

January 9, 2008

Mr. Ted Gregory
200 East Patrick Street, LLC
c/o Frederick News Post
200 East Patrick Street
Frederick, MD 21701

RE: **Phase II Subsurface Investigation**
Frederick News Post
200 & 214 East Patrick Street
Frederick, MD 21701
CGS Proposal No. CG-P07-0436
CGS Project No. CG-07-0311

Dear Mr. Gregory:

Chesapeake GeoSciences, Inc. (CGS) is pleased to submit the results of our Phase II Environmental Investigation for the referenced property.

1.0 INTRODUCTION

This investigation was conducted based upon the findings of our Phase I Environmental Site Assessment (ESA). This report presents the results of the field investigation, including field methods, observations, laboratory analytical results, conclusions, recommendations, and associated limitations.

The property is located at 200 & 214 East Patrick Street, Frederick County, Frederick, Maryland 21701, and is situated on the southeastern corner of the intersection between Carroll Street and East Patrick Street. The property is bordered to the south by Carroll Creek and the Carroll Creek Flood Control project development (Figure 1). The property is commercial in use, and the surrounding area is also primarily commercial in use. The property is “L-shaped” and consists of two parcels containing approximately 1.3 acres of mostly developed land.

Two primary improvements exist on the property. The larger improvement, referred to as the Frederick News-Post building, is currently used for newspaper publication. It consists of 2 stories with a divided basement on the oldest, northern side of the building with two 1-story warehouse type additions to the south. The 2-story section of the News-Post was constructed prior to 1873 with its 1-story warehouse type additions built during 1887-1892, and in 1968.

Prior to its use for newspaper publication, the building served as a station and storage shed for an electric railway. The second improvement is a 2-story building on the southeast portion of the property adjacent to the Carroll Creek development. This building, referred to as the tannery, was constructed in 1800 and served as a local tannery for over one hundred years. Numerous storage sheds and leaching pits associated with tannery operations were constructed and demolished onsite during its years of operation. Since then, the tannery building was used as a poultry packing facility, and it is currently vacant.

Additionally, a review of available historical records, regulatory records, and interviews conducted during the property reconnaissance revealed the historic presence of several notable items of environmental interest. An atlas of Frederick County circa 1873 depicts a second tannery located on the southwestern portion of the property, which is now used as the rear parking lot for the News-Post. A fire insurance map from 1971 showed the presence of a gasoline tank located on the south side of the tannery building. During the property reconnaissance, two approximately 3-inch pipes likely associated with an underground storage tank (UST) were observed in the same courtyard area on the south side of the tannery building. It is unclear whether the visible piping could be associated with the gasoline tank from the 1971 fire insurance map. Additionally, it was discovered that two heating oil USTs were removed from the elevated parking area adjacent to the east wall of the News-Post in September 1989.

Based upon the property reconnaissance, interviews, and a review of historical and regulatory database information, the environmental conditions on adjoining properties are not expected to affect the subsurface conditions of the property.

1.1 Topography, Geology, and Hydrology

The property is divided into an upper level (the News-Post building) and a lower level (the tannery building), which is separated by a retaining wall spanning the length of the property in a north-south direction. The overall topography of the property is relatively flat, having a gentle slope toward the south-southwest until the vertically constructed development surrounding Carroll Creek is encountered. Shallow groundwater flow generally follows topography; thus, CGS estimates that shallow groundwater also flows to the south-southwest. It should be noted that seasonal fluctuations could cause changes in groundwater levels and/or flow direction as can local demands, geology, underground structures, or dewatering operations.

The property has a mean elevation of approximately 285 feet above mean sea level (msl). The property is located in the Lowland Section of the Piedmont Plateau physiographic province. The relatively flat Frederick Valley area is underlain with Cambrian and Ordovician limestone and dolomite. In reviewing the *Geologic Map of Maryland* (Maryland Geological Survey, 1968), the property appears to be underlain by the Upper Cambrian Frederick Limestone, which generally consists of blue, slabby, thin-bedded limestone and minor shale.

1.2 Potential Contaminant Source Areas

As part of the Phase I ESA, CGS observed the following environmental concerns associated with the operational activities conducted at the property.

- The historic use of both the southeast and southwest portions of the property as tanneries.
- Potential surface soil contamination from electrical transformers when the property was used by an electric railway as a station and for storage.
- The historic presence of two former heating oil USTs, estimated to be present from the 1960s through 1989, and a gasoline tank illustrated in the 1971 fire insurance map, for which there is no removal documentation or confirmation of environmental integrity at the time of removal.
- Existing piping that may indicate the presence of an abandoned UST near the location where the gasoline tank is illustrated in the 1971 fire insurance map.

2.0 FIELD INVESTIGATION

The field investigation was conducted on November 30 and December 3, 2007, and included the collection of soil samples and groundwater samples from the property. A total of four soil borings were advanced to evaluate the subsurface environmental integrity of the property (Figure 2). One soil boring (B-1a) was advanced in the elevated parking area adjacent to the east side of the News-Post building, slightly down gradient from the former location of the heating oil USTs. One soil boring (B-2) was advanced in the rear or southern parking lot adjacent to the Carroll Creek Development in the general area of the former tannery location. One soil boring (B-3c) was advanced in the parking area along the west wall of the tannery building, nearest the area once mapped as being a leaching pit. The fourth boring (B-4) was advanced in the rear courtyard to the south of the tannery building near the locations of the former gasoline tank and existing piping that may indicate the presence of an abandoned UST.

2.1 Sampling Methodology and Field Observations

Soil observations were logged in accordance with the Unified Soil Classification System. Samples logged during advancement of the borings were generally a mixture of silt and clay having minor coarse sand to fine gravel. Soils were generally damp and ranged in color from brown to grey and olive. A summary of soil observations is included in the Soil Boring Logs (Appendix A).

Soil borings were advanced on the property utilizing a track-mounted GeoProbe® rig with Macrocore sampling system. Soil borings were advanced to a maximum depth of 18-feet below ground surface (bgs) with the GeoProbe®. Soil samples were continuously collected using the Macrocore and screened for volatile organic compounds (VOCs) using a hand held Photo

Ionization Detector (PID). All soil samples collected for laboratory analyses were containerized in 4-ounce glass jars and preserved on ice for transport to the laboratory.

