Aspect consulting
earth + water

April 25, 2008

Mr. James Tosti, President
Windward Real Estate Services, Inc.
7981 168th Avenue NE, #118
Redmond, Washington 98052

Re: Additional Groundwater Sampling Results
1006 Lake Street, Kirkland, Washington
Project No. 080009-001-02

Dear Mr. Tosti:

This letter presents results of groundwater sampling performed at the 1006 Lake Street property in Kirkland, Washington. The site is currently occupied by an active dry cleaning operation and an empty storefront that formerly housed a restaurant. A previous site investigation performed in 2006 identified tetrachloroethene (PCE), a chlorinated volatile organic compound (VOC), in a shallow groundwater sample collected beneath the dry cleaner building at a concentration greater than regulatory cleanup levels. A subsequent soil and groundwater investigation completed in February 2008 did not detect any chlorinated VOCs at additional locations at the site. The presence of a dense glacial till layer near ground surface limited sampling of groundwater to one location. The purpose of current investigation was to collect additional groundwater quality data to more fully assess the extent of the chlorinated VOC release at the site.

Property Description

The subject property is currently occupied by an active dry cleaners (Michael's Fine Dry Cleaning) and an empty storefront that formerly housed a restaurant. The property is bordered to the south by an empty lot, to the east by a single family residence, and to the north and west by 10th Avenue South and Lake Street South, respectively (Figure 1). Lake Washington is located approximately 200 feet west of the property. Lake elevation is approximately 20 feet below the ground surface at the property. The parking areas on the west and south sides of the property are paved with asphalt. The east side of the property, behind the dry cleaner and restaurant building, is unpaved and overgrown with blackberries. This area is at the base of steep slopes coming down from 10th Avenue South and the residential property to the east. An apparent sanitary sewer line was located along the east side of the building. This line runs north toward 10th Avenue South, although it was not determined where this sewer line joins the sewer main line.

Previous Investigations

A previous investigation to evaluate site soil and groundwater conditions was performed by Environmental Associates, Inc. (EAI, 2006). Four soil borings (B-1 through B-4) were drilled at the property in July 2006 using a direct-push (e.g., Geoprobe) drill rig. Approximate boring locations are shown on Figure 1.

One or two soil samples were collected from each boring and submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260B. One groundwater sample was also collected from the only boring where water was encountered boring (B-4, near the dry cleaning machine) and submitted for analysis of VOCs. Analytical results are summarized in Tables 1 and 2. VOCs were not detected in any soil sample at concentrations above the laboratory reporting limit. Three chlorinated VOCs associated with dry cleaning solvents were detected in the groundwater sample. Detected VOCs include PCE at a concentration of 10 micrograms per liter (µg/L), trichloroethene (TCE) at a concentration of 2.8 µg/L, and cis-1,2-dichloroethene (cis-1,2-DCE) at a concentration of 5.5 µg/L. The concentration of PCE exceeded the Washington State Model Toxics Control Act (MTCA) Method A groundwater cleanup level for this substance of 5 µg/L. Detected concentrations of TCE and cis-1,2-DCE were below their respective cleanup levels. Based on these results it was concluded that a release of dry cleaning solvents had occurred, resulting in adverse environmental impacts in the vicinity of the dry cleaning machine.

Aspect Consulting, LLC (Aspect) completed a subsequent soil and groundwater investigation in January 2008 (Aspect, 2008). Five soil borings (B-5 through B-9) were completed at the site at the locations shown on Figure 1. Borings B-6 through B-9 were completed using a Geoprobe drill rig. Boring B-5, located behind the building, was drilled using a hand auger due to access limitations for a drill rig. Soils encountered during drilling generally consisted of dense silty sand and hard sandy silt, which is interpreted as a native glacial till unit. Due to the dense nature of the till, the Geoprobe borings could not advance through this unit, hitting refusal at between 4.5 and 8 feet below ground surface (bgs). Water was encountered in only one boring (B-5) next to the sanitary sewer line.

One soil sample was collected from B-5 and two soil samples each were collected from borings B-6 through B-9. One groundwater sample was also collected from boring B-5 using a temporary PVC well screen. Soil and groundwater samples were submitted to the analytical laboratory for analysis of VOCs by EPA Method 8260B. VOCs were not detected in any of the soil or groundwater samples. Results are summarized on Tables 1 and 2.

Current Investigation and Results

The purpose of the current investigation was to evaluate whether dry cleaning activities had impacted groundwater quality at the site. The scope of work included:

- Drill three groundwater monitoring wells (MW-1 through MW-3) at the locations shown on Figure 1;
- Develop the wells and collect groundwater samples for analysis of VOCs; and
- Measure groundwater elevations to confirm that the general groundwater flow direction is westward toward Lake Washignton.

On March 13, 2008, three monitoring wells were constructed at the site under the direction of an Aspect geologist. The monitoring wells were installed using a hollow-stem auger drill rig. Soil samples were collected every five feet through the drilling depth and screened in the field for possible presence of VOCs using a photoionization detector (PID). All PID readings were

at background levels, and no soil samples were submitted for laboratory analysis. Soil conditions and field observations were recorded on the boring logs, which are included in Attachment A.

