xylene	ug/L (ppb)	50	98	93	54-153	5
Styrene	ug/L (ppb)	50	99	94	77-126	5
Isopropylbenzene	ug/L (ppb)	50	99	92	82-122	6
Bromoform	ug/L (ppb)	50	110	107	55-123	3
n-Propylbenzene	ug/L (ppb)	50	96	91	86-124	6
Bromobenzene	ug/L (ppb)	50	86	84	79-122	3
1,3,5-Trimethylbenzene	ug/L (ppb)	50	93	89	77-127	4
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	91	90	77-124	1
1,2,3-Trichloropropane	ug/L (ppb)	50	89	89	77-125	1
2-Chlorotoluene	ug/L (ppb)	50	92	88	82-120	5
4-Chlorotoluene	ug/L (ppb)	50	92	88	83-120	5
tert-Butylbenzene	ug/L (ppb)	50	93	88	81-125	5
1,2,4-Trimethylbenzene	ug/L (ppb)	50	93	89	78-125	4
sec-Butylbenzene	ug/L (ppb)	50	95	90	77-125	5
p-Isopropyltoluene	ug/L (ppb)	50	96	92	77-131	5
1,3-Dichlorobenzene	ug/L (ppb)	50	89	86	79-115	4
1,4-Dichlorobenzene	ug/L (ppb)	50	88	84	78-110	4
1,2-Dichlorobenzene	ug/L (ppb)	50	87	84	78-114	3
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	84	86	73-139	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	93	89	75-127	4
Hexachlorobutadiene	ug/L (ppb)	50	84	80	68-138	6
Naphthalene	ug/L (ppb)	50	80	79	68-137	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	87	84	69-137	3

Date of Report: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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

Laboratory Code: 703150-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	99	50-150
Chloromethane	ug/L (ppb)	50	<1	101	50-150
Vinyl chloride	ug/L (ppb)	50	<0.2	100	50-150
Bromomethane	ug/L (ppb)	50	<1	98	50-150
Chloroethane	ug/L (ppb)	50	<1	104	50-150
Trichlorofluoromethane	ug/L (ppb)	50	<1	116	50-150
Acetone	ug/L (ppb)	50	<10	114	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	108	50-150
Methylene chloride	ug/L (ppb)	50	<6	110	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	105	50-150
2,2-Dichloropropane	ug/L (ppb)	50	<1	115	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	50-150
Chloroform	ug/L (ppb)	50	<1	108	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<10	136	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	108	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	110	50-150
1,1-Dichloropropene	ug/L (ppb)	50	<1	106	50-150
Carbon Tetrachloride	ug/L (ppb)	50	<1	115	50-150
Benzene	ug/L (ppb)	50	<1	103	50-150
Trichloroethene	ug/L (ppb)	50	<1	101	50-150
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	50-150
Bromodichloromethane	ug/L (ppb)	50	<1	115	50-150
Dibromomethane	ug/L (ppb)	50	<1	112	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	111	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	117	50-150
Toluene	ug/L (ppb)	50	<1	101	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	96	50-150
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	105	50-150
2-Hexanone	ug/L (ppb)	50	<10	101	50-150
1,3-Dichloropropane	ug/L (ppb)	50	<1	105	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	99	50-150
Dibromochloromethane	ug/L (ppb)	50	<1	96	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	110	50-150
Chlorobenzene	ug/L (ppb)	50	<1	99	50-150
Ethylbenzene	ug/L (ppb)	50	<1	102	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	50-150
m,p-Xylene	ug/L (ppb)	100	<2	101	50-150
o-Xylene	ug/L (ppb)	50	<1	102	50-150
Styrene	ug/L (ppb)	50	<1	106	50-150
Isopropylbenzene	ug/L (ppb)	50	<1	103	50-150
Bromoform	ug/L (ppb)	50	<1	98	50-150
n-Propylbenzene	ug/L (ppb)	50	<1	103	50-150
Bromobenzene	ug/L (ppb)	50	<1	100	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	103	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	108	50-150
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	106	50-150
2-Chlorotoluene	ug/L (ppb)	50	<1	99	50-150
4-Chlorotoluene	ug/L (ppb)	50	<1	101	50-150
tert-Butylbenzene	ug/L (ppb)	50	<1	101	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	103	50-150
sec-Butylbenzene	ug/L (ppb)	50	<1	100	50-150
p-Isopropyltoluene	ug/L (ppb)	50	<1	104	50-150
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	98	50-150
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	98	50-150
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<1	96	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	103	50-150
Hexachlorobutadiene	ug/L (ppb)	50	<1	94	50-150
Naphthalene	ug/L (ppb)	50	<1	117	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	105	50-150

Date of Report: 03/27/07
Date Received: 03/06/07
Project: Fife 1052-01, F&BI 703051