At boring location B-1, refusal occurred when concrete was encountered immediately beneath the asphalt parking surface. Boring B-1a was successfully advanced approximately 10 feet south-southwest of B-1 to a depth of about 18 feet bgs. One soil sample with the highest PID reading (90.6 parts per million) was collected from the 12 to 16 foot bgs interval for laboratory analysis. No soil staining was observed during sampling. An additional soil sample was collected for laboratory analysis at a depth of 1-foot bgs. Groundwater was not encountered prior to refusal during boring advancement.

Boring location B-2 was advanced to a depth of approximately 17.5 feet bgs when refusal was encountered. One soil sample was collected at the refusal depth for laboratory analysis. An additional soil sample was collected for laboratory analysis at a depth of 1-foot bgs. Again, groundwater was not encountered prior to refusal during boring advancement.

During the advancements of borings B-3, B-3a, and B-3b, refusal was encountered at relatively shallow depths of approximately 5-feet bgs. Boring B-3c was successfully advanced approximately 10 feet west of B-3 to a depth of about 16 feet bgs. One soil sample was collected for laboratory analysis at the refusal depth in boring B-3c, which coincided with the groundwater interface. A temporary piezometer was installed and a peristaltic pump was used for the collection of grab groundwater samples. The groundwater was filtered using high capacity inline 0.45-micron filters, and the samples were contained in one unpreserved 500 mL nalgene bottle, and one 500 mL nalgene bottle preserved with nitric acid. The samples were also preserved on ice for transport to the laboratory. Because no elevated PID readings above background levels were detected, no groundwater sample was collected for VOC analysis.

Boring location B-4 was advanced until refusal was encountered at a depth of approximately 16 feet bgs. One soil sample was collected at the refusal depth, which also coincided with the groundwater interface. As with boring B-3c, filtered grab groundwater samples were collected in 500 mL nalgene bottles. Although no elevated PID readings above background levels were detected, an additional grab groundwater sample was collected in a 40 mL volatile organic analyte (VOA) container preserved with hydrochloric acid due to the suspected historic presence of the gasoline tank.

2.2 Analytical Results

Samples were submitted on November 30 and December 3, 2007 to Maryland Spectral Services, Inc. in Baltimore, MD for laboratory analyses. Analytical results for detected analytes in soil are summarized in Table 1. The chain of custody documentation and laboratory analytical reports are presented in Attachment B.

2.2.1 Soil Analysis

One soil sample collected from the 12-16 feet bgs interval at boring B-1a was analyzed for both volatile organic compounds (VOCs) by USEPA Method 8260, and for total petroleum hydrocarbons, diesel range organics (TPH DRO) via USEPA Method 8015 M. Several analytes were detected in the VOC analysis including; acetone (59 micrograms per kilogram ($\mu\text{g}/\text{kg}$)), sec-butylbenzene (33 $\mu\text{g}/\text{kg}$), and toluene (11 $\mu\text{g}/\text{kg}$). These detected analytes were screened against the Maryland Department of the Environment (MDE) non-residential and residential soil standards, and were determined not to exceed levels that would require corrective action. An elevated TPH DRO level was detected at 235 milligrams per kilogram (mg/kg). This concentration does not exceed the MDE non-residential soil cleanup standard, however the TPH DRO concentration exceeds the MDE residential soil cleanup standard by approximately 5 mg/kg . Additionally, a soil sample was collected at 1-foot bgs in B-1a and analyzed for polychlorinated biphenyls (PCBs) by USEPA Method 8082. No PCBs were detected above laboratory quantitation limits.

One soil sample collected from refusal depth at boring location B-2 was submitted to the laboratory for analysis of total chromium by USEPA Method 6010 and for hexavalent chromium by USEPA Method 7196. No hexavalent chromium was detected, however, a total chromium concentration of 28.6 mg/kg was found. This total chromium level does not exceed either the MDE non-residential or residential soil clean-up standards, as shown in Table 1. Additionally, according to the MDE Anticipated Typical Concentration (ATC) table, sites in Western Maryland should anticipate a typical total chromium soil concentration of approximately 42 mg/kg . Thus, the level of total chromium detected in the soil at the site is within the range expected for naturally occurring background levels. A second soil sample was collected at 1-foot bgs in B-2 and analyzed for PCBs. No PCBs were detected above laboratory quantitation limits.

One soil sample collected from boring B-3c at the groundwater interface was analyzed for total chromium and hexavalent chromium. Hexavalent chromium was not detected above the laboratory quantitation limit. Total chromium was detected at 41.6 mg/kg below the MDE non-residential and residential soil cleanup standards, as well as within the regional ATC.

One soil sample from boring B-4 was collected at the groundwater interface and analyzed for total chromium and hexavalent chromium. Hexavalent chromium was not detected. Total chromium was detected at 40.3 mg/kg below the MDE non-residential and residential soil cleanup standards, as well as within the regional ATC. Due to the reported presence of a historic gasoline tank, an additional soil sample was collected from B-4 at refusal depth to analyze for total petroleum hydrocarbons, gasoline range organics (TPH GRO) by USEPA Method 8015M. TPH GRO was not detected above the laboratory quantitation limit.

2.2.2 Groundwater Analysis

Groundwater was not encountered prior to refusal when borings B-1a and B-2 were advanced. For both borings B-3c and B-4, filtered grab groundwater samples were collected in preserved

containers for the analysis of total chromium by USEPA Method 6010, and in unpreserved containers for the analysis of hexavalent chromium by USEPA Method 7196. No analytes were detected above laboratory quantitation limits. An additional unfiltered grab groundwater sample was collected from boring B-4 and analyzed for VOCs by USEPA Method 8260. No analytes were detected above laboratory quantitation limits.

3.0 CONCLUSIONS AND RECOMMENDATIONS

CGS has conducted a Phase II Environmental Investigation of the property. Soil and groundwater samples collected during the Phase II investigation did not exhibit contamination surpassing MDE soil and groundwater clean-up standards, with the exception of one sample with an elevated TPH DRO concentration from boring location B-1a, as presented in Section 2.0. The TPH DRO concentration exceeds the MDE residential soil clean-up standard; however, because the property is currently non-residential in use, CGS does not believe further investigation or remediation to be necessary at this time.

According to the Code of Maryland Regulations (COMAR) Title 26, Department of the Environment, out of service underground storage systems must be removed or permanently abandoned in place. CGS believes the presence of the two pipes found on the south side of the tannery building warrants further investigation. Because it still remains unclear whether these pipes could belong to the same gasoline tank noted in the 1971 fire insurance map, or if they belong to a separate UST, CGS suggests two excavations be performed within the courtyard on the south side of the tannery building. CGS proposes that soil should be excavated around the piping to determine if an associated UST exists. CGS proposes an additional test pit be excavated near the estimated location of the 1971 fire insurance gasoline tank to determine if a gasoline tank exists. If a UST is found to exist, it would be necessary to properly abandon or remove it in accordance with COMAR Title 26.10.01.14. Additionally, it would be necessary to collect soil samples from the tank pit once the UST has been removed to confirm that no environmental impact has resulted from the tank.