Soils encountered during drilling generally consisted of dense silty sand and stiff to hard sandy silt, which is interpreted as a native glacial till unit. The till unit extends to at least 45 feet below ground surface (bgs) at the site. The dense silty nature of the till limits groundwater movement, and water was not observed in the borings during drilling. The wells did slowly fill with water after drilling was completed, with water levels rising to within 1 to 2 feet of ground surface. Well MW-1 was completed at a depth of 45 feet bgs and screened at depths of 25 to 45 feet bgs. Wells MW-02 and MW-3 were completed at depths of 30 feet bgs and screened from depths of 10 to 30 feet bgs.

On March 18, 2008 the wells were developed and groundwater samples collected for analysis of VOCs by EPA Method 8260B. VOCs were not detected in any of the groundwater samples. Results are summarized on Table 2. Copies of the laboratory certificates of analysis are presented in Attachment B.

The top of casing elevations of the monitoring wells were surveyed and depth to groundwater measurements were converted into groundwater elevations (Table 3). Based on the groundwater elevation data, groundwater flow across the site is generally to the west, with a slight northward component. Based on this, wells MW-1 and MW-2 are located downgradient from the dry cleaning operation and dry cleaning machine where PCE in shallow groundwater was previously detected.

Conclusions and Recommendations

Based on results of the three investigations completed to date, impacts associated with the dry cleaning operation appear to be limited to shallow groundwater in the area near the dry cleaning machine. The chlorinated VOC PCE was detected in a groundwater sample collected at boring B-5 at a concentration that exceeds MTCA cleanup levels by a factor of two. Chlorinated VOCs were not detected in soil samples collected adjacent to the dry cleaning machine or outside the building footprint, in groundwater samples collected adjacent to the sanitary sewer line, or in groundwater downgradient (west) of the dry cleaning operation.

The single detection of PCE in shallow groundwater at a concentration of twice the cleanup level is not indicative of a significant solvent release at the site. This is supported by the lack of detectable concentrations of VOCs in soil samples collected from the same location adjacent to the dry cleaning machine where PCE was detected in groundwater and the lack of detectable concentrations of VOCs in groundwater downgradient from the dry cleaning machine.

Limitations

Work for this project was performed and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Windward Real Estate Services, Inc. for specific application to the referenced property. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

Sincerely,

Aspect consulting, LLC

Joseph Morrice, LHG
Senior Hydrogeologist
jmorrice@aspectconsulting.com

Doug Hillman, LHG
Principal Hydrogeologist
dhillman@aspectconsulting.com

Attachments:
Table 1 – Analytical Results - Soil
Table 2 – Analytical Results – Groundwater
Table 3 – Groundwater Elevation Data
Figure 1 – Exploration Locations
Attachment A – Boring Logs
Attachment B – Laboratory Certificates of Analysis

References

Aspect Consulting, LLC, 2008. Soil and Groundwater Sampling Results, 1006 Lake Street, Kirkland, Washington.

Environmental Associates, Inc., 2006. Preliminary Subsurface Sampling & Testing, 1006 Lake Street South, Kirkland, Washington.

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Table 1 - Analytical Results - Soil

1006 Lake Street, Kirkland, Washington

			Concentration in µg/L			
Sample ID	Date	Sampled By	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
B1-11	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B2-7.5	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B2-9	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B3-1	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B3-3.5	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B4-4	7/22/2006	EAI	<0.05	<0.03	<0.05	<0.05
B5-4	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B6-4.5	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B6-8	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B7-2.5	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B7-4.5	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B8-4	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B8-5	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B9-4	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
B9-5	1/31/2008	Aspect	<0.025	<0.03	<0.05	<0.05
Cleanup Level			0.05	0.03	800	0.67

Notes:
Cleanup levels listed are the more restrictive of MTCA Method A or Method B values for unrestricted land use.
< indicates constituent not detected at listed detection limit.

Table 2 - Analytical Results - Groundwater

1006 Lake Street, Kirkland, Washington

			Concentration in µg/L			
Sample ID	**Date**	**Sampled By**	**Tetrachloroethene**	**Trichloroethene**	**cis-1,2-Dichloroethene**	**Vinyl Chloride**
B4-GW	7/22/2006	EAI	10	2.8	5.5	<0.2
B-5	1/31/2008	Aspect	<1	<1	<1	<0.2
MW-1	3/18/2008	Aspect	<1	<1	<1	<0.2
MW-2	3/18/2008	Aspect	<1	<1	<1	<0.2
MW-3	3/18/2008	Aspect	<1	<1	<1	<0.2
Cleanup Level			5	5	70	0.2