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	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	103	97	45-139	6
Chloromethane	ug/L (ppb)	50	101	102	49-141	1
Vinyl chloride	ug/L (ppb)	50	98	98	51-154	1
Bromomethane	ug/L (ppb)	50	95	95	51-151	1
Chloroethane	ug/L (ppb)	50	102	100	50-152	2
Trichlorofluoromethane	ug/L (ppb)	50	110	109	53-140	0
Acetone	ug/L (ppb)	50	87	93	73-158	6
1,1-Dichloroethene	ug/L (ppb)	50	103	104	36-133	1
Hexane	ug/L (ppb)	50	77	74	70-143	4
Methylene chloride	ug/L (ppb)	50	97	96	66-120	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	89	91	72-123	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	102	66-109	0
1,1-Dichloroethane	ug/L (ppb)	50	103	103	66-110	0
2,2-Dichloropropane	ug/L (ppb)	50	118	117	47-130	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	103	75-119	1
Chloroform	ug/L (ppb)	50	104	104	68-120	0
2-Butanone (MEK)	ug/L (ppb)	50	106	101	83-122	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	99	69-112	1
1,1,1-Trichloroethane	ug/L (ppb)	50	106	105	70-114	1
1,1-Dichloropropene	ug/L (ppb)	50	102	102	70-106	0
Carbon Tetrachloride	ug/L (ppb)	50	110	110	73-115	0
Benzene	ug/L (ppb)	50	100	100	52-133	0
Trichloroethene	ug/L (ppb)	50	98	98	76-118	0
1,2-Dichloropropane	ug/L (ppb)	50	100	100	73-119	0
Bromodichloromethane	ug/L (ppb)	50	109	109	76-125	0
Dibromomethane	ug/L (ppb)	50	101	103	69-111	2
4-Methyl-2-pentanone	ug/L (ppb)	50	92	96	75-122	4
cis-1,3-Dichloropropene	ug/L (ppb)	50	112	113	71-109	1
Toluene	ug/L (ppb)	50	100	100	56-141	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	88	91	74-123	3
1,1,2-Trichloroethane	ug/L (ppb)	50	95	96	65-123	2
2-Hexanone	ug/L (ppb)	50	87	91	84-118	5
1,3-Dichloropropane	ug/L (ppb)	50	94	97	70-126	2
Tetrachloroethene	ug/L (ppb)	50	100	100	74-118	0
Dibromochloromethane	ug/L (ppb)	50	88	90	77-123	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	100	72-124	2
Chlorobenzene	ug/L (ppb)	50	98	97	72-119	0
Ethylbenzene	ug/L (ppb)	50	100	99	76-123	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	104	104	66-122	0
m,p-Xylene	ug/L (ppb)	100	99	100	62-147	1
o-Xylene	ug/L (ppb)	50	99	100	68-113	1
Styrene	ug/L (ppb)	50	103	103	71-117	1
Isopropylbenzene	ug/L (ppb)	50	101	101	66-111	0
Bromoform	ug/L (ppb)	50	88	88	75-127	3
n-Propylbenzene	ug/L (ppb)	50	101	101	67-110	0
Bromobenzene	ug/L (ppb)	50	98	98	68-125	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	102	101	70-110	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	94	97	60-123	3
1,2,3-Trichloropropane	ug/L (ppb)	50	91	93	61-123	2
2-Chlorotoluene	ug/L (ppb)	50	100	98	66-109	2
4-Chlorotoluene	ug/L (ppb)	50	99	98	67-110	1
tert-Butylbenzene	ug/L (ppb)	50	100	100	67-110	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	102	102	66-122	0
sec-Butylbenzene	ug/L (ppb)	50	101	100	70-112	1
p-Isopropyltoluene	ug/L (ppb)	50	102	103	71-114	0
1,3-Dichlorobenzene	ug/L (ppb)	50	96	96	72-116	0
1,4-Dichlorobenzene	ug/L (ppb)	50	96	95	69-112	1
1,2-Dichlorobenzene	ug/L (ppb)	50	95	95	72-117	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	77	81	62-126	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	95	97	65-119	3
Hexachlorobutadiene	ug/L (ppb)	50	91	95	78-113	4
Naphthalene	ug/L (ppb)	50	95	100	62-134	5
1,2,3-Trichlorobenzene	ug/L (ppb)	50	90	95	65-124	5

Note: The initial calibration verification result for hexane exceeded 15% deviation. The average deviation for all compounds was not greater than 15%, therefore the calibration is considered valid.

Note: The calibration verification result for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane, bromoform, and 1,2-dibromo-3-chloropropane exceeded 15% deviation. The average deviation for all compounds was not greater than 15%, therefore the calibration is considered valid. This applies to the sample 703051-01.

703051 SAMPLE CHAIN OF CUSTODY ME 03/06/07 V3/BI4

Send Report To Craig Hultgren
Company PNG
Address 1339 Commerce Ave
City, State, ZIP Longview, WA
Phone # 3604141069 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. FIFB LFN 1052-01

PO # 1052-01

REMARKS

Page # 1 of 1

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

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	GRO	PB Total				Notes
TB 030607	01	03/06/07	1105	Water	1			X									
Ditch	02 A-E		1117		5				X			X					
MW-1	03 A-F		1245		6				X			X	X				
MW-2	04 A-F		1313						X			X	X				
MW-3	05 A-F		1346						X			X	X				
MW-4	06 A-F		1410						X			X	X				
MW-5	07 A F		1232						X			X	X				
MW-6	08 A-F		1150						X			X	X				
MW-7	09 A-F		1327						X			X	X				

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Tony Griffey	PNG	3-6-07	1600
Received by:	[signature]	Eric Young	FBI	3/6/07	16:00
Relinquished by:					
Received by:					

Samples received at 6 °C

FORMS\COC\COC.DOC