4.0 REFERENCES

Code of Maryland Regulations (COMAR), Department of the Environment, 1988. Title 26, Subtitle 10, Chapter 01, Section 14 – Requirements for the Temporary or Permanent Abandonment and Removal of Underground Oil Storage Systems.

Maryland Geological Survey, 1968, Geologic Map of Maryland.

Maryland Geological Survey, 2001, Physiographic Provinces and their Subdivisions in Maryland.

United State Geological Survey, 1993, 7.5-Minute Series Frederick Topographic Quadrangle.

State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater, Interim Final Guidance, Update No. 1, August 2001.

5.0 LIMITATIONS

The work performed in conjunction with this project, and the data developed, are intended as a description of available information at the sample locations and depths indicated and the dates specified. Generally accepted industry standards were used in the preparation of this report.

Laboratory data are intended to approximate actual conditions at the time of sampling. Results from future sampling and testing may vary significantly as a result of natural conditions, a changing environment or the limits of analytical capabilities. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a specific location or depth not investigated. The limited sampling conducted is intended to approximate subsurface conditions by extrapolation between data points. Actual subsurface conditions may vary.

CGS has based its recommendations on observable conditions and analytical results from an independent analytical laboratory, which is solely responsible for the accuracy of its methods and results.

CGS is pleased to have been of service to you on this project. If you have any questions regarding this report please contact the undersigned at (410) 740-1911.

Sincerely,

Chesapeake GeoSciences, Inc.

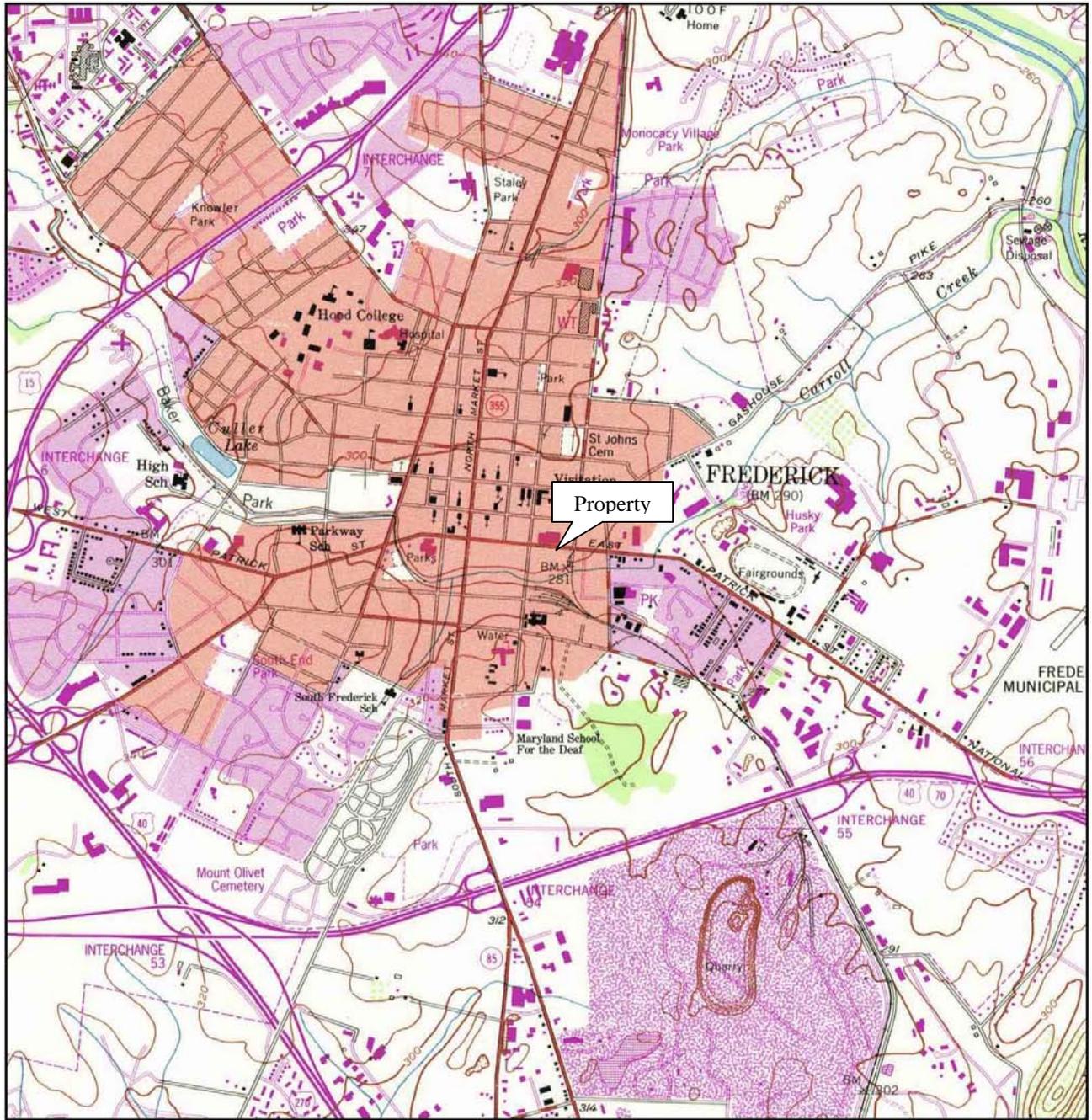
Jane E. Thies
Staff Geologist

Kevin W. Howard, PG
Principal

Enclosures:
Figures 1 and 2
Table 1
Attachment A: Soil Boring Logs
Attachment B: Laboratory Analytical Reports