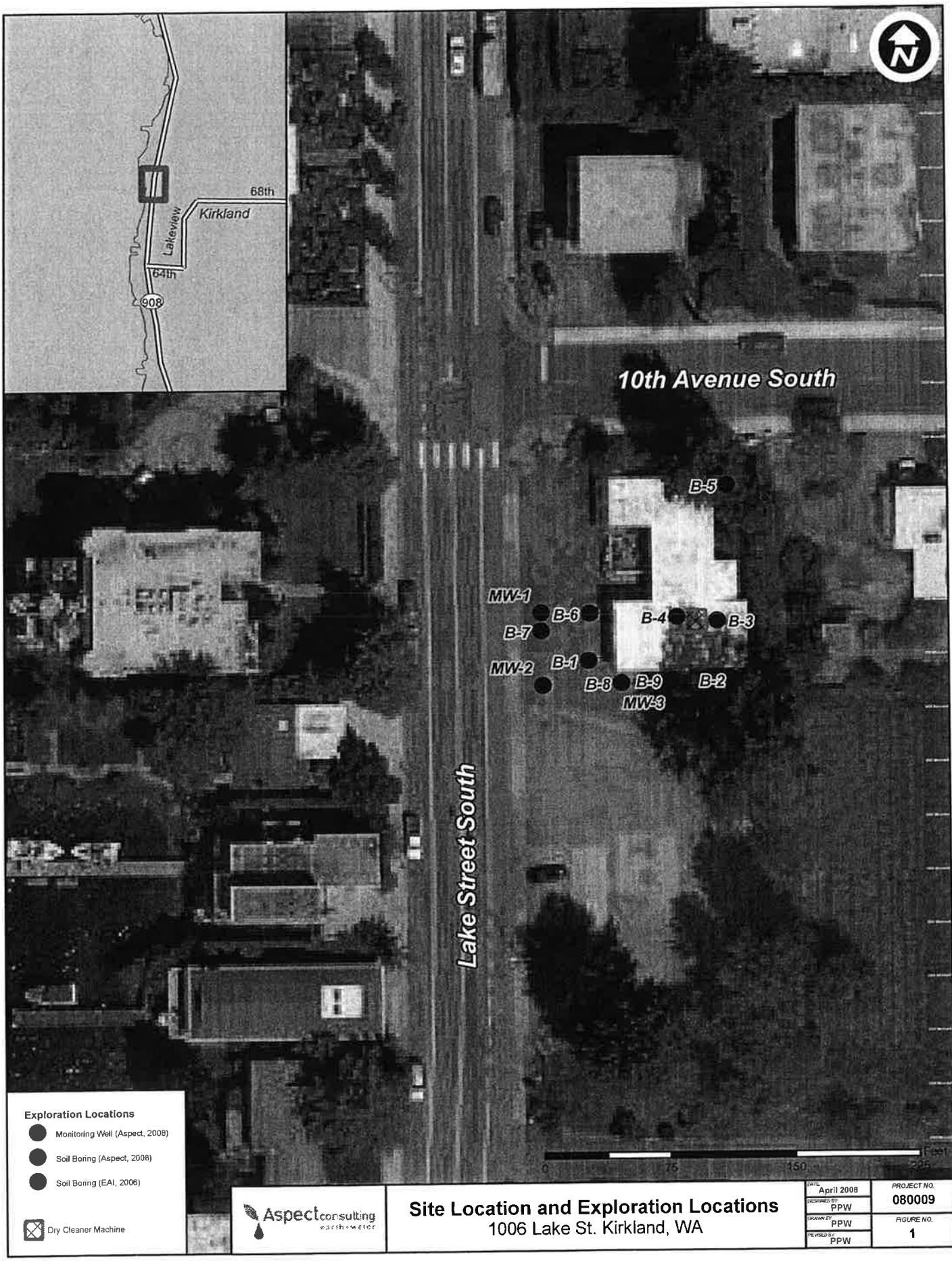
Notes:
Cleanup levels listed are the more restrictive of MTCA Method A or Method B values for unrestricted land use.
< indicates constituent not detected at listed detection limit.

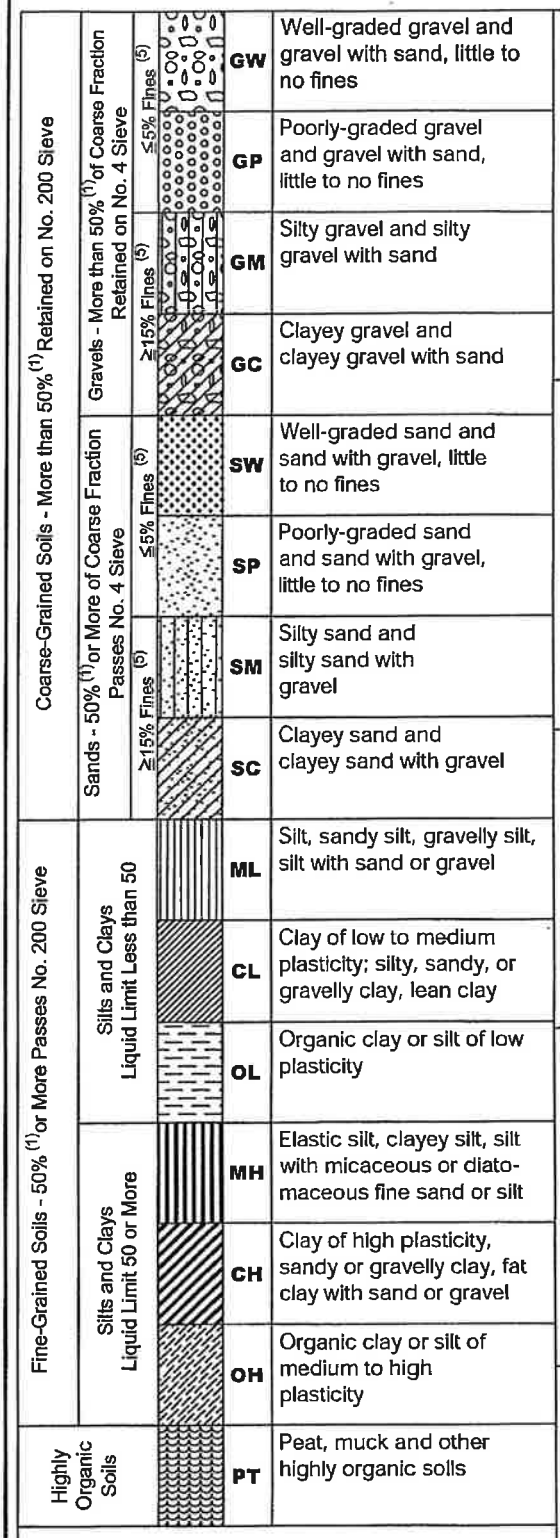
Table 3 - Groundwater Elevation Data

1006 Lake Street, Kirkland, Washington

Well ID	TOC Elevation	Date Measured	Depth to Water (Feet below TOC)	Groundwater Elevation (Feet)
MW-1	100.0	3/18/2008	1.7	98.3
MW-2	99.6	3/18/2008	0.8	98.8
MW-3	100.4	3/18/2008	0.1	100.3

Notes:
TOC - Top of Casing, elevation is relative to arbitrary datum of 100 feet at MW-1


68th
Kirkland
Lakeview
64th
908
10th Avenue South
Lake Street South
B-5
MW-1
B-6
B-7
B-4
B-3
MW-2
B-1
B-8
B-9
B-2
MW-3
N
0
75
150
225
Feet
Exploration Locations
Monitoring Well (Aspect, 2008)
Soil Boring (Aspect, 2008)
Soil Boring (EAI, 2006)
Dry Cleaner Machine
Aspect consulting
earth + water
Site Location and Exploration Locations
1006 Lake St. Kirkland, WA
DATE: April 2008
DESIGNED BY: PPW
DRAWN BY: PPW
REVISED BY: PPW
PROJECT NO. 080009
FIGURE NO. 1
T:\Projects_8\1006LakeSt\sitemap.mxd



Terms Describing Relative Density and Consistency

	Density	SPT (2) blows/foot
Coarse-Grained Soils	Very Loose	0 to 4
	Loose	4 to 10
	Medium Dense	10 to 30
	Dense	30 to 50
	Very Dense	>50
	Consistency	**SPT (2) blows/foot**
Fine-Grained Soils	Very Soft	0 to 2
	Soft	2 to 4
	Medium Stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	>30

Test Symbols

G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Chemical
DD = Dry Density
K = Permeability

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

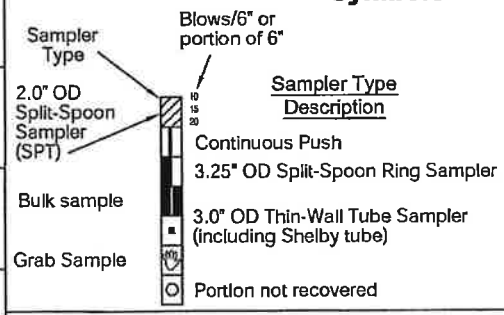
(3) Estimated Percentage

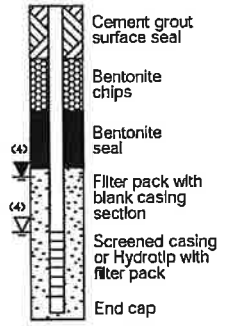
Percentage by Weight	Modifier
<5	Trace
5 to 15	Slightly (sandy, silty, clayey, gravelly)
15 to 30	Sandy, silty, clayey, gravelly)
30 to 49	Very (sandy, silty, clayey, gravelly)

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch
Slightly Moist - Perceptible moisture
Moist - Damp but no visible water
Very Moist - Water visible but not free draining
Wet - Visible free water, usually from below water table

Symbols





(1) Percentage by dry weight
(2) (SPT) Standard Penetration Test (ASTM D-1586)
(3) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)
(4) Depth of groundwater ▽ ATD = At time of drilling ▼ Static water level (date)
(5) Combined USCS symbols used for fines between 5% and 15% as estimated in General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

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Exploration Log Key

DATE:
DESIGNED BY:
DRAWN BY:
REVIEWED BY:

PROJECT NO.