FIGURES

Figure 1: Topographic Map



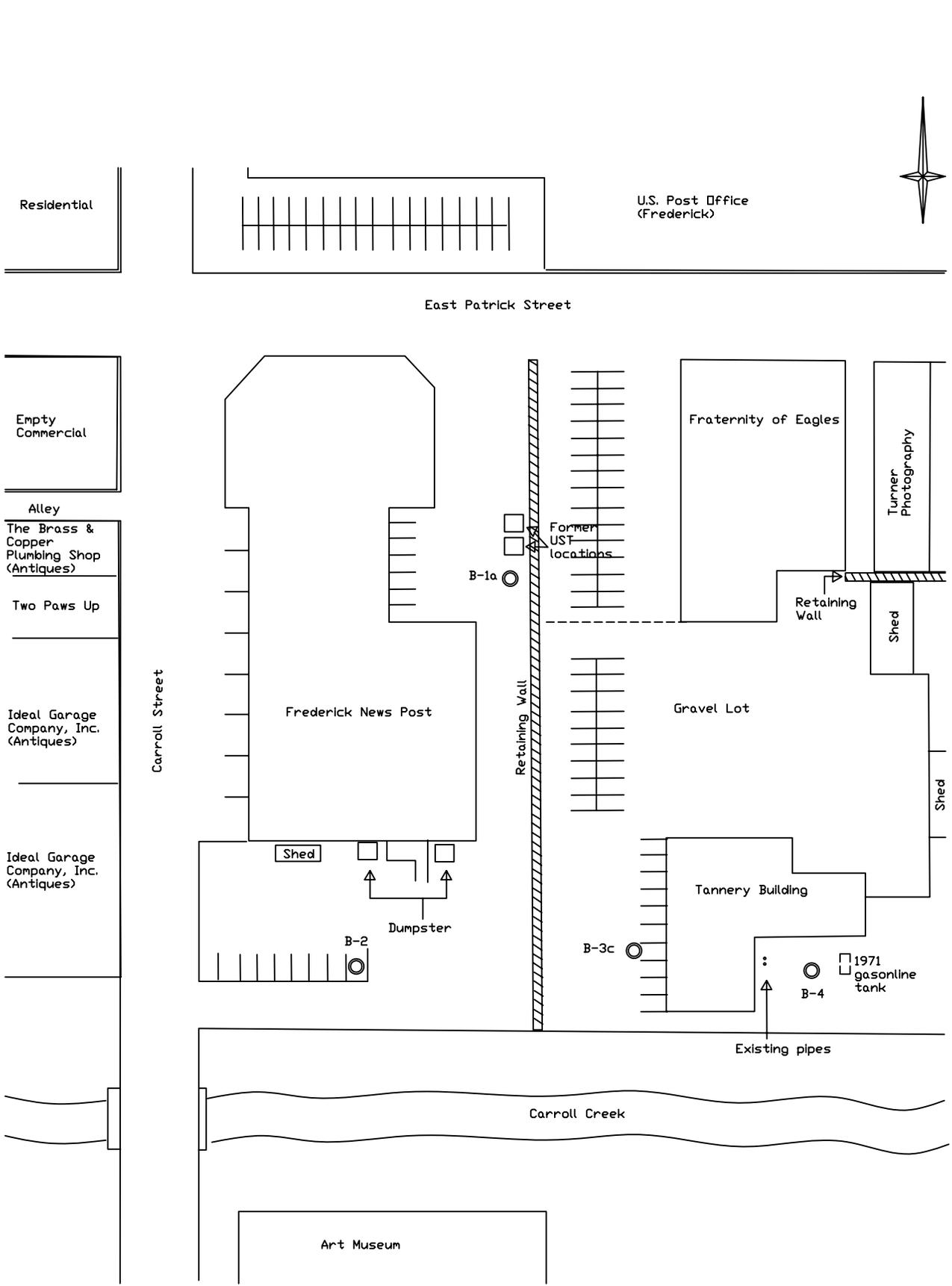
<p>N ↑</p>	TARGET QUAD	SITE NAME:	Frederick News-Post	CLIENT:	Mr. Ted Gregory
	NAME: FREDERICK	ADDRESS:	200 East Patrick Street	CONTACT:	Jane Thies
	MAP YEAR: 1993		Frederick, MD 21701	DATE:	01/04/2008
	REVISED FROM: 1953	LAT/LONG:	39.4134 / 77.4074		
	SERIES: 7.5				
SCALE: 1:24000					

Frederick News Post	
DATE: 12.06.07	SCALE: Not to Scale
DESIGNED BY: JET	JOB #: CG-07-0311
DRAFTED BY: JWO	FILE NAME: CG070311.dwg



FIGURE 2: Property Plan

DATE	REVISIONS



- Residential
- Empty Commercial
- Alley
- The Brass & Copper Plumbing Shop (Antiques)
- Two Paws Up
- Ideal Garage Company, Inc. (Antiques)
- Ideal Garage Company, Inc. (Antiques)

TABLES

TABLE 1

**The Frederick News-Post
Soil Sample Analytical Data**

Sample ID	B-1a	B-2	B-3c	B-4	Method Blank	MDE Non-Residential Soil Standard (ug/kg)	MDE Residential Soil Standard (ug/kg)
Date Collected	11/30/2007	12/3/2007	11/30/2007	11/30/2007	NA	-	-
Sample Depth	18 ft bgs	17.5 ft bgs	16 ft bgs	16 ft bgs	NA	-	-
Dilution Factor	5.0	NA	NA	NA	1.0	-	-
Volatile Organic Compounds (VOCs) (ug/kg)							
Acetone	59	NA	NA	NA	<10	2.00E+10	7.80E+05
sec-Butylbenzene	33	NA	NA	NA	<5.0	NL	NL
Toluene	11	J NA	NA	NA	<5.0	4.10E+07	1.60E+06
TPH Diesel Range Organics (DRO) (mg/kg)							
Dilution Factor	1.0	NA	NA	NA	1.0	-	-
DRO	235	NA	NA	NA	<10	6.20E+02 (mg/kg)	2.30E+02 (mg/kg)
Inorganics (mg/kg)							
Total Chromium	NA	28.6	41.6	40.3	NA	3.10E+05(mg/kg)*	1.20E+04(mg/kg)*

Table Notes:

VOC Analytical Method: EPA Method 8260

Total Chromium Analytical Method: EPA Method 6010

TPH DRO Analytical Method: EPA Method 8015M

mg/kg - milligrams per kilogram or parts per million (ppm)

ug/kg - micrograms per kilogram or parts per billion (ppb)

< - Analyte Not Detected Above Specified Sample Quantitation Limit (SQL)

Bold - Detected Analyte

J- Estimated value

NA - Not Applicable

NL - Not Listed

* MDE standard shown for Cr III (trivalent chromium)

B-1a was taken where two 3,000 gallon diesel USTs were removed
 B-2 was taken in the location of a historic tannery
 B-3c was taken in the "leach pit" area of a historic tannery
 B-4 was taken in the rear of a historic tannery near a gasoline UST

ATTACHMENT A

Chesapeake GeoSciences, Inc.
5405 Twin Knolls Road, Suite #1
Columbia, Maryland 21045

Soil Boring	B-1a	Start Date	11.30.07
Location	East lot, News-Post Building	Complete Date	11.30.07
Address	200 E. Patrick St, Frederick, MD	Total Depth	~18 feet
Drill Method	Geoprobe Direct Push	Soil Logger	JET (CGS)
Driller	AJD (CGS)	Depth to GW	Not Encountered
Depth (ft)	PID	Soil Description	
1.0	0	Asphalt ↓	
2.0		Crushed stone ↓	
3.0		7.5 YR 4/6 Strong brown, dry, mottled color of deep brown with orange, mostly SILT, some Clay, some coarse Sand to fine Gravel (Sampled 1' bgs at 12:00pm)	
4.0	1.2	7.5 YR 4/4 Brown, damp, still some mottling of same colors, Clayey SILT 2" layer of coarse Sand to fine Gravel	
5.0			
6.0			
7.0	2.8	7.5 YR 5/8 Strong brown, damp, all uniform in color Clayey SILT with some fine Gravel	
8.0			
9.0			
10.0	90.6	7.5 YR 5/8 Strong brown, damp, chemical odor Silty CLAY with some fine to medium Gravel and coarse Sand (Sampled at 11:50am) 3" medium Gravel layer	
11.0			
12.0			
13.0	20.6	7.5 YR 5/8 Strong brown, damp Silty CLAY with medium Gravel, some coarse Sand	
14.0			
15.0			
16.0		Large Gravel and refusal encountered ~ 17.8-18.0'	
17.0			
18.0			

Chesapeake GeoSciences, Inc.
5405 Twin Knolls Road, Suite #1
Columbia, Maryland 21045

Soil Boring	B-2	Start Date	12.03.07
Location	Rear/south lot, News-Post Building	Complete Date	12.03.07
Address	200 E. Patrick St, Frederick, MD	Total Depth	~17.5 feet
Drill Method	Geoprobe Direct Push	Soil Logger	JET (CGS)
Driller	AJD (CGS)	Depth to GW	Not Encountered
Depth (ft)	PID	Soil Description	
1.0		Asphalt and large Gravel, dry	
2.0	0	↓ 10 YR 5/8 Yellowish brown, damp Clayey SILT, abundant fine to coarse Gravel	
3.0		(Sampled at 12:15pm)	
4.0			
5.0		7.5 YR 2/3 Very dark brown, damp Clayey SILT mixed with fine Gravel and Soil	
6.0	0	↓ 10 YR 6/8 Brownish yellow, damp SILT with some Clay, some large Gravel	
7.0		↓ 10 YR 5/1 Dark grey, damp	
8.0		SILT with medium to coarse Sand, some fine Gravel	
9.0			
10.0	0	10 YR 5/3 Brown, moist to damp Silty CLAY with abundant fine Gravel, some coarse Gravel	
11.0		Becomes mostly CLAY	
12.0			
13.0		2.5 YR 5/3 Light olive brown, moist Silty CLAY with some fine Gravel	
14.0	0	At 13.5' becomes 10 YR 3/2 Very dark greyish brown, damp mostly CLAY, some Silt	
15.0			
16.0		10 YR 3/2 Very dark greyish brown, moist, Silty CLAY	
17.0	0	↓ 10 YR 5/1 Grey, moist Clayey SILT, some coarse Gravel	
18.0		↓ At 17.5' refusal encountered (Sampled at 12:15pm)	

Chesapeake GeoSciences, Inc.
5405 Twin Knolls Road, Suite #1
Columbia, Maryland 21045

Soil Boring	B-3c	Start Date	11.30.07
Location	West lot/leaches, Tannery Building	Complete Date	12.03.07
Address	200 E. Patrick St, Frederick, MD	Total Depth	~16 feet
Drill Method	Geoprobe Direct Push	Soil Logger	JET (CGS)
Driller	AJD (CGS)	Depth to GW	~ 16 feet
Depth (ft)	PID	Soil Description	
1.0		2.5 YR 6/3 Light yellow brown, damp mostly CLAY, some Silt, fine to coarse Gravel mixed with mulch to 2'	
2.0	0	↓	
3.0		10 YR 4/1 Dark grey, damp coarse Sand to medium Gravel	
4.0		coarse Gravel layer 2"	
5.0		↓	
6.0	0	10 YR 7/1 Light grey, dry	
7.0		↓	
8.0		3" layer 10 YR 3/1 Very dark grey, damp, CLAY to Silty CLAY	
9.0		↓	
10.0	0	2.5 YR 6/3 Light yellow brown, moist CLAY with some Silt, coarse Sand to fine Gravel	
11.0		5/10 Y Greenish grey, moist, Silty CLAY with some fine Gravel mottled with 5 YR 3/4 Dark reddish brown (6")	
12.0		↓	
13.0	0	2" layer Dark grey, dry coarse Sand to medium Gravel	
14.0		↓	
15.0		5 Y 6/3 Pale olive, moist Silty CLAY with some fine Gravel	
16.0		10 YR 5/1 Grey, moist to wet coarse Gravel mixed with some Silt and Clayey SILT mottled with Dark red-brown color at 13.5'	
17.0		↓	
18.0		2.5 5/3 Light olive brown, wet Silty CLAY with some coarse Sand	
		Refusal encountered at ~ 16' (Sampled at 1:45pm)	

Chesapeake GeoSciences, Inc.
5405 Twin Knolls Road, Suite #1
Columbia, Maryland 21045

Soil Boring	B-4	Start Date	11.30.07
Location	South courtyard, Tannery Building	Complete Date	12.03.07
Address	200 E. Patrick St, Frederick, MD	Total Depth	~16 feet
Drill Method	Geoprobe Direct Push	Soil Logger	JET (CGS)
Driller	AJD (CGS)	Depth to GW	~ 16 feet
Depth (ft)	PID	Soil Description	
1.0		Very dark brown Topsoil 1"	
		↓	
2.0	0	Red brick Gravel with medium Sand 8"	
		↓	
3.0		10 YR 5/8 Yellowish-brown, damp Clayey SILT, minor medium to fine Gravel	
4.0			
5.0			
6.0	0	10 YR 5/1 Grey, damp mostly CLAY with minor Silt, very plastic	
7.0			
8.0			
9.0		5 Y 5/2 Olive grey, moist to damp mostly CLAY with minor Silt, plastic	
10.0	0	↓	
11.0		At 11.5' 5" of 2.5 YR 4/4 Reddish brown coarse Sand to medium Gravel	
12.0			
13.0		5 Y 5/6 Olive, very moist Clayey SILT with some fine Gravel	
	0	↓	
14.0		5 Y 4/1 Dark grey, wet Silty CLAY, some medium to coarse Sand (minor)	
15.0			
16.0		Refusal encountered at ~ 16' (Sampled at 2:30pm)	
17.0			
18.0			