FIGURE NO.
A-1

Q:_ACAD Standards\Standard Details\Exploration Log Key A1.dwg

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IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-1	1 of 3

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer
Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 1.7
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
0	8" flush-mount monument; locking thermos cap; concrete seal 0'-2'						Asphalt	0
1								1
2	▼ 3/18/2008							2
3								3
4		1		0	50/6		Very dense, slightly moist, brown, gravelly, silty, SAND	4
5								5
6								6
7								7
8								8
9		2		0	50/6		Becomes gray, slighly gravelly, slightly silty, SAND	9
10	hydrated bentonite chips, 2'-22'							10
11								11
12								12
13								13
14		3		0	18 50/6		Becomes moist	14
15	2-inch diameter, schedule 40 PVC casing, threaded connection, 0'-25'							15
16								16
17								17
18								18
19		4		0	20 21 32		Hard, moist, gray, slightly sandy, SILT	19

Sampler Type:
- ○ No Recovery
- ▯ 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 2

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

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IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-1	2 of 3

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer
Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 1.7
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
21		4		0				21
22								22
23								23
24					10 18 21		Hard, moist, gray, slightly sandy, SILT	24
25		5		0				25
26								26
27								27
28								28
29					2 11 13		Very stiff, moist, gray, SILT	29
30	#2/12 monterey beach sand filter pack, 22'-45'	6		0				30
31								31
32								32
33	▽3/13/2008							33
34					2 11 12		Same	34
35	2-inch diameter, schedule 40 PVC screen, 20-slot, 25'-45'	7		0				35
36								36
37								37
38								38
39		8		0	8 9 9		Same	39

Sampler Type:
- ⊘ No Recovery
- ▯ 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 2

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

Aspect consulting
IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-1	3 of 3

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer

Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 1.7
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
41		8		0				41
42								42
43								43
44					4		Becomes stiff	44
45	threaded PVC endcap	9		0	6 6			45
46								46
47								47
48								48
49								49
50								50
51								51
52								52
53								53
54								54
55								55
56								56
57								57
58								58
59								59

Sampler Type:
- No Recovery
- 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 2

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

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IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-2	1 of 2

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer

Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 0.8
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	▼ 3/18/2008 8" flush-mount monument; locking thermos cap; concrete seal 0'-2'						Asphalt Slightly moist, brown, gravelly, silty, SAND	1
2								2
3	hydrated bentonite chips, 2'-7'							3
4								4
5								5
6								6
7	2-inch diameter, schedule 40 PVC casing, threaded connection, 0'-10'							7
8								8
9		1		0	15 50/6		Very dense, slightly moist, gray, slightly gravelly, slightly silty, SAND	9
10	#2/12 monterey beach sand filter pack, 7'-30'							10
11								11
12								12
13								13
14		2		0	15 25 26		Same	14
15								15
16								16
17								17
18								18
19		3		0	15 16 50/6		Hard, moist, gray, slightly sandy, SILT	19

Sampler Type:
- No Recovery
- 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 3

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

Aspect consulting
IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-2	2 of 2

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer

Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 0.8
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
21	2-inch diameter, schedule 40 PVC screen, 20-slot, 10'-30'	3		0				21
22								22
23								23
24					6 8		Becomes very stiff	24
25		4		0	10			25
26								26
27								27
28								28
29	▽ 3/13/2008				10		Becomes non-sandy	29
30	threaded PVC endcap	5		0	14 15			30
31								31
32								32
33								33
34								34
35								35
36								36
37								37
38								38
39								39

Sampler Type:
- ⊘ No Recovery
- ▯ 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 3

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

Aspect consulting
IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-3	1 of 2

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer
Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 0.1
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	3/18/2008 8" flush-mount monument; locking thermos cap; concrete seal 0'-2'						Asphalt	1
							Slightly moist, brown, gravelly, silty, SAND	
2								2
3	hydrated bentonite chips, 2'-7'							3
4								4
5								5
6								6
7	2-inch diameter, schedule 40 PVC casing, threaded connection, 0'-10'							7
8								8
9		1		0	50/6		Very dense, slightly moist, gray, slightly gravelly, slightly silty, SAND	9
10	#2/12 monterey beach sand filter pack, 7'-30'							10
11								11
12								12
13								13
14		2		0	18 18 20		Dense, moist, gray, silty, SAND	14
15								15
16								16
17								17
18								18
19		3		0	16 18 19		Very stiff, moist, gray, slightly sandy, SILT	19

Sampler Type:
- No Recovery
- 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 4

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

Aspect consulting
IN-DEPTH PERSPECTIVE

Boring Log

Project Number	Boring Number	Sheet
080009	MW-3	2 of 2

Project Name: 1006 Lake Street
Location: Kirkland, WA
Driller/Method: Cascade Drilling Inc. / Hollow Stem Auger
Sampling Method: 3" OD split barrel sampler with 300 lb hammer

Ground Surface Elev (ft amsl):
Depth to Water (ft BTOC): 0.1
Start/Finish Date: 3/13/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
21	2-inch diameter, schedule 40 PVC screen, 20-slot, 10'-30'	3		0				21
22								22
23								23
24					8 9 9		Very stiff, moist, gray, slightly sandy, SILT	24
25		4		0				25
26								26
27								27
28	▽3/13/2008							28
29					4 6 7		Becomes non-sandy	29
30	threaded PVC endcap	5		0				30
31								31
32								32
33								33
34								34
35								35
36								36
37								37
38								38
39								39

Sampler Type:
- ⊘ No Recovery
- ▯ 3" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: EJM
Approved by: JM
Figure No. A - 4

ENV BORING LOG 1006 LAKE STREET.GPJ April 8, 2008

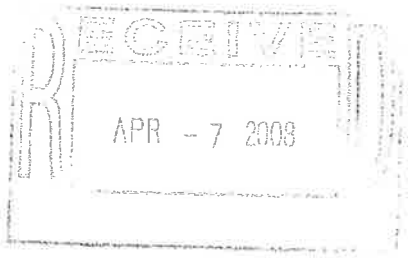
FRIEDMAN & BRUYA, INC.

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

March 31, 2008



Joe Morrice, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Morrice:

Included are the results from the testing of material submitted on March 18, 2008 from the 1006 Lake St./080009, F&BI 803178 project. There are 9 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.

Michael Erdahl
Project Manager

Enclosures
c: Parker Wittman
ASP0331R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 18, 2008 by Friedman & Bruya, Inc. from the Aspect Consulting 1006 Lake St./080009, F&BI 803178 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
803178-01	MW-1-031808
803178-02	MW-2-031808
803178-03	MW-3-031808

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-1-031808	Client:	Aspect Consulting
Date Received:	03/18/08	Project:	1006 Lake St./080009, F&BI 803178
Date Extracted:	03/18/08	Lab ID:	803178-01
Date Analyzed:	03/25/08	Data File:	032507.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	57	121
1,2-Dichloroethane-d4	83	58	118
Toluene-d8	78	59	117
4-Bromofluorobenzene	75	45	141

Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1
Chloromethane	<1
Vinyl chloride	<0.2
Bromomethane	<1
Chloroethane	<1
Trichlorofluoromethane	<1
Acetone	<10
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
2,2-Dichloropropane	<1
cis-1,2-Dichloroethene	<1
Chloroform	<1
2-Butanone (MEK)	<10
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
1,1-Dichloropropene	<1
Carbon Tetrachloride	<1
Benzene	<1
Trichloroethene	<1
1,2-Dichloropropane	<1
Bromodichloromethane	<1
Dibromomethane	<1
4-Methyl-2-pentanone	<10
cis-1,3-Dichloropropene	<1
Toluene	<1
trans-1,3-Dichloropropene	<1
1,1,2-Trichloroethane	<1
2-Hexanone	<10
1,3-Dichloropropane	<1

Compounds:	Concentration ug/L (ppb)
Tetrachloroethene	<1
Dibromochloromethane	<1
1,2-Dibromoethane (EDB)	<1
Chlorobenzene	<1
Ethylbenzene	<1
1,1,1,2-Tetrachloroethane	<1
m,p-Xylene	<2
o-Xylene	<1
Styrene	<1
Isopropylbenzene	<1
Bromoform	<1
n-Propylbenzene	<1
Bromobenzene	<1
1,3,5-Trimethylbenzene	<1
1,1,2,2-Tetrachloroethane	<1
1,2,3-Trichloropropane	<1
2-Chlorotoluene	<1
4-Chlorotoluene	<1
tert-Butylbenzene	<1
1,2,4-Trimethylbenzene	<1
sec-Butylbenzene	<1
p-Isopropyltoluene	<1
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
1,2-Dibromo-3-chloropropane	<1
1,2,4-Trichlorobenzene	<1
Hexachlorobutadiene	<1
Naphthalene	<1
1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-2-031808	Client:	Aspect Consulting
Date Received:	03/18/08	Project:	1006 Lake St./080009, F&BI 803178
Date Extracted:	03/18/08	Lab ID:	803178-02
Date Analyzed:	03/25/08	Data File:	032508.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	84	57	121
1,2-Dichloroethane-d4	84	58	118
Toluene-d8	81	59	117
4-Bromofluorobenzene	76	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	Tetrachloroethene	<1
Chloromethane	<1	Dibromochloromethane	<1
Vinyl chloride	<0.2	1,2-Dibromoethane (EDB)	<1
Bromomethane	<1	Chlorobenzene	<1
Chloroethane	<1	Ethylbenzene	<1
Trichlorofluoromethane	<1	1,1,1,2-Tetrachloroethane	<1
Acetone	<10	m,p-Xylene	<2
1,1-Dichloroethene	<1	o-Xylene	<1
Methylene chloride	<5	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
1,3-Dichloropropane	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	MW-3-031808	Client:	Aspect Consulting
Date Received:	03/18/08	Project:	1006 Lake St./080009, F&BI 803178
Date Extracted:	03/18/08	Lab ID:	803178-03
Date Analyzed:	03/25/08	Data File:	032509.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	57	121
1,2-Dichloroethane-d4	79	58	118
Toluene-d8	78	59	117
4-Bromofluorobenzene	72	45	141

Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1
Chloromethane	<1
Vinyl chloride	<0.2
Bromomethane	<1
Chloroethane	<1
Trichlorofluoromethane	<1
Acetone	<10
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
2,2-Dichloropropane	<1
cis-1,2-Dichloroethene	<1
Chloroform	<1
2-Butanone (MEK)	<10
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
1,1-Dichloropropene	<1
Carbon Tetrachloride	<1
Benzene	<1
Trichloroethene	<1
1,2-Dichloropropane	<1
Bromodichloromethane	<1
Dibromomethane	<1
4-Methyl-2-pentanone	<10
cis-1,3-Dichloropropene	<1
Toluene	<1
trans-1,3-Dichloropropene	<1
1,1,2-Trichloroethane	<1
2-Hexanone	<10
1,3-Dichloropropane	<1