ATTACHMENT B

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD 8260

CLIENT SAMPLE ID: B-1A VBLK1203A1
PAGE 1 OF 2 GC-07-0311
LAB SAMPLE ID: 07113031 METHOD BLANK
SAMPLE DATE: 11/30/07
RECEIVED DATE: 11/30/07
ANALYSIS DATE: 12/03/07 12/03/07
FILE NAME: 113031D 1203VBLKA1
INSTRUMENT ID: MSA MSA
% MOISTURE: 12 N/A
MATRIX: SOIL SOIL
UNITS: ug/kg ug/kg
DILUTION FACTOR: 5.0 1.0

VOLATILE COMPOUNDS (Results reported on a dry-weight basis)

Acetone	59	10 U
t-Amyl Alcohol (TAA)	284 U	50 U
t-Amyl Methyl Ether (TAME)	28 U	5.0 U
Benzene	28 U	5.0 U
Bromobenzene	28 U	5.0 U
Bromochloromethane	28 U	5.0 U
Bromodichloromethane	28 U	5.0 U
Bromoform	28 U	5.0 U
Bromomethane	28 U	5.0 U
tert-Butanol (TBA)	284 U	50 U
2-Butanone (MEK)	57 U	10 U
n-Butylbenzene	28 U	5.0 U
sec-Butylbenzene	33	5.0 U
tert-Butylbenzene	28 U	5.0 U
Carbon Disulfide	28 U	5.0 U
Carbon Tetrachloride	28 U	5.0 U
Chlorobenzene	28 U	5.0 U
Chloroethane	28 U	5.0 U
Chloroform	28 U	5.0 U
Chloromethane	28 U	5.0 U
2-Chlorotoluene	28 U	5.0 U
4-Chlorotoluene	28 U	5.0 U
1,2-Dibromo-3-chloropropane	28 U	5.0 U
Dibromochloromethane	28 U	5.0 U
1,2-Dibromoethane (EDB)	28 U	5.0 U
Dibromomethane	28 U	5.0 U
1,2-Dichlorobenzene	28 U	5.0 U
1,3-Dichlorobenzene	28 U	5.0 U
1,4-Dichlorobenzene	28 U	5.0 U
Dichlorodifluoromethane	85 U	15 U
1,1-Dichloroethane	28 U	5.0 U
1,2-Dichloroethane	28 U	5.0 U
1,1-Dichloroethene	28 U	5.0 U
cis-1,2-Dichloroethene	28 U	5.0 U
trans-1,2-Dichloroethene	28 U	5.0 U
Dichlorofluoromethane	28 U	5.0 U

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD 8260

PAGE 2 OF 2

CLIENT SAMPLE ID:	B-1A	VBLK1203A1
	GC-07-0311	
LAB SAMPLE ID:	07113031	METHOD BLANK
SAMPLE DATE:	11/30/07	
RECEIVED DATE:	11/30/07	
ANALYSIS DATE:	12/03/07	12/03/07
FILE NAME:	113031D	1203VBLKA1
INSTRUMENT ID:	MSA	MSA
% MOISTURE:	12	N/A
MATRIX:	SOIL	SOIL
UNITS:	ug/kg	ug/kg
DILUTION FACTOR:	5.0	1.0

VOLATILE COMPOUNDS (Results reported on a dry-weight basis)

1,2-Dichloropropane	28 U	5.0 U
1,3-Dichloropropane	28 U	5.0 U
2,2-Dichloropropane	28 U	5.0 U
1,1-Dichloropropene	28 U	5.0 U
cis-1,3-Dichloropropene	28 U	5.0 U
trans-1,3-Dichloropropene	28 U	5.0 U
Diisopropyl Ether (DIPE)	28 U	5.0 U
Ethyl-t-Butyl Ether (ETBE)	28 U	5.0 U
Ethylbenzene	28 U	5.0 U
Hexachlorobutadiene	28 U	5.0 U
2-Hexanone	57 U	10 U
p-Isopropyl toluene	28 U	5.0 U
Isopropylbenzene (Cumene)	28 U	5.0 U
4-Methyl-2-Pentanone	57 U	10 U
Methyl-t-Butyl Ether (MTBE)	28 U	5.0 U
Methylene Chloride	57 U	10 U
Naphthalene	28 U	5.0 U
n-Propylbenzene	28 U	5.0 U
Styrene	28 U	5.0 U
1,1,1,2-Tetrachloroethane	28 U	5.0 U
1,1,2,2-Tetrachloroethane	28 U	5.0 U
Tetrachloroethene	28 U	5.0 U
Toluene	11 J	5.0 U
1,2,3-Trichlorobenzene	28 U	5.0 U
1,2,4-Trichlorobenzene	28 U	5.0 U
1,1,1-Trichloroethane	28 U	5.0 U
1,1,2-Trichloroethane	28 U	5.0 U
Trichloroethene	28 U	5.0 U
Trichlorofluoromethane	28 U	5.0 U
1,2,3-Trichloropropane	28 U	5.0 U
1,2,4-Trimethylbenzene	28 U	5.0 U
1,3,5-Trimethylbenzene	28 U	5.0 U
Vinyl Chloride	28 U	5.0 U
o-Xylene	28 U	5.0 U
m+p-Xylenes	28 U	5.0 U

B - Detected in lab blank U - Below reported quantitation level J - Estimated value
ug/kg = Microgram per kilogram (parts per billion)

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore MD 21227

DIESEL-RANGE ORGANICS (DRO) BY METHODS 3540/8015 (GC/FID)

CLIENT SAMPLE ID:	B-1A	071203SBLK
	CG-07-0311	
LAB SAMPLE ID:	07113031	METHOD BLANK
SAMPLE DATE:	11/30/07	
RECEIVED DATE:	11/30/07	
EXTRACTION DATE:	12/03/07	12/03/07
ANALYSIS DATE:	12/04/07	12/04/07
INSTRUMENT ID:	GC-G	GC-G
% MOISTURE:	12	N/A
MATRIX:	SOIL	SOIL
UNITS:	mg/kg	mg/kg
DILUTION FACTOR:	1.0	1.0
PARAMETER	(Results reported on a dry-weight basis)	