Compounds:	Concentration ug/L (ppb)
Tetrachloroethene	<1
Dibromochloromethane	<1
1,2-Dibromoethane (EDB)	<1
Chlorobenzene	<1
Ethylbenzene	<1
1,1,1,2-Tetrachloroethane	<1
m,p-Xylene	<2
o-Xylene	<1
Styrene	<1
Isopropylbenzene	<1
Bromoform	<1
n-Propylbenzene	<1
Bromobenzene	<1
1,3,5-Trimethylbenzene	<1
1,1,2,2-Tetrachloroethane	<1
1,2,3-Trichloropropane	<1
2-Chlorotoluene	<1
4-Chlorotoluene	<1
tert-Butylbenzene	<1
1,2,4-Trimethylbenzene	<1
sec-Butylbenzene	<1
p-Isopropyltoluene	<1
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
1,2-Dibromo-3-chloropropane	<1
1,2,4-Trichlorobenzene	<1
Hexachlorobutadiene	<1
Naphthalene	<1
1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	1006 Lake St./080009, F&BI 803178
Date Extracted:	03/18/08	Lab ID:	080441 mb
Date Analyzed:	03/25/08	Data File:	032506.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MB

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	81	57	121
1,2-Dichloroethane-d4	85	58	118
Toluene-d8	78	59	117
4-Bromofluorobenzene	80	45	141

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	Tetrachloroethene	<1
Chloromethane	<1	Dibromochloromethane	<1
Vinyl chloride	<0.2	1,2-Dibromoethane (EDB)	<1
Bromomethane	<1	Chlorobenzene	<1
Chloroethane	<1	Ethylbenzene	<1
Trichlorofluoromethane	<1	1,1,1,2-Tetrachloroethane	<1
Acetone	<10	m,p-Xylene	<2
1,1-Dichloroethene	<1	o-Xylene	<1
Methylene chloride	<5	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
1,3-Dichloropropane	<1		

Date of Report: 03/31/08
Date Received: 03/18/08
Project: 1006 Lake St./080009, F&BI 803178

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

Laboratory Code: 803178-03 (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
Methylene chloride	ug/L (ppb)	<5	<5	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

Date of Report: 03/31/08
Date Received: 03/18/08
Project: 1006 Lake St./080009, F&BI 803178

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

Laboratory Code: 803170-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	82	27-155
Chloromethane	ug/L (ppb)	50	<1	92	30-167
Vinyl chloride	ug/L (ppb)	50	<0.2	101	36-166
Bromomethane	ug/L (ppb)	50	<1	96	47-169
Chloroethane	ug/L (ppb)	50	<1	87	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	77	48-158
Acetone	ug/L (ppb)	50	<10	110	31-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	69-118
Methylene chloride	ug/L (ppb)	50	<5	106	68-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	94	60-136
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	71-127
Chloroform	ug/L (ppb)	50	<1	98	65-132
2-Butanone (MEK)	ug/L (ppb)	50	<10	104	64-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	87	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	62-133
1,1-Dichloropropene	ug/L (ppb)	50	<1	105	71-124
Carbon Tetrachloride	ug/L (ppb)	50	<1	97	62-134
Benzene	ug/L (ppb)	50	<1	100	77-117
Trichloroethene	ug/L (ppb)	50	<1	97	79-118
1,2-Dichloropropane	ug/L (ppb)	50	<1	105	79-119
Bromodichloromethane	ug/L (ppb)	50	<1	100	60-136
Dibromomethane	ug/L (ppb)	50	<1	98	66-141
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	92	58-134
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	75-127
Toluene	ug/L (ppb)	50	<1	100	77-118
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	102	75-128
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	98	68-131
2-Hexanone	ug/L (ppb)	50	<10	91	54-142
1,3-Dichloropropane	ug/L (ppb)	50	<1	101	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	98	77-121
Dibromochloromethane	ug/L (ppb)	50	<1	106	71-128
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	69-134
Chlorobenzene	ug/L (ppb)	50	<1	100	78-118
Ethylbenzene	ug/L (ppb)	50	<1	101	78-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	78-124
m,p-Xylene	ug/L (ppb)	100	<2	101	76-121
o-Xylene	ug/L (ppb)	50	<1	100	71-125
Styrene	ug/L (ppb)	50	<1	99	74-125
Isopropylbenzene	ug/L (ppb)	50	<1	99	71-125
Bromoform	ug/L (ppb)	50	<1	105	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	103	68-127
Bromobenzene	ug/L (ppb)	50	<1	99	78-116
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	101	74-121
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	92	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	100	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	100	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	98	69-122
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	101	68-126
sec-Butylbenzene	ug/L (ppb)	50	<1	102	68-129
p-Isopropyltoluene	ug/L (ppb)	50	<1	102	70-125
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	94	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	94	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<1	94	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	94	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	101	68-128
Naphthalene	ug/L (ppb)	50	<1	94	47-159
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	94	70-143

Date of Report: 03/31/08
Date Received: 03/18/08
Project: 1006 Lake St./080009, F&BI 803178

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
Dichlorodifluoromethane	ug/L (ppb)	50	80	31-145
Chloromethane	ug/L (ppb)	50	94	22-155
Vinyl chloride	ug/L (ppb)	50	100	33-158
Bromomethane	ug/L (ppb)	50	101	26-174
Chloroethane	ug/L (ppb)	50	92	35-157
Trichlorofluoromethane	ug/L (ppb)	50	100	49-153
Acetone	ug/L (ppb)	50	127	38-171
1,1-Dichloroethene	ug/L (ppb)	50	101	55-139
Methylene chloride	ug/L (ppb)	50	102	52-129
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	73-120
1,1-Dichloroethane	ug/L (ppb)	50	106	75-118
2,2-Dichloropropane	ug/L (ppb)	50	116	68-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	108	78-119
Chloroform	ug/L (ppb)	50	106	78-120
2-Butanone (MEK)	ug/L (ppb)	50	100	61-139
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	106	74-129
1,1,1-Trichloroethane	ug/L (ppb)	50	108	68-130
1,1-Dichloropropene	ug/L (ppb)	50	118	74-123
Carbon Tetrachloride	ug/L (ppb)	50	111	67-131
Benzene	ug/L (ppb)	50	105	76-115
Trichloroethene	ug/L (ppb)	50	108	76-118
1,2-Dichloropropane	ug/L (ppb)	50	114	74-119
Bromodichloromethane	ug/L (ppb)	50	109	78-122
Dibromomethane	ug/L (ppb)	50	109	80-119
4-Methyl-2-pentanone	ug/L (ppb)	50	98	56-134
cis-1,3-Dichloropropene	ug/L (ppb)	50	116	77-122
Toluene	ug/L (ppb)	50	106	77-115
trans-1,3-Dichloropropene	ug/L (ppb)	50	116	78-128
1,1,2-Trichloroethane	ug/L (ppb)	50	102	82-116
2-Hexanone	ug/L (ppb)	50	106	58-144
1,3-Dichloropropane	ug/L (ppb)	50	108	80-118
Tetrachloroethene	ug/L (ppb)	50	105	79-119
Dibromochloromethane	ug/L (ppb)	50	112	86-122
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	109	84-116
Chlorobenzene	ug/L (ppb)	50	107	81-110
Ethylbenzene	ug/L (ppb)	50	106	80-113
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	107	81-119
m,p-Xylene	ug/L (ppb)	100	108	80-111
o-Xylene	ug/L (ppb)	50	108	79-110
Styrene	ug/L (ppb)	50	108	79-111
Isopropylbenzene	ug/L (ppb)	50	109	76-115
Bromoform	ug/L (ppb)	50	110	80-131
n-Propylbenzene	ug/L (ppb)	50	108	74-119
Bromobenzene	ug/L (ppb)	50	101	80-116
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	75-115
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	98	78-118
1,2,3-Trichloropropane	ug/L (ppb)	50	95	76-124
2-Chlorotoluene	ug/L (ppb)	50	105	77-115
4-Chlorotoluene	ug/L (ppb)	50	105	77-116
tert-Butylbenzene	ug/L (ppb)	50	105	76-113
1,2,4-Trimethylbenzene	ug/L (ppb)	50	104	75-115
sec-Butylbenzene	ug/L (ppb)	50	109	74-116
p-Isopropyltoluene	ug/L (ppb)	50	107	75-117
1,3-Dichlorobenzene	ug/L (ppb)	50	101	81-111
1,4-Dichlorobenzene	ug/L (ppb)	50	100	81-110
1,2-Dichlorobenzene	ug/L (ppb)	50	102	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	72-137
1,2,4-Trichlorobenzene	ug/L (ppb)	50	94	74-131
Hexachlorobutadiene	ug/L (ppb)	50	109	64-138
Naphthalene	ug/L (ppb)	50	88	74-131
1,2,3-Trichlorobenzene	ug/L (ppb)	50	93	73-134

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

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

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

ht - The sample was extracted outside of holding time. Results should be considered estimates.

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

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

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

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

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

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

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

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

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

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

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

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

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

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

803178

SAMPLE CHAIN OF CUSTODY

ME 03-18-08, V1

Page # 1 of 1

Send Report To: Joe Morrice
Company: Aspect Consulting, LLC
Address: 401 Second Avenue S, Suite 201
City, State, ZIP: Seattle, WA 98104
Phone # 206-328-7443 Fax #:

SAMPLERS (signature): Jeffrey Landrin
PROJECT NAME/NO.: 1006 Lake St. /080009
PO #:
REMARKS:

TURNAROUND TIME
☒ Standard (2 Weeks)
☒ RUSH 1 week per JM 3/19/08 AE
Rush charges authorized by:

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
MW-1-031808	01A-C	3/18/08	12:50	water	3				X									
MW-2-031808	02A-C	3/18/08	12:20	↓	3				X									
MW-3-031808	03A-C	3/18/08	11:50	↓	3				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:	Jeffrey Landrin	Jeffrey Landrin	Aspect Consulting LLC	3/18/08	14:00
Received by:	Heather Rankin	H. Rankin	FBI	3/19	1400
Relinquished by:					
Received by:			Samples received at 9 °C		