Diesel-Range Organics (API)	235	10 U

Surrogate Recovery		
o-Terphenyl	96%	87%

mg/kg - Milligrams per kilogram (parts per million)
U - Less than reported quantitation limit
DL - Surrogate diluted out

The above analyses were performed as described in the American Petroleum Institute's "Method for Determination of Diesel Range Organics (1990)"

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore, MD 21227

POLYCHLORINATED BIPHENYLS (PCBS) BY EPA METHODS 3540/8082

CLIENT SAMPLE ID: B-1A SBLK1203
CG-07-0311
LAB SAMPLE ID: 07113031 METHOD BLANK
SAMPLE DATE: 11/30/07
RECEIVED DATE: 11/30/07
EXTRACTION DATE: 12/03/07 12/03/07
ANALYSIS DATE: 12/07/07 12/07/07
INSTRUMENT ID: GC-A GC-A
% MOISTURE: 12
MATRIX: SOIL SOIL
UNITS: ug/kg ug/kg
DILUTION FACTOR: 1.0 1.0

ANALYTE (Results reported on a dry-weight basis)

Aroclor-1016	95 U	83 U
Aroclor-1221	190 U	170 U
Aroclor-1232	95 U	83 U
Aroclor-1242	95 U	83 U
Aroclor-1248	95 U	83 U
Aroclor-1254	95 U	83 U
Aroclor-1260	95 U	83 U

Surrogate Recovery

Tetrachloro-m-xylene	84%	90%
Decachlorobiphenyl	118%	105%

ug/kg - Micrograms per kilogram (parts per billion)

U - Less than reported quantitation limit

DL - Surrogate diluted out

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

GASOLINE RANGE ORGANICS (API) BY EPA METHODS 5030/8015

CLIENT SAMPLE ID: B-4 BBLK1203D1
CG-07-0311
LAB SAMPLE ID: 07113033 METHOD BLANK
SAMPLE DATE: 11/30/07
RECEIVED DATE: 11/30/07
ANALYSIS DATE: 12/03/07 12/03/07
FILE NAME: 113033 1203BBLKD1
INSTRUMENT ID: GC-D GC-D
% MOISTURE: 24 N/A
MATRIX: SOIL SOIL
UNITS: mg/kg mg/kg
DILUTION FACTOR: 1.0 1.0

PARAMETER (Results reported on a dry-weight basis)

Gasoline Range Organics (API) 0.132 U 0.100 U

B - Detected in lab blank U - Below reported quantitation level J - Estimated value
mg/kg = Milligram per kilogram (parts per million)

MARYLAND SPECTRAL SERVICES, INC.
 1500 Caton Center Drive, Baltimore, MD 21227

REPORT OF METAL DETERMINATIONS*

CLIENT SAMPLE ID:	B-3C	B-4
	CG-07-0311	CG-07-0311
MSS SAMPLE ID:	07113032	07113033
ECL SAMPLE ID:	014934001	014934002
SAMPLE DATE:	11/30/07	11/30/07
MSS RECEIVED DATE:	11/30/07	11/30/07
% SOLIDS:	77	75
MATRIX:	SOIL	SOIL
UNITS:	mg/kg	mg/kg

ANALYTE (Results reported on a dry-weight basis)

Chromium, Total	<u>41.6</u>	<u>40.3</u>
Chromium, Hexavalent	< 2.6	< 2.5

ANALYTE	METHOD	ANALYSIS DATE	DETECTION LIMIT
Chromium, Total	6010	12/05/07	1.0
Chromium, Hexavalent	7196A	12/07/07	2.0

mg/kg - Milligrams per kilogram (parts per million)

< - Less than reported detection limit

* These analyses performed by Enviro-Chem Laboratories, Inc., Hunt Valley, MD

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore, MD 21227

POLYCHLORINATED BIPHENYLS (PCBS) BY EPA METHODS 3540/8082

CLIENT SAMPLE ID: B-2 SBLK1204
CG-07-0311
LAB SAMPLE ID: 07120401 METHOD BLANK
SAMPLE DATE: 12/03/07
RECEIVED DATE: 12/04/07
EXTRACTION DATE: 12/04/07 12/04/07
ANALYSIS DATE: 12/07/07 12/07/07
INSTRUMENT ID: GC-A GC-A
% MOISTURE: 15
MATRIX: SOIL SOIL
UNITS: ug/kg ug/kg
DILUTION FACTOR: 1.0 1.0

ANALYTE (Results reported on a dry-weight basis)

Aroclor-1016	98 U	83 U
Aroclor-1221	200 U	170 U
Aroclor-1232	98 U	83 U
Aroclor-1242	98 U	83 U
Aroclor-1248	98 U	83 U
Aroclor-1254	98 U	83 U
Aroclor-1260	98 U	83 U

Surrogate Recovery

Tetrachloro-m-xylene	98%	90%
Decachlorobiphenyl	115%	95%

ug/kg - Micrograms per kilogram (parts per billion)

U - Less than reported quantitation limit

DL - Surrogate diluted out

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive, Baltimore, MD 21227

REPORT OF METAL DETERMINATIONS*

CLIENT SAMPLE ID: B-2
CG-07-0311
MSS SAMPLE ID: 07120401
ECL SAMPLE ID: 014933001
SAMPLE DATE: 12/03/07
MSS RECEIVED DATE: 12/04/07
% SOLIDS: 81
MATRIX: SOIL
UNITS: mg/kg

ANALYTE (Results reported on a dry-weight basis)

Chromium, Total 28.6
Chromium, Hexavalent < 2.2

ANALYTE	METHOD	ANALYSIS DATE	DETECTION LIMIT
Chromium, Total	6010	12/05/07	1.0
Chromium, Hexavalent	7196A	12/07/07	2.0

mg/kg - Milligrams per kilogram (parts per million)

< - Less than reported detection limit

* These analyses performed by Enviro-Chem Laboratories, Inc., Hunt Valley, MD

MARYLAND SPECTRAL SERVICES, INC.
 1500 Caton Center Drive, Baltimore, MD 21227

REPORT OF METAL DETERMINATIONS*

CLIENT SAMPLE ID:	B-3C	B-4
	CG-07-0311	CG-07-0311
MSS SAMPLE ID:	07120402	07120403
ECL SAMPLE ID:	014933002	014933003
SAMPLE DATE:	12/03/07	12/03/07
MSS RECEIVED DATE:	12/04/07	12/04/07
MATRIX:	WATER	WATER
UNITS:	mg/L	mg/L

ANALYTE

Chromium, Total	< 0.010	< 0.010
Chromium, Hexavalent	< 0.010	< 0.010

ANALYTE	METHOD	ANALYSIS DATE	DETECTION LIMIT
Chromium, Total	200.7	12/05/07	0.010
Chromium, Hexavalent	7196A	12/04/07	0.010

mg/L - Milligrams per liter (parts per million)

< - Less than reported detection limit

* These analyses performed by Enviro-Chem Laboratories, Inc., Hunt Valley, MD

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD 8260

CLIENT SAMPLE ID: B-4 VBLK1204A1
PAGE 1 OF 2 CG-07-0311
LAB SAMPLE ID: 07120404 METHOD BLANK
SAMPLE DATE: 12/03/07
RECEIVED DATE: 12/04/07
ANALYSIS DATE: 12/04/07 12/04/07
FILE NAME: 120404 1204VBLKA1
INSTRUMENT ID: MSA MSA
MATRIX: WATER WATER
UNITS: ug/L ug/L
DILUTION FACTOR: 1.0 1.0

VOLATILE COMPOUNDS

Acetone	10 U	10 U
t-Amyl Alcohol (TAA)	20 U	20 U
t-Amyl Methyl Ether (TAME)	5.0 U	5.0 U
Benzene	5.0 U	5.0 U
Bromobenzene	5.0 U	5.0 U
Bromochloromethane	5.0 U	5.0 U
Bromodichloromethane	5.0 U	5.0 U
Bromoform	5.0 U	5.0 U
Bromomethane	5.0 U	5.0 U
tert-Butanol (TBA)	15 U	15 U
2-Butanone (MEK)	10 U	10 U
n-Butylbenzene	5.0 U	5.0 U
sec-Butylbenzene	5.0 U	5.0 U
tert-Butylbenzene	5.0 U	5.0 U
Carbon Disulfide	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U
Chloroethane	5.0 U	5.0 U
Chloroform	5.0 U	5.0 U
Chloromethane	5.0 U	5.0 U
2-Chlorotoluene	5.0 U	5.0 U
4-Chlorotoluene	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U
1,2-Dibromoethane (EDB)	5.0 U	5.0 U
Dibromomethane	5.0 U	5.0 U
1,2-Dichlorobenzene	5.0 U	5.0 U
1,3-Dichlorobenzene	5.0 U	5.0 U
1,4-Dichlorobenzene	5.0 U	5.0 U
Dichlorodifluoromethane	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U
cis-1,2-Dichloroethene	5.0 U	5.0 U
trans-1,2-Dichloroethene	5.0 U	5.0 U
Dichlorofluoromethane	5.0 U	5.0 U

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD 8260

CLIENT SAMPLE ID: B-4 VBLK1204A1
 PAGE 2 OF 2 CG-07-0311
 LAB SAMPLE ID: 07120404 METHOD BLANK
 SAMPLE DATE: 12/03/07
 RECEIVED DATE: 12/04/07
 ANALYSIS DATE: 12/04/07 12/04/07
 FILE NAME: 120404 1204VBLKA1
 INSTRUMENT ID: MSA MSA
 MATRIX: WATER WATER
 UNITS: ug/L ug/L
 DILUTION FACTOR: 1.0 1.0

VOLATILE COMPOUNDS

1,2-Dichloropropane	5.0 U	5.0 U
1,3-Dichloropropane	5.0 U	5.0 U
2,2-Dichloropropane	5.0 U	5.0 U
1,1-Dichloropropene	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U
trans-1,3-Dichloropropene	5.0 U	5.0 U
Diisopropyl Ether (DIPE)	5.0 U	5.0 U
Ethyl-t-Butyl Ether (ETBE)	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U
Hexachlorobutadiene	5.0 U	5.0 U
2-Hexanone	10 U	10 U
p-Isopropyl toluene	5.0 U	5.0 U
Isopropylbenzene (Cumene)	5.0 U	5.0 U
4-Methyl-2-Pentanone	10 U	10 U
Methyl-t-Butyl Ether (MTBE)	5.0 U	5.0 U
Methylene Chloride	5.0 U	5.0 U
Naphthalene	5.0 U	5.0 U
n-Propylbenzene	5.0 U	5.0 U
Styrene	5.0 U	5.0 U
1,1,1,2-Tetrachloroethane	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U
Tetrachloroethene	5.0 U	5.0 U
Toluene	5.0 U	5.0 U
1,2,3-Trichlorobenzene	5.0 U	5.0 U
1,2,4-Trichlorobenzene	5.0 U	5.0 U
1,1,1-Trichloroethane	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U
Trichlorofluoromethane	5.0 U	5.0 U
1,2,3-Trichloropropane	5.0 U	5.0 U
1,2,4-Trimethylbenzene	5.0 U	5.0 U
1,3,5-Trimethylbenzene	5.0 U	5.0 U
Vinyl Chloride	5.0 U	5.0 U
o-Xylene	5.0 U	5.0 U
m+p-Xylenes	5.0 U	5.0 U

B - Detected in lab blank U - Below reported quantitation level J - Estimated value
 ug/L = Microgram per liter (parts per billion)

CHAIN-OF-CUSTODY RECORD

Company Name:
Chesapeake GeoSciences

Project Name:
Frederick News Post

Sampler(s):
Jane Thies, Allen Dupree

Project Manager:
Kevin Howard

Project ID:
CG-07-0311

P.O. Number:
CG070311 KH

Chesapeake GeoSciences
5405 Twin Knolls Rd.
Columbia, MD 21045
(410) 745-1911

Preservative/Remarks

MSS
MDE Lab ID

07-1204-01
07-1204-02
07-1204-03
07-1204-04

Nitric acid (Total Chrom.)
"
HCl

Parameters

PCB 8082
Total chromium Cr10
Hexavalent Chrom. #196
VOC EPA 8260

No. of Containers

Other

Soil

Water

Time

Date

Field Sample ID

B-2
B-3c
B-4
B-4

4
2
2
2

X

X

X

X

12/3/07
12:15
18:30
17:30
13:45

Relinquished by: (Signature)
Jane Thies

(Printed)
Jane Thies

Date/Time
12/4/07
8:35

(Printed)
Received by MDE: (Signature)

Received by: (Signature)

(Printed)
Received by MDE: (Signature)

Relinquished by: (Signature)

(Printed)

Date/Time

(Printed)

Received by: (Signature)

(Printed)

Relinquished by: (Signature)

(Printed)

Date/Time

(Printed)

Date/Time

(Printed)

Remarks: