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**Phase II Environmental  
Site Assessment**

**2251 Sherman Avenue, N.W.  
Washington, District of Columbia**

**March 31, 2008**

ECC Project No. 08-9373

Prepared For: D.C. Department of the Environment  
Brownfields / Voluntary Cleanup Program  
51 N Street, N.E., 3<sup>rd</sup> Floor  
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## 1.0 Executive Summary

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ECC performed a Phase II Environmental Site Assessment of the 2251 Sherman Avenue, N.W., property (the *Subject Property*). The Subject Property is located on the southwest portion of Lot 0796 on D.C. Square 2873, and consists of approximately 1.46 acres. The Subject Property is used as a parking lot by Howard University and is improved with an abandoned office building.

The Phase II investigation included installation of eight soil borings on the Subject Property to depths of 30 feet, which were completed as temporary piezometers. Groundwater was encountered at depths ranging from approximately 13 to 19 feet below grade across the site. Findings from this investigation indicate that the site is suitable for the proposed residential redevelopment, provided the environmental engineering controls and remedial actions described in this report are implemented during construction.

Low- to moderate-level petroleum contamination was detected in soil and groundwater on the southern portion of the Subject Property, in the vicinity of B-4 and B-5. Petroleum impacted soil was detected at a depth of 20 feet in B-5. Petroleum contamination was not detected in the remaining soil samples recovered from the Subject Property. Localized petroleum contaminated soil is expected to be present in the immediate vicinity of the suspected underground storage tank (UST) located adjacent east of the site building. Polychlorinated biphenyls (PCBs) and polyaromatic hydrocarbons (PAHs) were not detected in soil samples recovered from the Subject Property. RCRA metal concentrations detected in soil appear to be indicative of background concentrations.

Groundwater contamination on the Subject Property includes low to moderate levels of petroleum compounds and trace levels of organic solvents. The highest levels of dissolved-phase petroleum contamination were detected at B-4, where Total Petroleum Hydrocarbon, Diesel Range Organics, (TPH-DRO) and ethylbenzene concentrations exceeded D.C. Department of the Environment (DDOE) Tier 1 Risk-Based Screening Level (RBSL) concentrations.

ECC recommends excavation, removal, and closure of the suspected UST located east of the site structure in accordance with DDOE regulations. Based on the presence of petroleum contamination in soil and groundwater at levels above the DDOE RBSLs, ECC recommends submitting a copy of this report to the DDOE UST Division to satisfy any reporting requirements. If a Leaking UST (LUST) Case is not assigned to the Subject Property as a result of reporting or UST removal, ECC recommends enrolling the Subject Property in the DDOE Voluntary Remediation Action Program (VRAP).

Redevelopment of the Subject Property with a multi-story residential building with up to three subgrade parking levels has been proposed. ECC assumes the entire footprint of the Subject Property will be excavated, except an the area on the northern portion of the site which will be transferred to the District of Columbia for the proposed Bryant Street, N.W.,

extension. The soil disposal cost estimate does not include costs associated with building footers, elevator pits, or other foundation designs.

Petroleum contaminated soil will likely to be encountered during planned excavation of the Subject Property. Based on existing data, the impacted soil will be suitable for disposal at the Soil Safe, Inc., facility in Brandywine, Maryland. Based on available data, ECC estimates approximately 840 cubic yards (1,500 tons) of petroleum-impacted soil will be excavated for a one level garage; approximately 5,300 cubic yards (9,450 tons) of petroleum-impacted soil will be excavated for a two level garage; and approximately 13,300 cubic yards (23,850) tons will be excavated for a three level garage. The estimated volumes of impacted soil are based on the data obtained during this investigation, and additional investigation would allow for further definition and refining of petroleum-impacted soil transportation and disposal cost estimates.

An Environmental Health and Safety Plan should be prepared prior to redevelopment to document and negate risks to worker and area resident health and safety during excavation. Environmental monitoring and construction oversight should be performed during future excavation to identify and segregate impacted soils, evaluate air quality in the excavation and along the perimeter of the site, and to ensure proper implementation of the Environmental Health and Safety Plan.

Dewatering of the site will be necessary for two and three level subgrade garage construction, and may also be required for a one level subgrade garage. Construction-generated groundwater should be discharged under a D.C. Water and Sewer Authority (DCWASA) Temporary Discharge Authorization (TDA) Permit. Treatment may be necessary based on the findings from this investigation.

## 2.0 Authorization and Scope of Investigation

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Environmental Consultants and Contractors (ECC), Inc., was authorized by Mr. Kokeb Tarekegan, Environmental Engineer for the District of Columbia Department of the Environment (DDOE), to perform a Phase II Environmental Site Assessment of 2251 Sherman Avenue, NW., the *Subject Property*. This investigation was performed to assess soil and groundwater quality to determine if on-site or identified off-site contaminant sources have adversely impacted the subsurface environment of the Subject Property.

This report was prepared for, and may be relied upon by, the DDOE, the D.C. Mayor's office, and the U.S. Environmental Protection Agency. No other person or organization is entitled to rely upon this report without the written authorization of ECC.

The scope of services performed as part of this Phase II Environmental Site Assessment conforms to ECC's proposal dated February 22, 2008, and the *Sampling and Laboratory Analyses Plan* and *Environmental Health and Safety Plans*, dated March 12, 2008, prepared by ECC. Specifically, the scope of services for this investigation includes:

- Clearance of site utilities by "Miss Utility" and a private utility locator.
- Confirmation of a suspected underground storage tank by visual inspection and performance of a limited magnetic detector survey.
- Installation of eight soil borings to depths of 30 feet using a hollow-stem auger drilling rig at locations preselected by ECC and approved by DDOE.
- Collection of split-barrel soil samples at five-foot depth intervals. Soil samples were screened for the presence of volatile organic vapors using a PhotoIonization Detector (PID).
- Collection of two soil samples from each boring for laboratory analysis for Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) via EPA Method 8015B.
- Collection of one soil sample from shallow depth intervals from four representative borings for laboratory analyses for RCRA Metals via EPA Method 6020A, Polychlorinated Biphenyls (PCBs) via EPA Method 8082, and for Polyaromatic Hydrocarbons (PAHs) via EPA Method 8270C.
- Collection of one representative soil sample for laboratory analyses of disposal criteria, including: TCLP Metals via EPA Method 6020A, Flashpoint / Ignitability via EPA Method 1020A, and Corrosivity / pH via EPA Method 9045D.
- Completion of each soil boring as a temporary groundwater piezometer with the installation of one-inch slotted PVC pipe.

- Collection of one groundwater sample from each piezometer using a clean, disposable bailer for laboratory analysis for TPH-DRO via EPA Method 8015B, and Volatile Organic Compounds (VOCs) via EPA Method 8260B. One field blank and one trip blank were also collected for quality assurance / quality control purposes.
- Preparation of this report of findings.



## 3.0 Property Description

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### 3.1 Site Location and Description

The Subject Property, addressed 2251 Sherman Avenue, N.W., is located east of the intersection of Sherman Avenue, N.W., and Florida Avenue, N.W., and northeast of the intersection of Florida Avenue, N.W., and W Street, N.W., in Washington, D.C. The Subject Property is located in ZIP Code area 20001 and is centered at approximately 38° 55' 10" North latitude and 77° 01' 28" West longitude. A Site Location Map and Site Plan are presented as Figure 1 and Figure 2, respectively.

The Subject Property occupies a total of 63,314 square feet (approximately 1.46 acres) and is situated on the southwest portion of District of Columbia Square 2873, Lot 796.

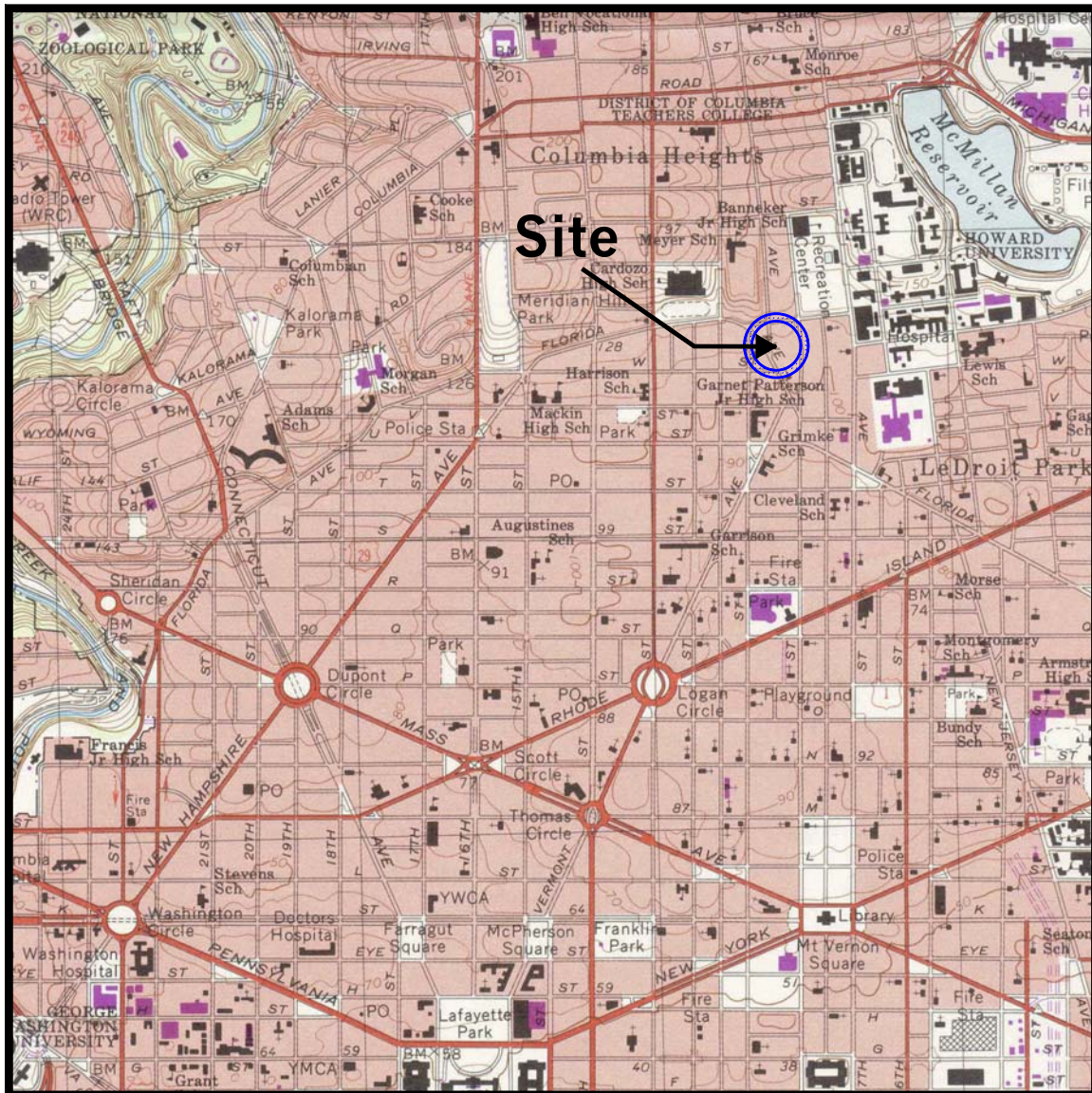
The Subject Property is owned by Howard University and is currently used as a parking lot. A vacant two-story brick office building is located on the west-central portion of the site and two pad-mounted electrical transformers secured within chain-link fencing are located on the northwestern portion of the site. The remainder of the Subject Property includes an asphalt paved parking lot and perimeter chain-link security fencing. Access to the Subject Property is via three unlocked / uncontrolled gates on Sherman Avenue, N.W., Florida Avenue, N.W., and 9<sup>th</sup> Street, N.W.

The Subject Property is bound to the north by a Howard University dormitory, to the east by 9<sup>th</sup> Street, N.W., to the south by Atlantic Plumbing Supply Company, and to the west by Florida Avenue, N.W., and residential properties.

Evidence of an underground storage tank (UST), located adjacent east of the vacant on-site office building, was identified in a previous Phase I Environmental Site Assessment of the Subject Property performed by SCA Associates, in May 2005. ECC's utility locating contractor performed a limited magnetometer survey in the vicinity of the suspected UST, and identified a large magnetic anomaly indicative of a buried, steel UST. ECC field personnel observed the vent and fill pipes for the UST. The location of the UST and piping configuration suggests the UST was used for heating oil storage for the adjacent vacant office building. No evidence of above ground storage tanks (ASTs) was identified in the previous Phase I Environmental Site Assessment or was observed by ECC personnel.

Subsurface utilities on the Subject Property include natural gas, electric, and fiber optic communication lines which cross the northern portion of the site, a municipal sewer line which crosses the southern portion of the site, and Howard University steam lines which transect the site from vaults located at the northeastern and southwestern site corners. The electric lines at the northern section of the site are connected to the two pad-mounted transformers. No potable water wells are located on the Subject Property or surrounding properties, and municipal water is available to the site area.

FIGURE 1



U.S. GEOLOGICAL SURVEY 7.5-MINUTE TOPOGRAPHIC QUADRANGLE MAPPING  
WASHINGTON WEST, DISTRICT OF COLUMBIA · MARYLAND · VIRGINIA (1965, PHOTOREVISED 1983)  
CONTOUR INTERVAL = 10 FEET



FIGURE 1 - QUADRANGLE SITE LOCATION MAP.DCD

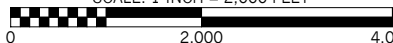

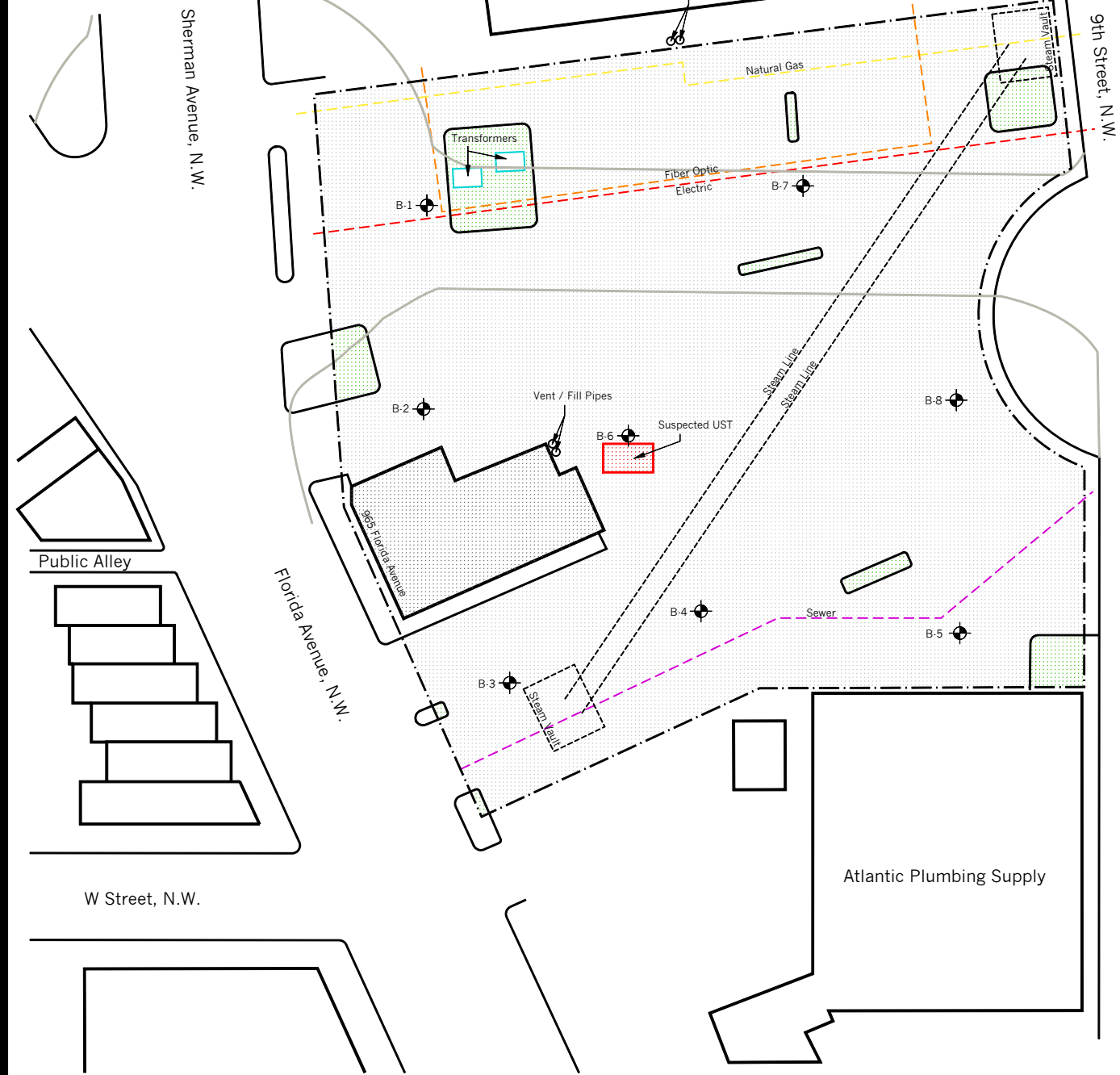
|  |                         |   |                                       |  |
|--|-------------------------|---|---------------------------------------|--|
| <b>TITLE:</b><br>SITE LOCATION MAP   | <b>DATE:</b><br>2/24/08 | <b>SCALE:</b> 1 INCH = 2,000 FEET<br> |                                       | <br>Environmental<br>Consultants and<br>Contractors, Inc. |
| <b>PROJECT:</b><br>2251 SHERMAN AVENUE, N.W.<br>WASHINGTON, DISTRICT OF COLUMBIA | <b>DRAWN BY:</b><br>CJB | <b>APPROVED BY:</b><br>JPD  | <b>PROJECT NUMBER:</b><br>08-9373     |  |
|  |                         |   | <b>REGULATORY CASE NUMBER:</b><br>N/A |  |

FIGURE 2



# Legend

- Property Boundary
- Curb / Roadway
- Future Roadway
- - - - - Underground Utility
- [Stippled Box] Existing Building
- [Red Stippled Box] Existing AST / UST
- [Grey Box] Pavement
- [Green Box] Lawn
- ⊙ Soil Boring



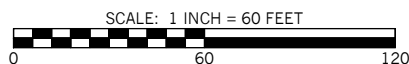
TITLE:  
SITE PLAN

PROJECT:  
2251 SHERMAN AVENUE, NW  
WASHINGTON, D.C.

DATE:  
2/22/08

DRAWN BY:  
CJB

APPROVED BY:  
TMH



PROJECT NUMBER:  
08-9373

REGULATORY CASE NUMBER:  
N/A



Environmental  
Consultants and  
Contractors, Inc.

Suspected fill and vent pipes for an off-site UST were located at the southern boundary of the north-adjacent Howard University dormitory property. Natural gas is available to this property, suggesting the fill and vent pipes may connect to an auxiliary heating oil UST or diesel fuel powered generator which serves the dormitory.

Howard University has a UST registered to 2251 Sherman Avenue, N.W., which is the address assigned to the entire Lot 796. The UST is described as a permanently out-of-use heating oil UST; the capacity of the registered UST is not known. It is unknown if this UST listing references the suspected UST located adjacent to the site structure on the Subject Property, or if this listing references a UST located on another portion of the 2251 Sherman Avenue, N.W., property not included in the Subject Property.

## 3.2 Site Environmental History

### 3.2.1 Previous Owners and Property Use

According to historical aerial photographs, Sanborn Fire Insurance Maps, and City Directories reviewed as part of SCA's Phase I Environmental Site Assessment of the property, the Subject Property has been used for various commercial and light-industrial enterprises since *circa* 1903.

The Subject Property was used as a coal yard and had a small building labeled "Asbury Mission" in 1903. The 1928 Sanborn Map showed the existing office building and a small building labeled Simpson, M.E. Church, on the northern portion of the site near Sherman Avenue, N.W. The remainder of the Subject Property was covered with lumber piles and sheds associated with Galliher and Hugely Lumber Company, which occupied the site from 1922 to 1954.

Henderson Auto Wreckers was listed as a site occupant in the 1936 City Directory, and Randall Printing was listed as a site occupant in the 1954 City Directory.

The 1959 Sanborn Map showed lumber piles and sheds on the Subject Property, and the former church building had been expanded and was labeled "roofing material and sheet metal." The listed owner of the Subject Property during this time period was American Building and Cleaning / Janitorial, and various professional tenants were identified in the office building.

A Auto Locksmith was listed as a site occupant in the 1969 City Directory, and GKM GM City Auto Sales was listed as a site occupant in the 1973 City Directory.

The 1977 Sanborn Map showed the lumber piles and sheds, but the former church building had been razed.

GLICOA GM Auto Body Shop and Call Callahan Refuse Service were listed as site occupants from 1978 to 1983.

Sanborn Maps from 1984 to 1994 show the lumber and sheds had been removed, and the only extant building was the existing office building.

Howard University acquired the Subject Property *circa* 1988, and has used it as a parking lot since that time.

No gasoline storage tanks were reportedly shown on the Subject Property in any of the Sanborn Fire Insurance Maps reviewed. No gasoline stations or dry cleaners were reportedly identified in connection with the Subject Property in any of the historical resources reviewed by SCA.

### 3.2.2 Previous Investigations

ECC was provided with a Phase I Environmental Site Assessment of the Subject Property entitled *Phase I Site Assessment, 2251 Sherman Avenue, N.W., Washington, D.C.*, prepared by SCA Associates, dated May 10, 2005. The Phase I assessment identified the following *recognized environmental conditions* in connection with the Subject Property:

- The potential presence of a UST, and the potential presence of soil and/or groundwater contamination from releases from the UST.
- The potential of soil and/or groundwater contamination from historical site uses (lumber yard, auto body shop, coal yard).
- The potential for polychlorinated biphenyls (PCBs) in the soil in the vicinity of the pad-mounted electrical transformers.

The Phase I assessment recommended performance of a Phase II Environmental Site Assessment to address the *recognized environmental conditions* identified.

## 3.3 Regional Geology and Hydrogeology

The topography in the site vicinity slopes moderately toward the south-southeast. According to the U.S. Geological Survey (USGS) topographic mapping of the site area (USGS 7.5-minute Topographic Quadrangle Maps, Washington West, D.C. - Maryland - Virginia, 1965, Photorevised 1983), the surface elevation of the Subject Property, relative to Mean Sea Level, ranges from approximately 110 feet on the north side of the site to approximately 107 feet at the southern boundary of the site.

Surface water runoff on the Subject Property is controlled by storm drains, and curbs and gutters along adjacent streets. The closest mapped surface water feature is the McMillan Reservoir, located approximately 0.44 mile northeast of the Subject Property. Rock Creek is located approximately 1.38 miles west of the Subject Property, and the Potomac River is located approximately 2.46 miles southwest of the Subject Property.



### 3.3.1 Regional and Site Geologic Setting

As mapped by the USGS, *Geologic Map of Washington, D.C., and Vicinity* (1958), the Subject Property is located in the Coastal Plain Physiographic Province. The Coastal Plain province is described as an eastward-thickening wedge of semi-consolidated sediments deposited within the last 144 million years. The Subject Property is underlain by the middle Pleistocene age gravel, sand, silt and clay (mapping unit Q5). The middle Pleistocene age gravel, sand, silt, and clay unit is gray to gray brown, typically 30 to 60 feet in thickness, and is typically encountered at surface elevations between 40 to 105 feet mean sea level.<sup>1</sup>

According to the U.S. Department of Agriculture Soil Conservation Service (*General Soil Map, District of Columbia*, 1975), the Subject Property is mapped on the Urban Land Association (mapping unit 11). The Urban Land Association is typified by areas covered by structures, pavement, or other impermeable surfaces.

The soil borings installed to depths of 30 feet on the Subject Property revealed a surface layer of asphaltic pavement underlain by a gravel base to a depth of 0.5 foot. The surface pavement is underlain by silty and sandy clay, described as gray-brown, dense, and stiff on the western and central portions of the site (B-1, B-2, B-3, B-4, and B-6). This stiff clay unit extends to depths between 9 to 16 feet. The stiff clay unit is underlain by a soft, gray-brown sandy clay with larger sand grain which extends to depths up to 21 feet. The soft, grey-brown sandy clay unit is underlain by wet, dark gray sandy clay to the terminus of the borings. On the east side of the site (B-5, B-7, and B-8), the surficial pavement is underlain by soft, brown to gray-brown silt and silty sand layers which extend to depths up to 20 feet. A medium to coarse sand unit with some fine gravel was encountered at B-5 at depths ranging from 16 to 26 feet. The basal soft, gray wet sandy clay unit encountered on the western portion of the site is also encountered on the eastern portion of the site at depths ranging from 20 to 26 feet (B-8 and B-5). Boring B-7 did not exhibit softer layers with depth, as a brown-gray, stiff silty clay extended from 9 to 30 feet below grade. The subsurface sediments encountered correlate with middle Pleistocene gravel, sand, silt, and clay mapping unit Q5, which has been dissected by buried former stream and drainage channels. Detailed soil boring logs are provided in Appendix A.

### 3.3.2 Regional and Site Hydrogeology

Groundwater in the Coastal Plain sediments is considered to be generally unconfined. Clay units periodically formed in the eastern portion of the terrane act as basal confining layers isolating several lower aquifers. Groundwater is stored in and transported through the semi-consolidated sediments, and the water table generally reflects areal variations in surface topography. Based on the areal topography, shallow, unconfined groundwater flow is expected to be toward the south or southeast.

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<sup>1</sup> Fleming, A.H., Drake Jr., A.A., and McCartan, L., *Geologic Map of the Washington West Quadrangle, District of Columbia, Montgomery and Prince Georges Counties, Maryland, and Arlington and Fairfax Counties, Virginia*, U.S. Geological Survey Map GQ-1748, Reston, Virginia, 1994.

The eight borings installed on the Subject Property were completed as temporary piezometers with the installation of one-inch slotted PVC pipe. ECC personnel gauged the piezometers on March 17, 2008, for static water levels using an oil-water interface probe. Groundwater was encountered at depths ranging from approximately 13.5 to 19 feet below grade across the Subject Property. Free-phase petroleum was not detected on the groundwater surface during gauging. Groundwater depths measured in the piezometers are presented in Table 1. The piezometers installed on the Subject Property were not surveyed as part of this investigation and no groundwater flow direction was calculated. Water depth data suggests shallow, unconfined groundwater flow is to the southeast.

**Table 1- Groundwater Gauging Data**

| Piezometer /<br>Boring ID | Depth of<br>Boring<br>(feet) | Depth to<br>Groundwater<br>(feet) |
|---------------------------|------------------------------|-----------------------------------|
| B-1                       | 30                           | 18.75                             |
| B-2                       | 30                           | 13.57                             |
| B-3                       | 30                           | 13.74                             |
| B-4                       | 30                           | 15.62                             |
| B-5                       | 30                           | 18.09                             |
| B-6                       | 30                           | 19.00                             |
| B-7                       | 30                           | 18.20                             |
| B-8                       | 30                           | 18.15                             |

### 3.4 Off-Site Concerns

The Subject Property is located in a commercial and residential area of northwest Washington, D.C. Residential properties are located north and west of the Subject Property, including Howard University dormitories adjacent north, and rowhouses adjacent west. Atlantic Plumbing Supply Company is located south adjacent to the Subject Property. SCA personnel interviewed staff of Atlantic Plumbing Supply Company (APSC) in 2005 as part of their May 10, 2005, Phase I Environmental Site Assessment. APSC personnel indicated that no USTs were present on the APSC property. No evidence of hazardous materials or wastes were observed by SCA during their site inspection, however SCA noted that a subsurface drilling program was performed on the APSC property *circa* 2004; the purpose for the drilling performed on the adjacent property is not known.

SCA reported 7 leaking underground storage tank (LUST) sites within 0.125 mile of the Subject Property. The most proximal LUST site to the Subject Property is 2270 Sherman Avenue, N.W. (LUST Case No. 2002094), located approximately 150 feet north-northwest of the Subject Property. The 2270 Sherman Avenue, N.W., property historically had gasoline and diesel fuel USTs, and the LUST Case has been closed. No LUST cases were reported for the Subject Property.

## 4.0 Subsurface Investigation

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### 4.1 Soil Boring Installation and Sampling

On March 13 and 14, 2008, ECC oversaw installation of eight (8) soil borings (B-1 through B-8) on the Subject Property to depths of 30 feet using hollow-stem auger drilling methods with split-barrel sampling at depth intervals of five feet in accordance with ASTM D 1586-99 standards. Soil samples were recovered from the split-barrels for vapor-phase contaminant monitoring, material characterization, and laboratory sample selection. All drilling equipment was decontaminated prior to entering the site and between borings. Drilling and field screening activities were conducted in accordance with DDOE and EPA Region III protocols. The boring locations are shown on Figure 2.

Soil cuttings generated during drilling were containerized in steel 55-gallon drums staged along the eastern property boundary.

Soil samples were recovered from each boring at 5-foot depth intervals from the surface to the termination of the boring. Each recovered soil sample was split and containerized. One portion of each sample was allowed sufficient time for volatile organic compounds (VOCs) to volatilize (a minimum of 15 minutes per sample), after which headspace vapor-phase VOC readings were acquired using a MiniRAE III photoionization detector (PID) with a 10.2 eV sensor lamp calibrated to isobutylene, and recorded on boring log sheets. The second portion of each sample was retained for potential laboratory analyses.

Two soil samples were collected from distinct depth intervals from each boring, based on field screening results, for laboratory analyses of Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) via EPA Method 8015B. In the absence of detectable VOC vapor-phase contamination, soil staining, petroleum odors, or other obvious indication of contamination, a soil sample was composited from intervals above the water table and was submitted for laboratory analyses of TPH-DRO. The second sample was recovered from the first interval below the water table (generally 20 feet below grade).

Shallow soil samples were acquired from depths of 0 to 10 feet from borings B-1, B-5, B-6, and B-7 for laboratory analyses of RCRA Metals via EPA Method 6020A, Polychlorinated Biphenyls (PCBs) via EPA Method 8082, and Polyaromatic Hydrocarbons (PAHs) via EPA Method 8270C.

A soil sample from B-6 was also acquired for laboratory analyses of disposal criteria, including: TPH-DRO via EPA Method 8015B, TCLP Metals via EPA Method 6020A, Flashpoint / Ignitability via EPA Method 1020A, and for Corrosivity / pH via EPA Method 9045D.

Soil sampling, handling, and custody procedures were performed in compliance with DDOE and EPA Region III approved methods, District of Columbia Brownfields Quality



Assurance and Sampling and Analysis Plans, and methods detailed in ECC's March 12, 2008, *Sampling and Laboratory Analyses Plan*. The soil samples were submitted under *Chain of Custody* to Phase Separation Science, Inc., in Baltimore, Maryland, for laboratory analyses.

## 4.2 Piezometer Installation and Groundwater Sampling

ECC completed the eight hollow-stem auger borings as temporary piezometers with the installation of one-inch, slotted PVC pipe. The screened portions of the piezometers installed in the borings extended from the bottom of the borings to between 5 and 10 feet below grade. The remainder of each piezometer was constructed of solid PVC riser. The piezometers were cut flush with the ground surface and were covered to prevent accidental infiltration of surface water or other materials into the subsurface.

On March 17, 2008, groundwater samples were recovered from the piezometers installed on the Subject Property using clean, disposable bailers. Prior to sampling, the static water level in each piezometer was measured using an oil / water interface probe, and either three well-volumes of water were purged from each piezometer or the piezometer was bailed dry prior to recharge to ensure representative groundwater samples were collected.

Groundwater samples were acquired from all eight piezometers for laboratory analyses of TPH-DRO via EPA Method 8015B, and Volatile Organic Compounds (VOCs) via EPA Method 8260B. One field blank and one trip blank were also collected for quality assurance / quality control purposes.

Groundwater sampling, handling, and custody procedures were performed in compliance with DDOE and EPA Region III approved methods, District of Columbia Brownfields Quality Assurance and Sampling and Analysis Plans, and methods detailed in ECC's March 12, 2008, *Sampling and Laboratory Analyses Plan*. The groundwater samples were submitted under *Chain of Custody* to Phase Separation Science, Inc., in Baltimore, Maryland, for laboratory analyses.

## 5.0 Laboratory Analytical Results

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### 5.1 Free-Phase Contamination

No petroleum-saturated soil was observed during installation of the soil borings on the Subject Property. On March 17, 2008, ECC personnel gauged the piezometers on the Subject Property using an oil / water interface probe. No free-phase petroleum was detected in the piezometers. No petroleum sheens were observed on the surface of groundwater removed from the piezometers.

### 5.2 Vapor-Phase Contamination

Field screening of soil samples for vapor-phase VOCs using a PID indicated no vapor-phase VOCs were detected at B-1, B-2, B-3, B-5, B-6, and B-7. A very low vapor-phase VOC concentration of 6.7 parts per million volume (ppmv) was detected at the 15-foot depth interval at B-4. ECC personnel noted a slight petroleum odor in the sample from this interval of B-4. No other depth intervals from B-4 exhibited detectable vapor-phase VOCs or petroleum odors. Other chemical odors were not noted by ECC personnel during installation of the soil borings.

### 5.3 Residual-Phase Contamination

The laboratory analytical results from the eight soil samples recovered from the Subject Property are presented in Table 2. Please note that PCBs, PAHs, several RCRA Metals, and TCLP metals were not detected in the soil samples and are not listed in Table 2. The U.S. EPA Region III Risk-Based Concentrations (RBCs) for residential soil (*i.e.*, unrestricted site use) and the DDOE Risk-Based Corrective Action (RBCA) Tier 1 Risk-Based Screening Levels (RBSLs) for residential use are included in Table 2 for comparison purposes. The spatial distribution of site contaminants is shown on Figure 3. A copy of the laboratory analytical results is provided in Appendix B.

EPA Region III uses the RBCs as a screening tool for Superfund sites and a benchmark for evaluating data and setting preliminary remediation goals. The RBCs for residential soils were developed using a residential exposure scenario to the contamination, incorporating direct exposure and accidental ingestion of the contaminant. The residential RBC value for an individual compound reflects the concentration at which a direct exposure to that compound over a 30-year residential setting would cause an adverse health effect in adults and children (a Hazard Index  $\geq 1$  for non-carcinogenic compounds, or  $\geq 10^{-6}$  cancer risk for carcinogenic compounds)

The DDOE RBCA Tier 1 RBSLs are conservative risk-based levels developed for a number of different human receptors and select exposure pathways, and provide a screening tool for preliminary evaluation of site data. Note, however, that site-specific application of the Tier 1 RBSLs may require development of a conceptual exposure

scenario specific to the site, and selection of target levels based on completed exposure pathways.<sup>2</sup>

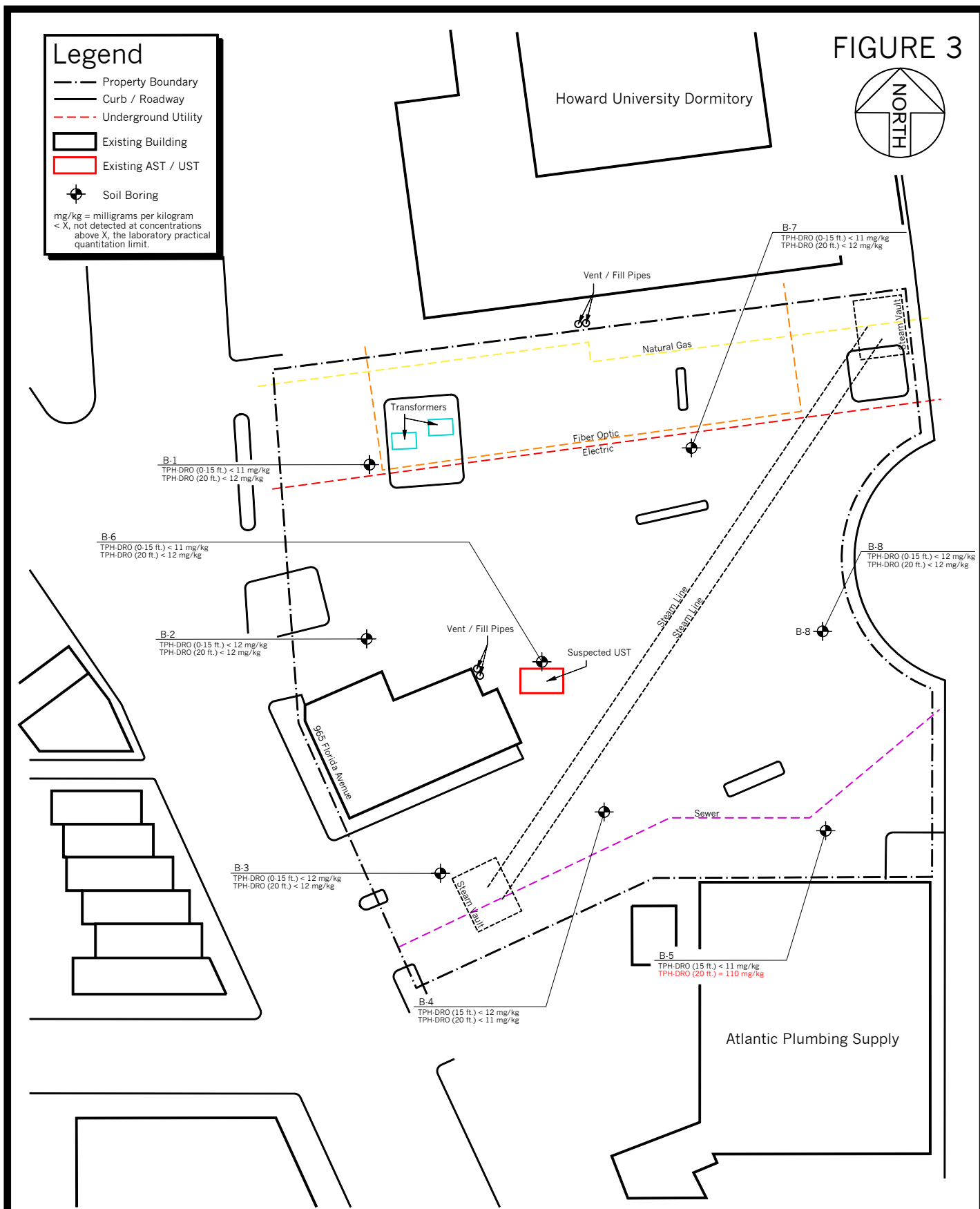
**Table 2 - Residual-Phase Contaminant Concentrations**

| Boring ID   | Depth Interval (feet) | TPH-DRO (mg/kg or ppm) | RCRA Metals (mg/kg or ppm) |        |                  |                  |
|---|-----------------------|------------------------|----------------------------|--------|------------------|------------------|
|   |                       |                        | Arsenic                    | Barium | Chromium         | Lead             |
| B-1   | 0 - 10                | ---                    | 5.7                        | 25     | 21               | 13               |
|   | 0 - 15                | < 11                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| B-2   | 0 - 15                | < 12                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| B-3   | 0 - 15                | < 12                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| B-4   | 15                    | < 12                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 11                   | ---                        | ---    | ---              | ---              |
| B-5   | 0 - 10                | ---                    | 0.59                       | 18     | 6.5              | 5.9              |
|   | 0 - 15                | < 11                   | ---                        | ---    | ---              | ---              |
|   | 20                    | 110                    | ---                        | ---    | ---              | ---              |
| B-6   | 0 - 15                | < 11                   | 3                          | 33     | 15               | 8.1              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| B-7   | 0 - 10                | ---                    | 2.9                        | 26     | 11               | 8.9              |
|   | 0 - 15                | < 11                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| B-8   | 0 - 15                | < 12                   | ---                        | ---    | ---              | ---              |
|   | 20                    | < 12                   | ---                        | ---    | ---              | ---              |
| EPA RBC <sup>1</sup>  |                       | ---                    | 0.43                       | 16,000 | 230 <sup>3</sup> | 400 <sup>4</sup> |
| DDOE Tier 1 RBSL <sup>2</sup>   |                       | ---                    | 0.101                      | ---    | 0.0461           | ---              |
| mg/kg = milligram per kilogram<br>< X, analyte not detected at concentrations greater than or equal to X, the laboratory reporting limit.<br><sup>1</sup> EPA Risk-Based Concentration (RBC) for unrestricted (i.e., residential) soil.<br><sup>2</sup> D.C. Department of the Environment Risk-Based Corrective Action (RBCA) Tier I Risk-Based Screening Levels (RBSLs) for an Expanded List of Contaminants.<br><sup>3</sup> EPA RBC for Chromium VI, the more stringent chromium screening level.<br><sup>4</sup> Based on U.S. EPA Residential Lead Hazard Standards (TSCA Section 403) for bare soil in children's play areas.<br>--- Not Tested / Not Applicable |                       |                        |                            |        |                  |                  |

Laboratory analysis of soil samples recovered from the Subject Property revealed a low-level TPH-DRO concentration of 110 milligrams per kilogram (mg/kg) in the sample from B-5 at a depth of 20 feet. The DDOE Tier 0 Risk Based Screening Level (RBSL) for TPH-DRO is 100 mg/kg, which was exceeded by this sample. No Tier 1 RBSL for TPH-DRO in soil has been established by the DDOE, however, the DDOE has established an RBSL of 960 mg/kg for subsurface soil in a residential child exposure scenario for indoor inhalation of vapor emissions.

<sup>2</sup>D.C. Risk-Based Corrective Action Guidance Document, 2002,  
([http://doh.dc.gov/doh/cwp/view,A,1374,Q,585847,dohNav\\_GID,1813.asp](http://doh.dc.gov/doh/cwp/view,A,1374,Q,585847,dohNav_GID,1813.asp))

FIGURE 3



TITLE:  
RESIDUAL-PHASE CONTAMINATION

PROJECT:  
2251 SHERMAN AVENUE, NW  
WASHINGTON, D.C.

DATE:  
3/28/08

DRAWN BY:  
CJB

APPROVED BY:  
TMH

SCALE: 1 INCH = 60 FEET  
0 60 120

PROJECT NUMBER:  
08-9373

REGULATORY CASE NUMBER:  
N/A

**ECC**  
Environmental  
Consultants and  
Contractors, Inc.

Four metals were detected at low concentrations in the soil samples recovered from B-1, B-5, B-6, and B-7. Arsenic exceeded the EPA RBC and DDOE Tier 1 RBSL at all four of these boring locations. Chromium also exceeded the DDOE Tier 1 RBSL but was one order of magnitude below the EPA RBC at all four boring soil samples. Note that the soil samples collected at the Subject Property were analyzed for total chromium, while the screening levels shown in Table 2 are for chromium VI, an industrial contaminant. The DDOE screening level for chromium III, the more commonly found oxidation state of chromium, is 98,800 mg/kg.

The EPA RBC for arsenic is generally considered one order of magnitude below anticipated background concentrations for the region and is calculated on the assumption that all potential exposure pathways are completed. The Agency for Toxic Substances and Disease Registry (ATSDR) states that arsenic concentrations in soil generally range from 1 to 40 mg/kg, with an average of 5 mg/kg.<sup>3</sup> Based on this information, the arsenic concentrations detected on the Subject Property appear to be representative of naturally-occurring (background) arsenic concentrations in soils.

Neither the DDOE nor EPA have established regulatory standards for lead in soil. However, the EPA has published a standard under the Toxic Substances Control Act (TSCA) which considers lead a hazard in concentrations greater than or equal to 400 mg/kg in bare soil in children's play areas, or an average concentration of 1,200 mg/kg for bare soil in the rest of the yard.<sup>4</sup> Natural levels of lead in soil are usually below 50 mg/kg.<sup>5</sup> The lead concentrations detected in soil on the Subject Property ranged from 5.9 to 13 mg/kg, below the TSCA standard of 400 mg/kg.

## 5.4 Dissolved-Phase Contamination

The laboratory analytical results for the eight groundwater samples recovered from the Subject Property are presented in Table 3. The U.S. EPA Region III Maximum Contaminant Levels (MCLs) for public water supplies and the DDOE RBCA Tier 1 RBSLs for groundwater are included in Table 3 for comparison purposes. The spatial distribution of site contaminants is shown on Figure 4. A copy of the laboratory analytical results is provided in Appendix B.

The U.S. EPA MCLs are legally enforceable maximum permissible levels for contaminants in drinking water delivered to users of public water supply systems. The EPA MCLs are sometimes used as guidance criteria by regulatory officials to determine action levels for groundwater contamination assessments. No MCL has been set for

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<sup>3</sup>Agency for Toxic Substances and Disease Registry (ASTDR), *Public Health Statement for Arsenic*. December 2003.

<sup>4</sup>U.S. Environmental Protection Agency, *Residential Lead Hazard Standards - TSCA Section 403*, January 5, 2001.

<sup>5</sup>U.S. Environmental Protection Agency, *Human Health, Addressing Lead at Superfund Sites*, <http://www.epa.gov/superfund/programs/lead/health.htm>.

MTBE; however, the EPA has established a drinking water advisory for MTBE, based upon taste and odor considerations, of 20 to 40 µg/L and has concluded that these levels provide a large margin of safety from toxic effects.

The DDOE RBCA Tier 1 RBSLs for groundwater are analogous to the Tier 1 RBSLs for soil described previously. Note that several potential exposure pathways, such as direct ingestion of impacted groundwater, would likely not be applicable in this urban setting.

**Table 3 - Dissolved-Phase Contaminant Concentrations**

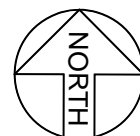
| Compound  | B-1  | B-2   | B-3   | B-4   | B-5   | B-6   | B-7   | B-8   | Trip Blank | Field Blank | EPA MCL <sup>1</sup> | DDOE Tier 1 RBSL <sup>2</sup> |
|---|------|-------|-------|-------|-------|-------|-------|-------|------------|-------------|----------------------|-------------------------------|
| <b>Total Petroleum Hydrocarbons (mg/L)</b>  |      |       |       |       |       |       |       |       |            |             |                      |                               |
| TPH-DRO   | < 1  | < 0.5 | < 0.5 | 2.5   | < 0.6 | < 0.5 | < 0.5 | < 0.8 | ---        | ---         | ---                  | 1.0                           |
| <b>Volatile Organic Compounds (µg/L)</b>  |      |       |       |       |       |       |       |       |            |             |                      |                               |
| Acetone   | < 10 | 24    | < 10  | < 100 | < 100 | < 10  | < 10  | < 10  | < 10       | < 10        | ---                  | ---                           |
| Benzene   | 35   | < 1   | 12    | 57    | 18    | 2     | 3     | < 1   | < 1        | < 1         | 5                    | 254                           |
| Carbon Tetrachloride  | < 1  | 1     | < 1   | < 10  | < 10  | 2     | < 1   | < 1   | < 1        | < 1         | 5                    | 31.7                          |
| Chloroform  | 2    | < 1   | 2     | < 10  | < 10  | 1     | < 1   | < 1   | 2          | 1           | ---                  | 119                           |
| Ethylbenzene  | < 1  | < 1   | < 1   | 240   | 65    | < 1   | < 1   | < 1   | < 1        | < 1         | 700                  | 169                           |
| Isopropylbenzene  | < 1  | < 1   | < 1   | 38    | < 10  | 1     | < 1   | < 1   | < 1        | < 1         | ---                  | ---                           |
| MTBE  | < 1  | < 1   | 34    | 550   | 91    | < 1   | < 1   | < 1   | < 1        | < 1         | AL - 20              | 6,800,000                     |
| Naphthalene   | 2    | < 1   | < 1   | 160   | < 10  | < 1   | 3     | < 1   | < 1        | < 1         | ---                  | ---                           |
| Toluene   | < 1  | < 1   | < 1   | 210   | 18    | < 1   | < 1   | < 1   | < 1        | < 1         | 1,000                | 108,000                       |
| m,p-Xylenes   | < 2  | < 2   | < 2   | 810   | 23    | < 2   | < 2   | < 2   | < 2        | < 2         | 10,000               | 9,180                         |
| o-Xylenes   | < 1  | < 1   | < 1   | 360   | < 10  | < 1   | < 1   | < 1   | < 1        | < 1         | 10,000               | 9,180                         |
| <sup>1</sup> EPA Maximum Contaminant Level for public water supplies<br><sup>2</sup> DDOE Tier 1 Risk-Based Screening Level for residential groundwater<br>< X, analyte not detected at concentrations greater than or equal to X, the laboratory reporting limit.<br>AL = Advisory Limit based on taste and odor considerations<br>mg/L = milligrams per liter; µg/L = micrograms per liter<br>--- Not Tested / Not Applicable |      |       |       |       |       |       |       |       |            |             |                      |                               |

Laboratory analyses of groundwater samples collected from the Subject Property detected TPH-DRO at a concentration of 2.5 milligrams per liter (mg/L, equivalent to parts per million) at B-4. The TPH-DRO concentration in this sample exceeds the DDOE Tier 1 RBSL. TPH-DRO was not detected in the remaining groundwater samples.

A low acetone concentration of 24 µg/L was detected at B-2. Acetone is a common solvent used for paints, nail polish remover, and for cleaning precision metal parts. Acetone is considered relatively low in toxicity, and no EPA MCLs or DDOE Tier 1 RBSLs have been established for the compound.

The petroleum contaminant compounds benzene, ethylbenzene, isopropylbenzene, methyl tertiary butyl ether (MTBE), naphthalene, toluene, and xylenes (m,p- and o-) were detected at low concentrations at B-1, B-3, B-4, B-5, B-6, and B-7.

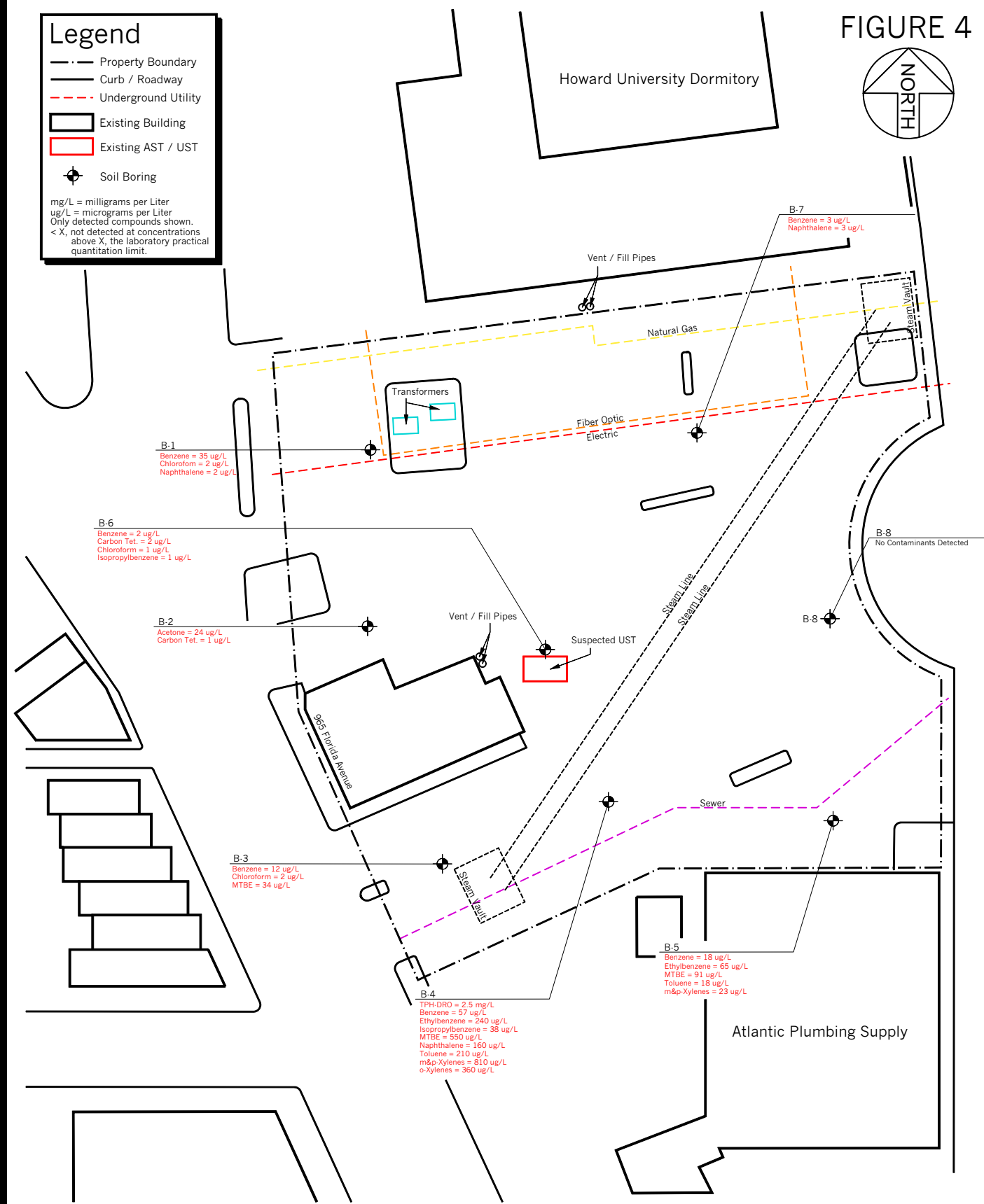
# FIGURE 4



## Legend

- Property Boundary
- Curb / Roadway
- - - - - Underground Utility
- Existing Building
- Existing AST / UST
- Soil Boring

mg/L = milligrams per Liter  
 ug/L = micrograms per Liter  
 Only detected compounds shown.  
 < X, not detected at concentrations  
 above X, the laboratory practical  
 quantitation limit.



TITLE:  
DISSOLVED-PHASE CONTAMINATION

PROJECT:  
2251 SHERMAN AVENUE, NW  
WASHINGTON, D.C.

DATE:  
3/28/08

DRAWN BY:  
CJB

APPROVED BY:  
TMH

SCALE: 1 INCH = 60 FEET  
 0 60 120

PROJECT NUMBER:  
08-9373

REGULATORY CASE NUMBER:  
N/A

**ECC**  
 Environmental  
 Consultants and  
 Contractors, Inc.

Benzene was detected at concentrations ranging from 2 to 57 micrograms per liter (ug/L, equivalent to parts per billion), with concentrations at B-1, B-3, B-4, and B-5 exceeding the EPA MCL of 5 ug/L. Benzene concentrations did not exceed the DDOE Tier 1 RBSL.

Ethylbenzene was detected at concentrations of 240 and 65 ug/L at B-4 and B-5, respectively. The ethylbenzene concentration of 240 ug/L at B-4 exceeds the DDOE Tier 1 RBSL but does not exceed the EPA MCL.

Isopropylbenzene was detected at concentrations of 38 and 1 ug/L at B-4 and B-6, respectively. No EPA MCLs or DDOE Tier 1 RBSL have been established for the compound.

MTBE was detected at concentrations ranging from 34 to 550 ug/L at B-4, B-5, and B-6. MTBE concentrations detected exceed the EPA advisory limit of 20 ug/L for drinking water, but do not exceed the DDOE Tier 1 RBSL.

Naphthalene was detected at concentrations ranging from 2 to 160 ug/L at B-1, B-4, and B-7. No EPA MCLs or DDOE Tier 1 RBSL have been established for the compound.

Toluene was detected at concentrations of 210 and 18 ug/L at B-4 and B-5, respectively. The toluene concentrations detected are significantly below its EPA MCL and DDOE Tier 1 RBSL.

Xylenes (m,p- and o-) were detected at concentrations ranging from 23 to 810 ug/L at B-4 and B-5. The xylene concentrations detected are significantly below its EPA MCL and DDOE Tier 1 RBSL.

Carbon tetrachloride was detected at the trace concentrations of 1 and 2 ug/L at B-2 and B-6, respectively. Carbon tetrachloride is a common solvent used in aerosols and propellants, rubber manufacturing, spot removal on fabrics, metal de-greasing, and as an agricultural fumigant. The carbon tetrachloride concentrations detected are below its EPA MCL and DDOE Tier 1 RBSL.

Chloroform was detected at trace concentrations, ranging from 1 to 2 ug/L, at B-1, B-3, B-6, and in the trip and field blanks. Trace level chloroform contamination is common in areas served by municipal water supplies, as it is formed as a degradation product of water chlorination procedures. The presence of chloroform in the trip and field blanks is likely due to the use of municipal water in preparing the distilled water used for these samples. Chloroform is also used as a soil fumigant and insecticide. The chloroform concentrations detected are significantly below its DDOE Tier 1 RBSL.



## 6.0 Soil Disposal Criteria

ECC personnel collected a representative soil sample from boring B-6, located on the central portion of the property, and submitted the sample for laboratory analyses for disposal criteria. The analyses selected were based on the requirements for soil disposal at the Soil Safe, Inc., facility in Brandywine, Maryland, and included TPH-DRO, corrosivity / pH, flash point / ignitability, TCLP Metals, and PCBs. The laboratory analytical results from the disposal sample and the Soil Safe disposal criteria are presented in Table 4.

**Table 4 - Soil Disposal Sample**

| Analysis                      | B-6   | Soil Safe Criteria |
|-------------------------------|-------|--------------------|
| Corrosivity / pH              | 5.2   | 2 - 12.5           |
| Flash Point / Ignitability °F | > 140 | > 140              |
| TPH-DRO (mg/kg)               | < 11  | < 25,000           |
| TCLP Metals                   |       |                    |
| Arsenic (mg/L)                | < 5   | < 5                |
| Barium (mg/L)                 | < 100 | < 100              |
| Cadmium (mg/L)                | < 1   | < 1                |
| Chromium (mg/L)               | < 5   | < 5                |
| Lead (mg/L)                   | < 5   | < 5                |
| Mercury (mg/L)                | < 0.2 | < 0.2              |
| Selenium (mg/L)               | < 1   | < 1                |
| Silver (mg/L)                 | < 5   | < 5                |
| Polychlorinated Biphenyls     |       |                    |
| Aroclor 1016 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1221 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1232 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1242 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1248 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1254 (mg/kg)          | < 0.3 | < 5.0              |
| Aroclor 1260 (mg/kg)          | < 0.3 | < 5.0              |

The contaminant concentrations detected in the soil sample do not exceed the Soil Safe, Inc., disposal criteria. Based on the laboratory analytical results of the disposal sample, contaminant impacted soil excavated from the Subject Property would be suitable for off-site disposal and treatment at the Soil Safe, Inc., facility in Brandywine, Maryland.

## 7.0 Conclusions and Recommendations

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### 7.1 Findings

ECC's Phase II Environmental Site Assessment revealed low to moderate level petroleum contamination in soil and groundwater on the southern portion of the Subject Property in the vicinity of B-4 and B-5. Findings from this investigation indicate that the site is suitable for the proposed residential redevelopment, assuming an underground parking structure is provided beneath all habitable spaces and that the environmental engineering controls and remedial actions described below are implemented during construction.

Petroleum contaminated soil is expected to be present in the immediate vicinity of the suspected UST located adjacent east of the site building. However, based on the absence of detected petroleum contamination in B-6, installed near the suspected UST, petroleum contamination in this area is likely localized. The dissolved-phase TPH-DRO and ethylbenzene concentrations detected at B-4 were the only dissolved-phase contaminant concentrations which exceed DDOE Tier 1 RBSLs. The EPA MCL for benzene was exceeded at four locations and the EPA advisory limit for MTBE was exceeded at three locations.

Petroleum impacted soil was detected at a depth of 20 feet at B-5, suggesting the petroleum contamination may be resultant from dissolved-phase contaminant transport. Moderate levels of dissolved-phase petroleum contamination were detected in the groundwater at B-4, however residual-phase (soil) petroleum contamination was not detected at this location. The detection of dissolved-phase petroleum contamination without surficial petroleum contamination present suggests the contamination is resultant from transport from another location, possibly along the backfill of the adjacent sewer line which transects the southern section of the property. Additionally, petroleum contaminants in groundwater exhibited a gasoline signature; the UST located on the Subject Property is suspected to have contained heavier fuels, such as heating oil or diesel fuel.

Trace levels of common solvents, including acetone, carbon tetrachloride, and chloroform, were detected in the groundwater samples across the site. The detection of these dissolved-phase solvent contaminants at trace levels is common in urban settings, and typically is not indicative of a source of significant on-site environmental contamination.

Low-level metal concentrations, indicative of background concentrations, were detected in the soil samples across the Subject Property. With the exception of arsenic and chromium, none of the contaminants detected in soil exceeded their EPA RBCs or DDOE Tier 1 RBSLs. Arsenic concentrations detected in soil appear representative of naturally-occurring levels for this region. Chromium concentrations detected were

significantly below the risk-based screening levels for trivalent chromium, which is the more commonly found oxidation state.

## 7.2 Recommendations

ECC recommends excavation, removal, and closure of the suspected UST located adjacent east of the site structure in accordance with DDOE regulations. Additionally, ECC recommends submitting the findings from this Phase II Environmental Site Assessment to the UST Division of the DDOE to satisfy any reporting requirements with respect to the low to moderate levels of petroleum contamination detected in soil and groundwater on the site. If a Leaking UST (LUST) Case Number is not assigned to the Subject Property following removal of the UST or based on the findings from this investigation, ECC recommends enrolling the Subject Property in the DDOE Voluntary Remediation Action Program (VRAP) as a mechanism to obtain regulatory approval of corrective actions implemented during future development.

Redevelopment of the Subject Property with a multi-story residential building with up to 3 subgrade parking levels has been proposed. For the purposes of conceptual soil removal estimates, ECC assumes subgrade construction will encompass the entire central and southern sections of the site. As finalized foundation designs have not been prepared, ECC assumes excavation to a depth of 30 feet and the conceptual soil removal estimates does not include costs for disposal of contaminated soil excavated for building footers, elevator pits, or other foundation elements.

Localized areas of petroleum contaminated soil will likely to be encountered in the vicinity of the suspected UST and below the water table on the southern portion of the Subject Property (B-4 to B-5 area). Based on existing data, the impacted soil will be suitable for disposal at the Soil Safe, Inc., facility in Brandywine, Maryland.

The underground parking garage proposed for the site may include up to three levels. ECC estimates up to approximately 840 cubic yards (1,500 tons) of petroleum-impacted soil will be excavated for a one level garage, up to approximately 5,300 cubic yards (9,450 tons) of petroleum-impacted soil will be excavated for a two level garage, and up to 13,300 cubic yards (23,850) tons will be excavated for a three level garage. Based on a \$32/ton transportation and disposal rate for petroleum-impacted soil, the estimated cost for transport and disposal of petroleum-impacted soil for a one level garage is \$50,000, for a two level garage is \$306,000, and for a three level garage is \$763,000. The soil excavation cost estimates are based on the data obtained during this investigation; installation of additional soil borings, particularly on the southern portion of the site and around the UST, would allow for further definition and refining of estimated impacted soil volumes and cost estimates of transportation and disposal of petroleum-impacted soil.

An Environmental Health and Safety Plan should be prepared prior to redevelopment to document and negate risks to worker and area resident health and safety during

excavation. The Plan will include a description of environmental monitoring and construction oversight activities necessary during excavation to conduct site and perimeter air monitoring and to evaluate soil quality to determine disposal requirements. The estimated cost to prepare the Plan is \$3,000, and the estimated cost to perform air monitoring and soil segregation activities is \$15,000 per month. Note that based on the findings from this investigation, environmental monitoring costs may not be necessary for the entire duration of excavation activities.

Groundwater was encountered at depths of approximately 13 to 19 feet below grade and dewatering is anticipated should the proposed structure include two or three levels of subgrade parking. Site dewatering may also be required for a one level subgrade parking garage, depending on the foundation design of the proposed site building. Discharge of construction-derived groundwater from the site should be performed in accordance with a DCWASA Temporary Discharge Authorization (TDA) Permit. If pre-treatment is required under the TDA Permit prior to discharge, the estimated cost to construct and operate a temporary dewatering treatment system includes \$25,000 for site equipment set-up, operational expenses of \$10,000 per month, and \$20,000 for equipment de-contamination and removal. The cost of construction dewatering itself is considered a normal construction expense and is not included in the provided treatment estimate.

## 8.0 Limitations

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In conducting this investigation, our professional opinions and judgments have been made based upon the information gathered, our experience in the area with similar projects, and in accordance with generally accepted professional environmental practice under similar circumstances. The information presented is based upon the presumption that existing site soil and groundwater conditions do not deviate appreciably from those observed and described during the drilling of soil borings and installation of piezometers as part of this investigation. Soil and groundwater conditions on the Subject Property are representative of conditions at the specified location and on the specific dates on which they were observed. The passage of time may result in changing conditions at the Subject Property.

ECC's recommendations are based on the nature of the investigation and current Subject Property usage and history. Should additional information become available with regard to site history or future planned use, ECC reserves the right to alter its recommendations regarding additional site activities and/or remediation activities.

All operations conducted on site, including drilling, well installation, soil and groundwater sampling, sample preservation, chain-of-custody, quality assurance, and decontamination, were conducted in accordance with established EPA Region III guidelines and professional environmental protocol.

Should you or designated users of this report have any questions or comments regarding the information contained herein, please feel free to contact this office at (703) 327-2900.

DRAFT

**Appendix A**

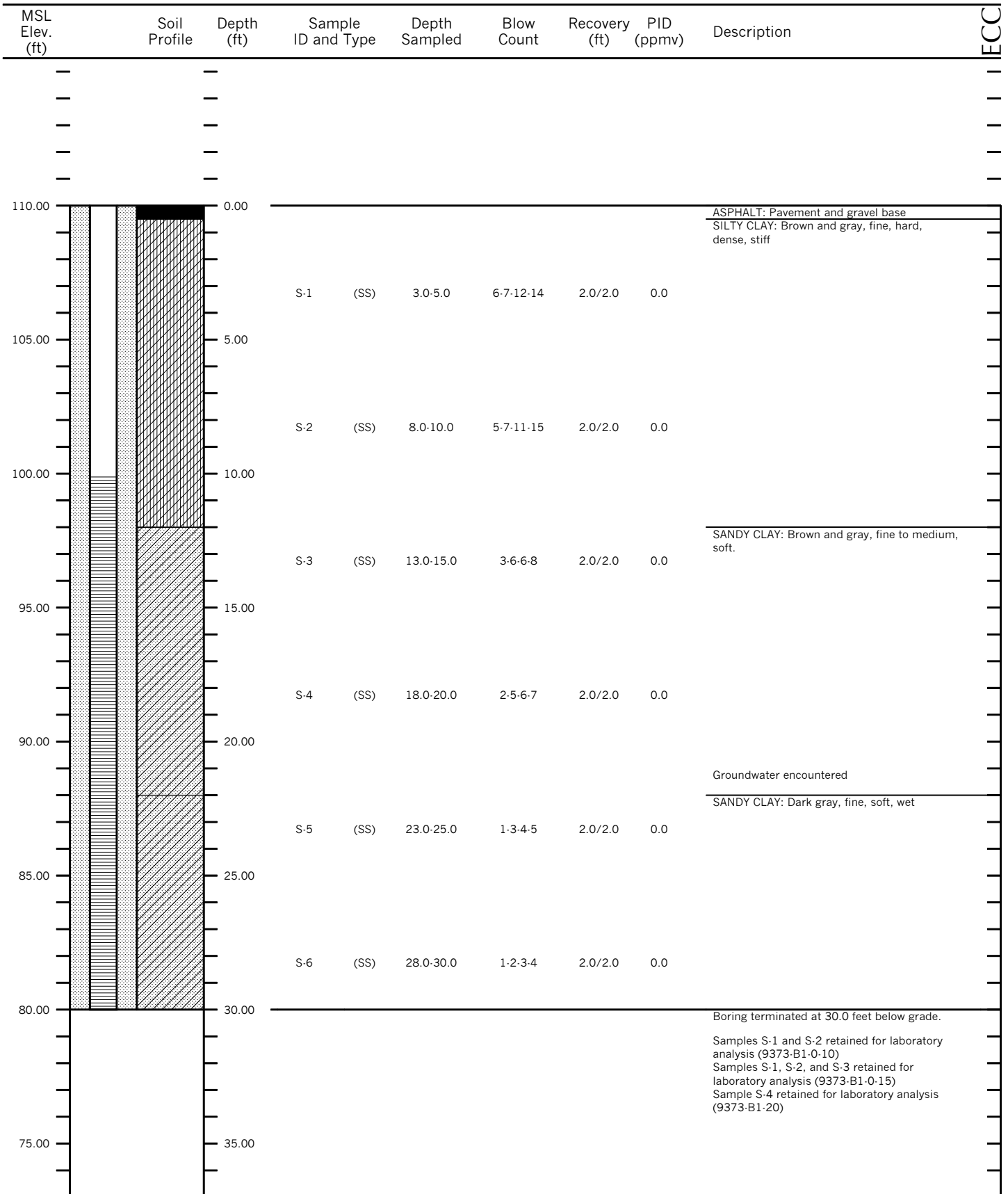
**Soil Boring Logs**

2251 Sherman Avenue, N.W.  
 City of Washington, DC  
 ECC Project No. 08-9373  
 Driller: Connelly & Associates, Inc.  
 Field Geologist: Jayson Huston  
 Date Drilled: March 14, 2008

# Geologic Boring Log

## Boring No. B-1

Page 1 of 1

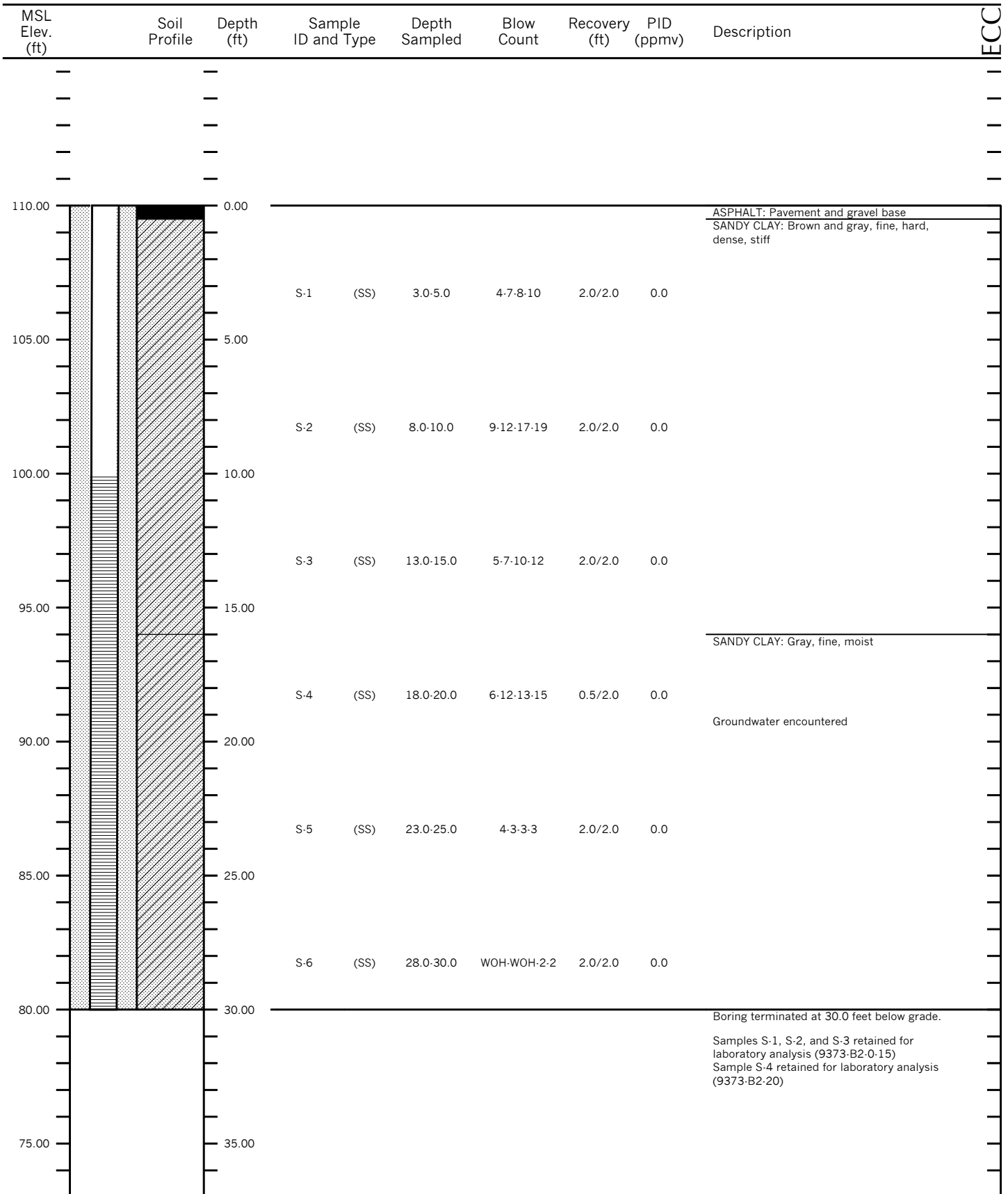


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 14, 2008

# Geologic Boring Log

## Boring No. B-2

Page 1 of 1



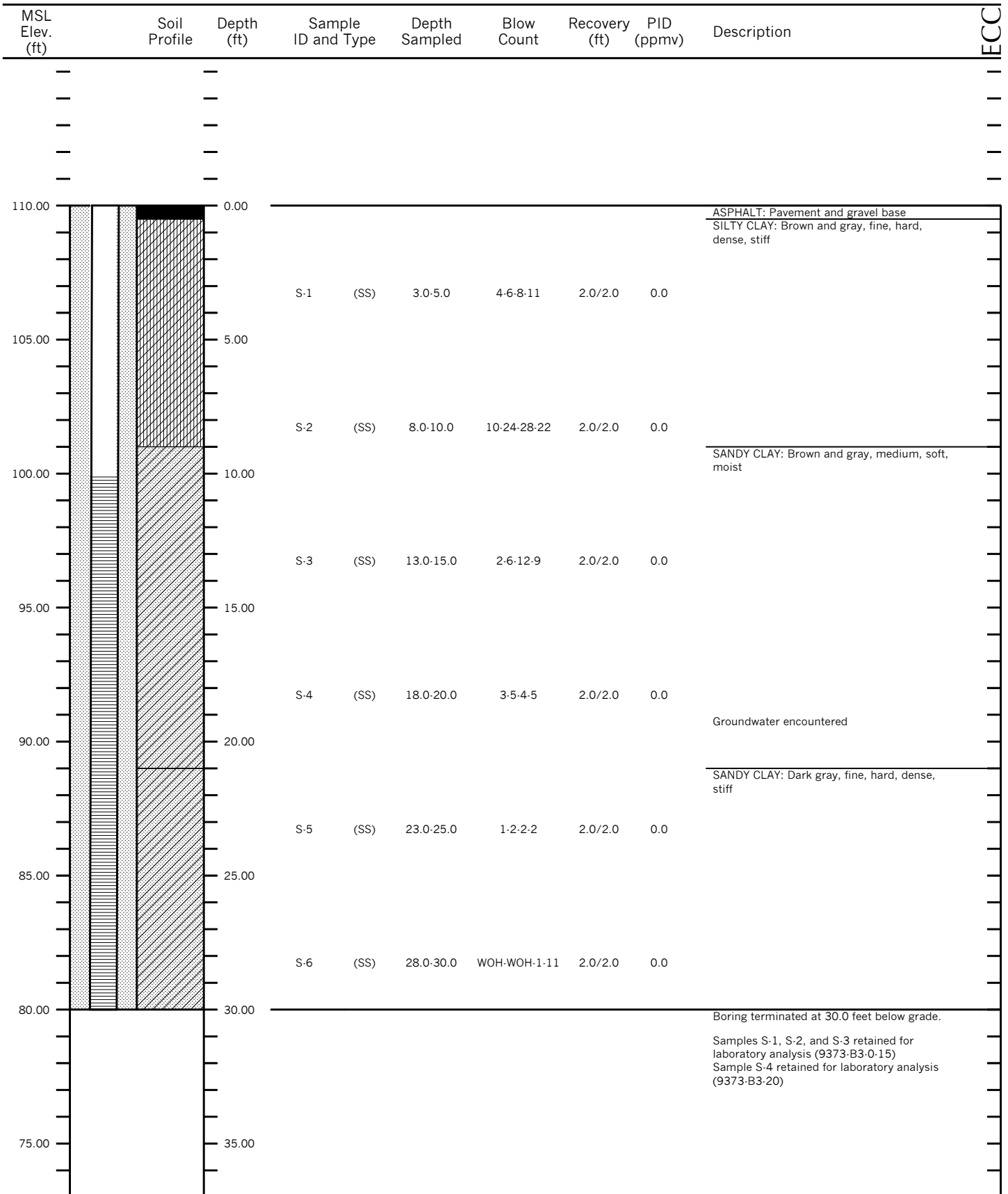


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 14, 2008

# Geologic Boring Log

## Boring No. B-3

Page 1 of 1

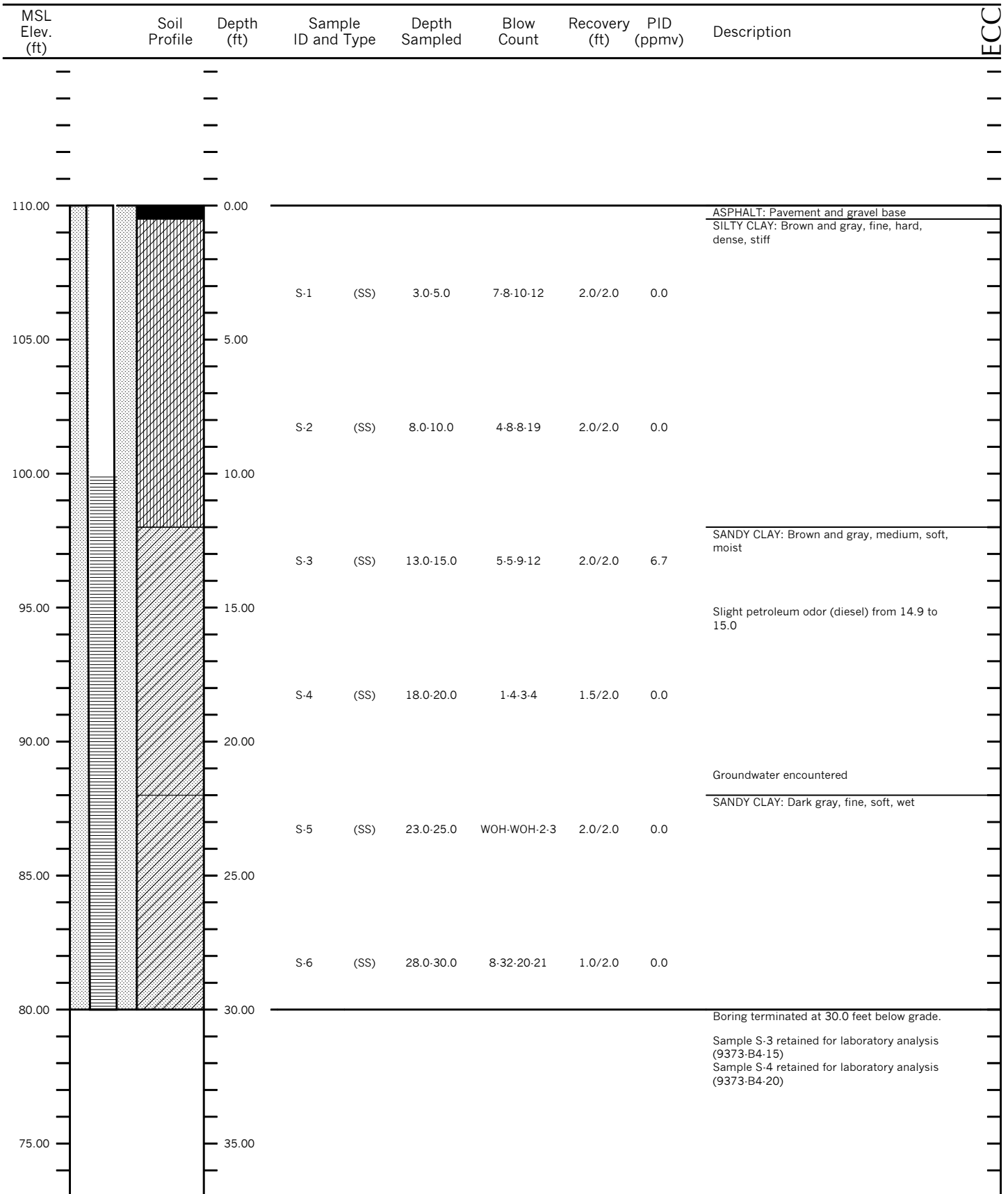


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 14, 2008

# Geologic Boring Log

## Boring No. B-4

Page 1 of 1

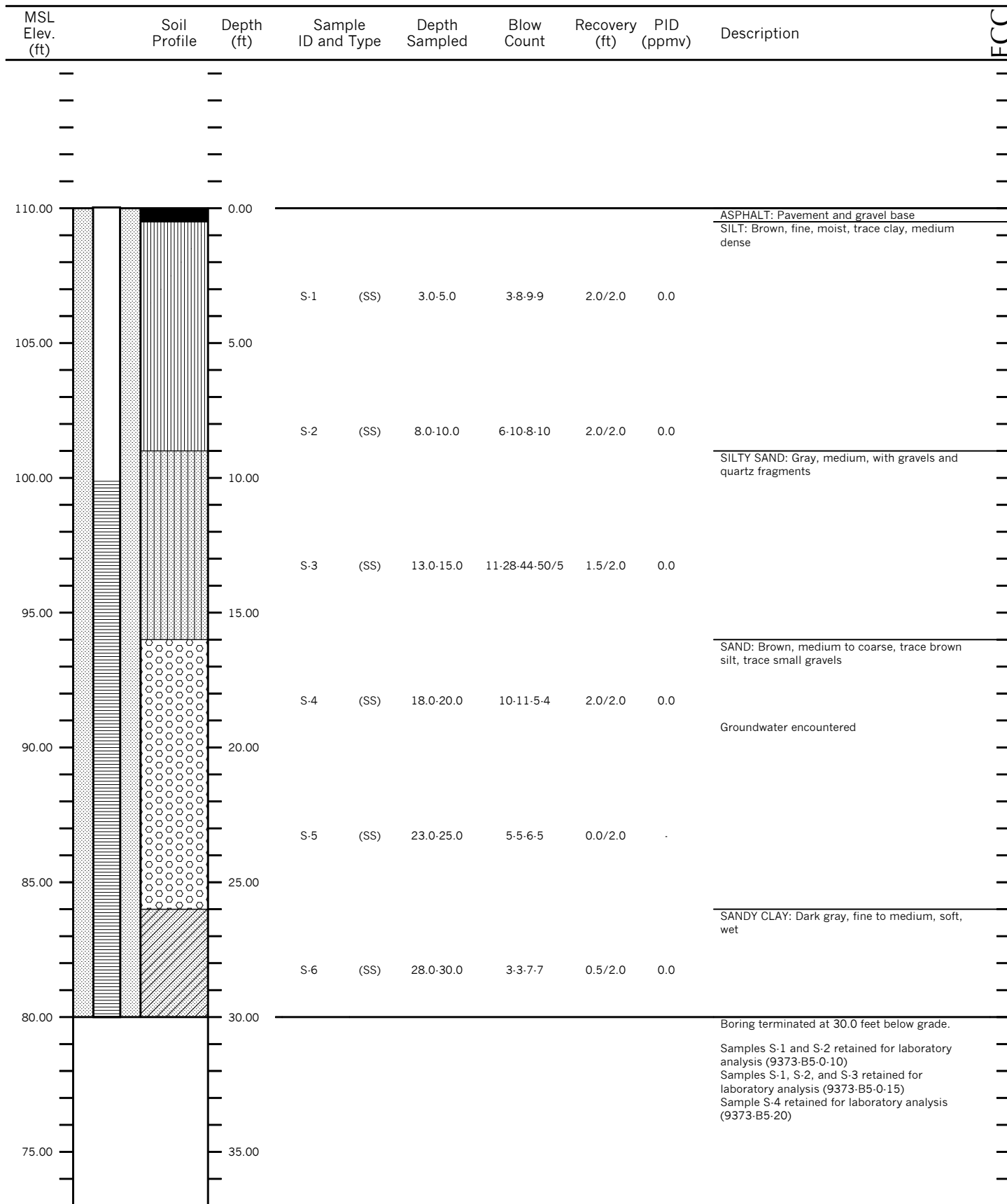


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 13, 2008

# Geologic Boring Log

## Boring No. B-5

Page 1 of 1

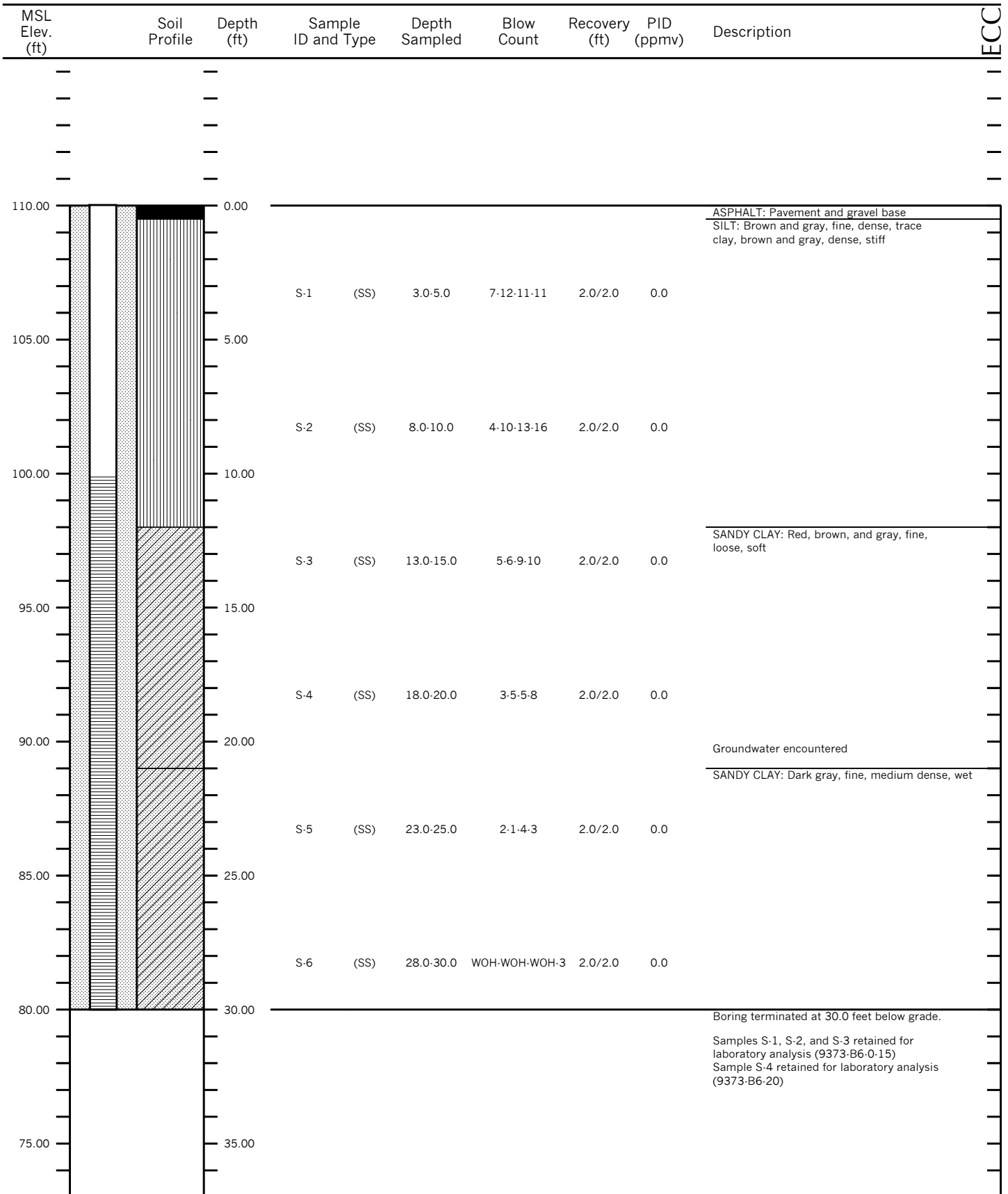


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 13, 2008

# Geologic Boring Log

## Boring No. B-6

Page 1 of 1

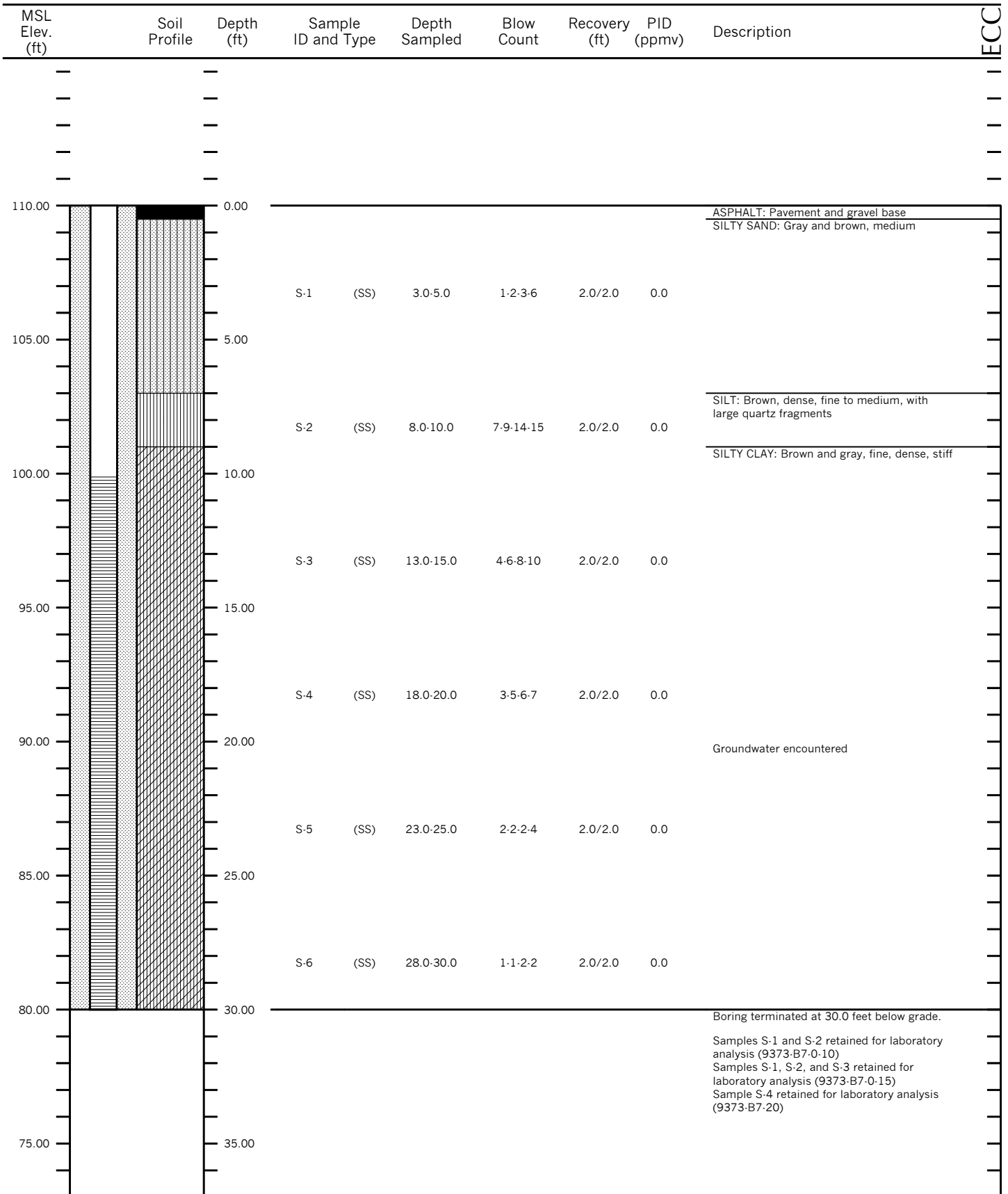


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 13, 2008

# Geologic Boring Log

## Boring No. B-7

Page 1 of 1

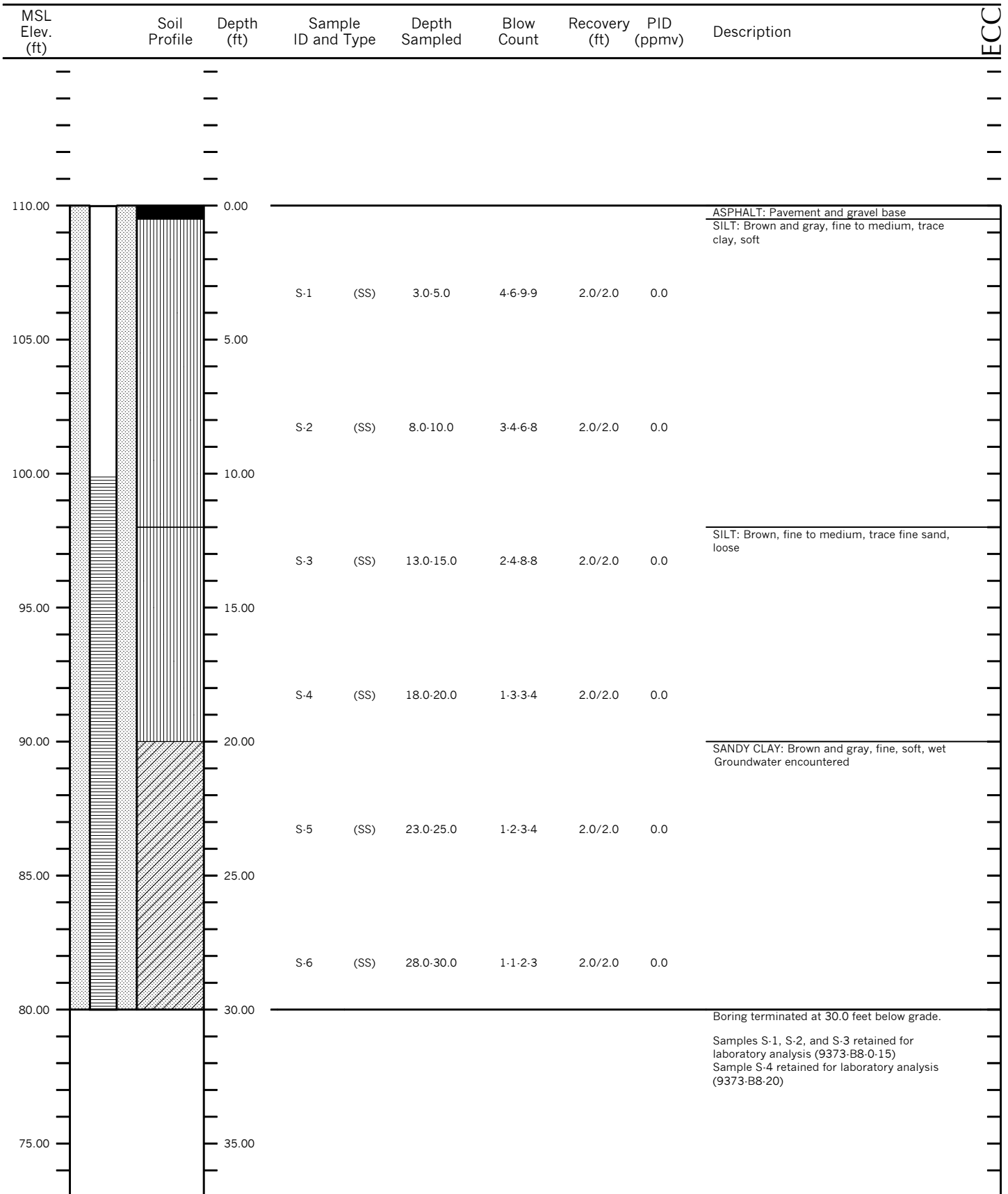


2251 Sherman Avenue, N.W.  
City of Washington, DC  
ECC Project No. 08-9373  
Driller: Connelly & Associates, Inc.  
Field Geologist: Jayson Huston  
Date Drilled: March 13, 2008

# Geologic Boring Log

## Boring No. B-8

Page 1 of 1



DRAFT

## **Appendix B**

### **Laboratory Analytical Results**

# **Analytical Report for**

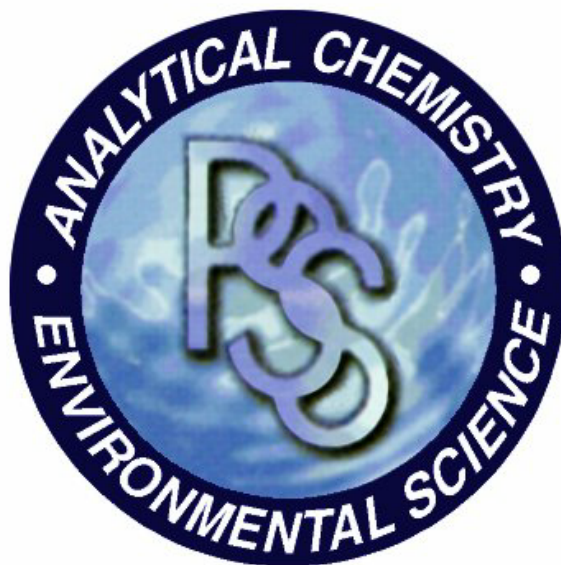
**ECC, Inc.**

**Certificate of Analysis No.: 8031808**

**Project Manager: Chris Becker**

**Project Name : 2251 Sherman Ave**

**Project ID : 9373**



**March 25, 2008**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

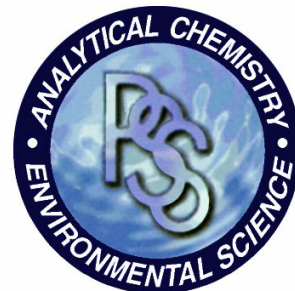
**Phone: (410) 747-8770**

**Fax: (410) 788-8723**



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ROUTE 40 WEST  
BALTIMORE, MD 21228  
410-747-8770  
800-932-9047

# PHASE SEPARATION SCIENCE, INC.



March 25, 2008

**Chris Becker**  
**ECC, Inc.**  
43045 John Mosby Highway  
Chantilly, VA 20152

Reference: PSS Work Order No: **8031808**  
Project Name : 2251 Sherman Ave  
Project Location: N/A  
Project ID.: 9373

Dear Chris Becker :

The attached Analytical and QC Summary lists the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **8031808**.

All work reported herein has been performed in accordance with referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on April 22, 2008. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 10 years, after which time it will be disposed without further notice, unless prior arrangements have been made.

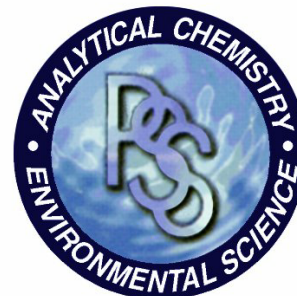
We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

---

**John Richardson**  
Laboratory Director

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BALTIMORE, MD 21228  
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800-932-9047  
FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-Trip Blank-3/08**  
**Matrix: WATER**

**Date/Time Sampled: 03/17/2008 09:00**  
**Date/Time Received: 03/18/2008 13:29**

**PSS Sample ID: 8031808-001**

TCL Volatile Organic Compounds

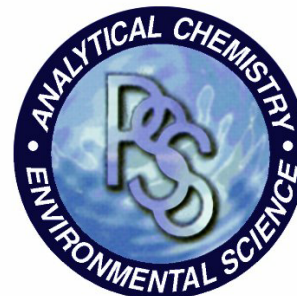
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Chloroform                            | 2      | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Carbon Tetrachloride                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Benzene                               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-Trip Blank-3/08**  
**Matrix: WATER**

**Date/Time Sampled: 03/17/2008 09:00**  
**Date/Time Received: 03/18/2008 13:29**

**PSS Sample ID: 8031808-001**

TCL Volatile Organic Compounds

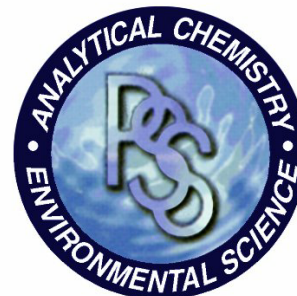
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 22:09 | 1011    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-Field Blank-3/08**  
**Matrix: WATER**

**Date/Time Sampled: 03/17/2008 11:00**  
**Date/Time Received: 03/18/2008 13:29**

**PSS Sample ID: 8031808-002**

TCL Volatile Organic Compounds

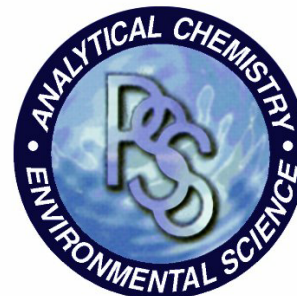
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Chloroform                            | 1      | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Carbon Tetrachloride                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Benzene                               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-Field Blank-3/08**  
**Matrix: WATER**

**Date/Time Sampled: 03/17/2008 11:00**  
**Date/Time Received: 03/18/2008 13:29**

**PSS Sample ID: 8031808-002**

TCL Volatile Organic Compounds

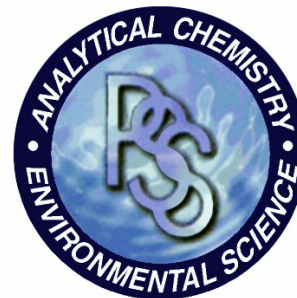
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/22/08 | 03/22/08 23:07 | 1011    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B1-3/08**

**Date/Time Sampled: 03/17/2008 12:15**

**PSS Sample ID: 8031808-003**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

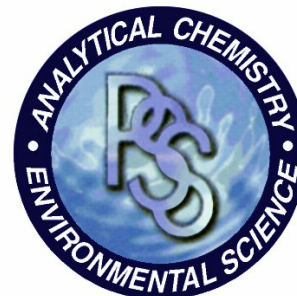
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 1                |             | 1          | 03/21/08        | 03/24/08 08:59  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B1-3/08**

**Date/Time Sampled: 03/17/2008 12:15**

**PSS Sample ID: 8031808-003**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

Analytical Method: SW846 8260B

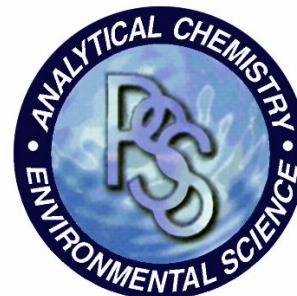
Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Chloroform                            | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Carbon Tetrachloride                  | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Benzene                               | 35     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B1-3/08**

**Date/Time Sampled: 03/17/2008 12:15**

**PSS Sample ID: 8031808-003**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

Analytical Method: SW846 8260B

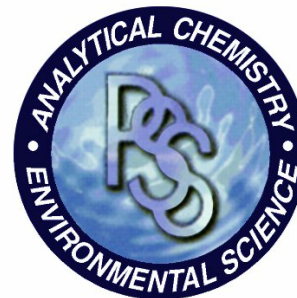
Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |
| Naphthalene                 | 2      | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:24 | 1014    |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B2-3/08**

**Date/Time Sampled: 03/17/2008 12:30**

**PSS Sample ID: 8031808-004**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

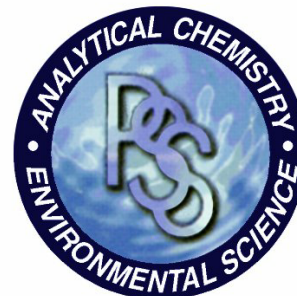
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.5              |             | 1          | 03/21/08        | 03/24/08 09:17  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B2-3/08**

**Date/Time Sampled: 03/17/2008 12:30**

**PSS Sample ID: 8031808-004**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

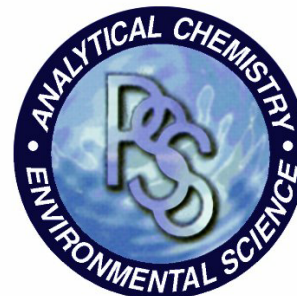
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Acetone                               | 24     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Chloroform                            | 1      | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Carbon Tetrachloride                  | 1      | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Benzene                               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

Sample ID: 9373-B2-3/08

Date/Time Sampled: 03/17/2008 12:30

PSS Sample ID: 8031808-004

Matrix: WATER

Date/Time Received: 03/18/2008 13:29

TCL Volatile Organic Compounds

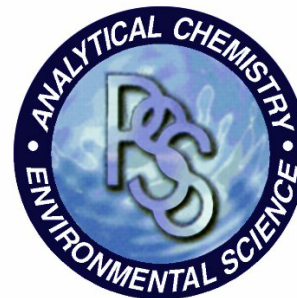
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 15:40 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B3-3/08**

**Date/Time Sampled: 03/17/2008 13:00**

**PSS Sample ID: 8031808-005**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

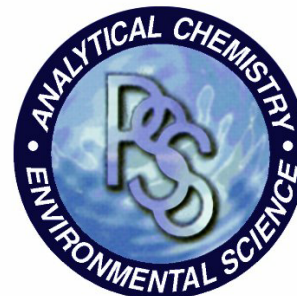
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.5              |             | 1          | 03/21/08        | 03/24/08 09:17  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B3-3/08**

**Date/Time Sampled: 03/17/2008 13:00**

**PSS Sample ID: 8031808-005**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

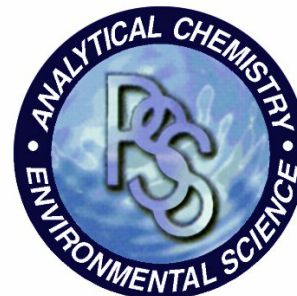
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result    | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|-----------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Chloromethane                         | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Vinyl Chloride                        | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Bromomethane                          | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Chloroethane                          | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Acetone                               | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Cyclohexane                           | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Trichlorofluoromethane                | ND        | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,1-Dichloroethene                    | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Methylene Chloride                    | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| trans-1,2-Dichloroethene              | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Methyl-t-butyl ether                  | <b>34</b> | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,1-Dichloroethane                    | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 2-Butanone (MEK)                      | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| cis-1,2-Dichloroethene                | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Chloroform                            | <b>2</b>  | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,1,1-Trichloroethane                 | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2-Dichloroethane                    | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Carbon Tetrachloride                  | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Benzene                               | <b>12</b> | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2-Dichloropropane                   | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Methyl Acetate                        | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Methylcyclohexane                     | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Trichloroethene                       | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Carbon Disulfide                      | ND        | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Bromodichloromethane                  | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| cis-1,3-Dichloropropene               | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 4-Methyl-2-Pentanone                  | ND        | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| trans-1,3-Dichloropropene             | ND        | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

Sample ID: 9373-B3-3/08

Date/Time Sampled: 03/17/2008 13:00

PSS Sample ID: 8031808-005

Matrix: WATER

Date/Time Received: 03/18/2008 13:29

TCL Volatile Organic Compounds

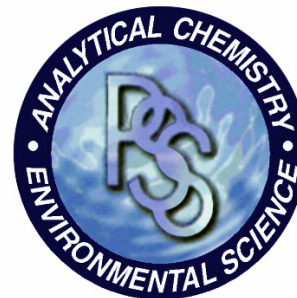
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 16:09 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B4-3/08**

**Date/Time Sampled: 03/17/2008 13:15**

**PSS Sample ID: 8031808-006**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

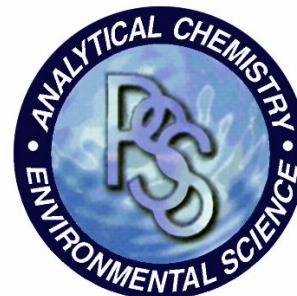
*LF - Lighter fuel/oil pattern observed in sample.*

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | <b>2.5</b>    | mg/L         | 0.5              | LF          | 1          | 03/21/08        | 03/24/08 12:24  | 1040           |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B4-3/08**

**Date/Time Sampled: 03/17/2008 13:15**

**PSS Sample ID: 8031808-006**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

Analytical Method: SW846 8260B

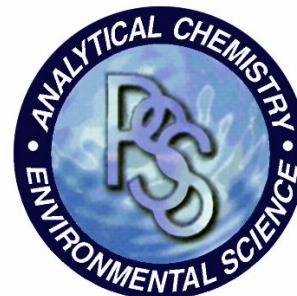
Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Chloromethane                         | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Bromomethane                          | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Chloroethane                          | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Acetone                               | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 50        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Methyl-t-butyl ether                  | 550    | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Chloroform                            | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Carbon Tetrachloride                  | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Benzene                               | 57     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 50        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B4-3/08**

**Date/Time Sampled: 03/17/2008 13:15**

**PSS Sample ID: 8031808-006**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

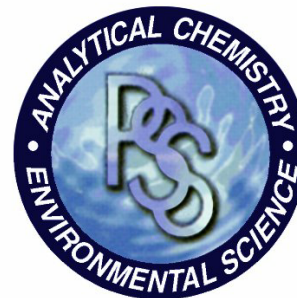
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result     | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|------------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Toluene                     | <b>210</b> | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 2-Hexanone                  | ND         | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Dibromochloromethane        | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Bromoform                   | ND         | ug/L  | 50        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Tetrachloroethene           | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Chlorobenzene               | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Ethylbenzene                | <b>240</b> | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| m,p-Xylenes                 | <b>810</b> | ug/L  | 20        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Styrene                     | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| o-Xylene                    | <b>360</b> | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Isopropylbenzene            | <b>38</b>  | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,3-Dichlorobenzene         | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,4-Dichlorobenzene         | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2-Dichlorobenzene         | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND         | ug/L  | 100       |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| 1,2,4-Trichlorobenzene      | ND         | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |
| Naphthalene                 | <b>160</b> | ug/L  | 10        |      | 10  | 03/23/08 | 03/23/08 16:37 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B5-3/08**

**Date/Time Sampled: 03/17/2008 11:30**

**PSS Sample ID: 8031808-007**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

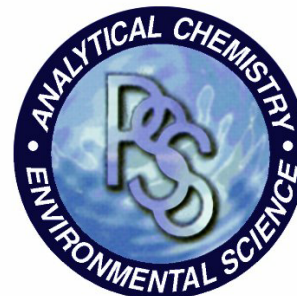
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.6              |             | 1          | 03/21/08        | 03/24/08 13:02  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B5-3/08**

**Date/Time Sampled: 03/17/2008 11:30**

**PSS Sample ID: 8031808-007**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

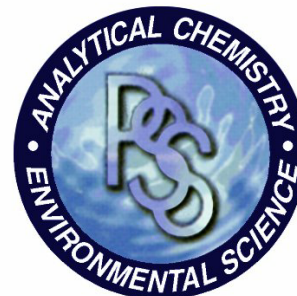
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result    | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|-----------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Chloromethane                         | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Vinyl Chloride                        | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Bromomethane                          | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Chloroethane                          | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Acetone                               | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Cyclohexane                           | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Trichlorofluoromethane                | ND        | ug/L  | 50        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,1-Dichloroethene                    | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Methylene Chloride                    | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| trans-1,2-Dichloroethene              | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Methyl-t-butyl ether                  | <b>91</b> | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,1-Dichloroethane                    | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 2-Butanone (MEK)                      | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| cis-1,2-Dichloroethene                | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Chloroform                            | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,1,1-Trichloroethane                 | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2-Dichloroethane                    | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Carbon Tetrachloride                  | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Benzene                               | <b>18</b> | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2-Dichloropropane                   | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Methyl Acetate                        | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Methylcyclohexane                     | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Trichloroethene                       | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Carbon Disulfide                      | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Bromodichloromethane                  | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| cis-1,3-Dichloropropene               | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 4-Methyl-2-Pentanone                  | ND        | ug/L  | 50        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| trans-1,3-Dichloropropene             | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B5-3/08**

**Date/Time Sampled: 03/17/2008 11:30**

**PSS Sample ID: 8031808-007**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

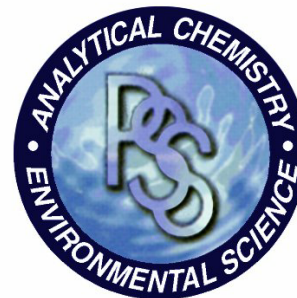
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result    | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|-----------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Toluene                     | <b>18</b> | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 2-Hexanone                  | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Dibromochloromethane        | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Bromoform                   | ND        | ug/L  | 50        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Tetrachloroethene           | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Chlorobenzene               | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Ethylbenzene                | <b>65</b> | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| m,p-Xylenes                 | <b>23</b> | ug/L  | 20        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Styrene                     | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| o-Xylene                    | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Isopropylbenzene            | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,3-Dichlorobenzene         | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,4-Dichlorobenzene         | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2-Dichlorobenzene         | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND        | ug/L  | 100       |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| 1,2,4-Trichlorobenzene      | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |
| Naphthalene                 | ND        | ug/L  | 10        |      | 10  | 03/24/08 | 03/24/08 18:18 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B6-3/08**

**Date/Time Sampled: 03/17/2008 12:45**

**PSS Sample ID: 8031808-008**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

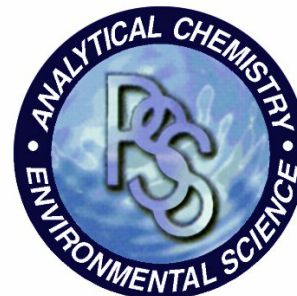
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.5              |             | 1          | 03/21/08        | 03/24/08 13:20  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B6-3/08**

**Date/Time Sampled: 03/17/2008 12:45**

**PSS Sample ID: 8031808-008**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

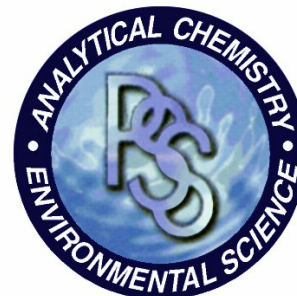
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Chloroform                            | 1      | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Carbon Tetrachloride                  | 2      | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Benzene                               | 2      | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B6-3/08**

**Date/Time Sampled: 03/17/2008 12:45**

**PSS Sample ID: 8031808-008**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

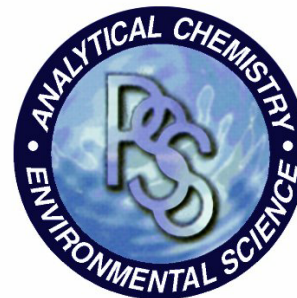
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Isopropylbenzene            | 1      | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/24/08 | 03/24/08 16:53 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B7-3/08**

**Date/Time Sampled: 03/17/2008 12:00**

**PSS Sample ID: 8031808-009**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

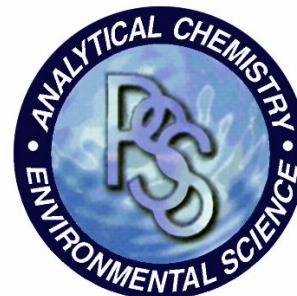
Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.5              |             | 1          | 03/21/08        | 03/24/08 13:20  | 1040           |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B7-3/08**

**Date/Time Sampled: 03/17/2008 12:00**

**PSS Sample ID: 8031808-009**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

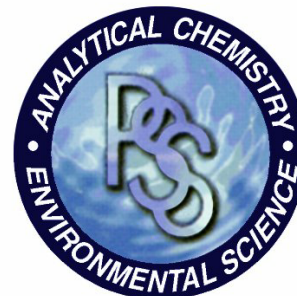
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Chloroform                            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Carbon Tetrachloride                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Benzene                               | 3      | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B7-3/08**

**Date/Time Sampled: 03/17/2008 12:00**

**PSS Sample ID: 8031808-009**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

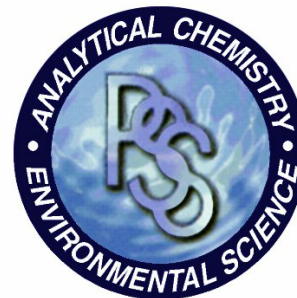
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |
| Naphthalene                 | 3      | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:03 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B8-3/08**

**Date/Time Sampled: 03/17/2008 11:45**

**PSS Sample ID: 8031808-010**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

Total Petroleum Hydrocarbons - DRO

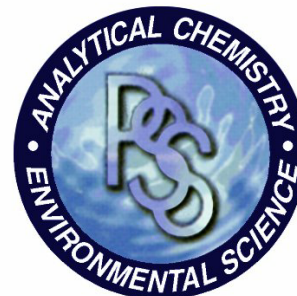
Analytical Method: SW846 8015B

Preparation Method: SW846 3510C

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/L         | 0.8              |             | 1          | 03/21/08        | 03/24/08 13:39  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

ECC, Inc., Chantilly, VA

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B8-3/08**

**Date/Time Sampled: 03/17/2008 11:45**

**PSS Sample ID: 8031808-010**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

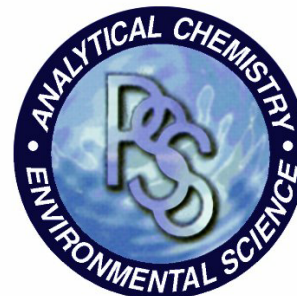
Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                                       | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Dichlorodifluoromethane               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Chloromethane                         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Vinyl Chloride                        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Bromomethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Chloroethane                          | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Acetone                               | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Cyclohexane                           | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Trichlorofluoromethane                | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,1-Dichloroethene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Methylene Chloride                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| trans-1,2-Dichloroethene              | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Methyl-t-butyl ether                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,1-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 2-Butanone (MEK)                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| cis-1,2-Dichloroethene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Chloroform                            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,1,1-Trichloroethane                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2-Dichloroethane                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Carbon Tetrachloride                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Benzene                               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2-Dichloropropane                   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Methyl Acetate                        | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Methylcyclohexane                     | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Trichloroethene                       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Carbon Disulfide                      | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Bromodichloromethane                  | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| cis-1,3-Dichloropropene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 4-Methyl-2-Pentanone                  | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| trans-1,3-Dichloropropene             | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031808

**ECC, Inc., Chantilly, VA**

March 25, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B8-3/08**

**Date/Time Sampled: 03/17/2008 11:45**

**PSS Sample ID: 8031808-010**

**Matrix: WATER**

**Date/Time Received: 03/18/2008 13:29**

TCL Volatile Organic Compounds

Analytical Method: SW846 8260B

Preparation Method: SW846 5030B

|                             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-----------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| 1,1,2-Trichloroethane       | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Toluene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 2-Hexanone                  | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2-Dibromoethane (EDB)     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Dibromochloromethane        | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Bromoform                   | ND     | ug/L  | 5         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Tetrachloroethene           | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Chlorobenzene               | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Ethylbenzene                | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| m,p-Xylenes                 | ND     | ug/L  | 2         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Styrene                     | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,1,2,2-Tetrachloroethane   | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| o-Xylene                    | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Isopropylbenzene            | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,3-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,4-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2-Dichlorobenzene         | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2-Dibromo-3-Chloropropane | ND     | ug/L  | 10        |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| 1,2,4-Trichlorobenzene      | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |
| Naphthalene                 | ND     | ug/L  | 1         |      | 1   | 03/23/08 | 03/23/08 18:31 | 1014    |



8081208

Page 31 of 32

White - Returned with Report      Yellow - Retained by Lab      Pink - Retained by Sampler



# Phase Separation Science, Inc

## Sample Receipt Checklist

Wo Number 8031808  
Client Name ECC, Inc.  
Project Name 2251 Sherman Ave  
Project Number 9373

Received By Rachel Davis  
Date Received 03/18/2008 01:29:00 PM  
Delivered By Dial Courier  
Tracking No Not Applicable  
Logged In By Rachel Davis

### Shipping Container(s)

|                |                          |                    |         |
|----------------|--------------------------|--------------------|---------|
| No. of Coolers | 1                        | Ice                | Present |
| Custody Seals  | Present                  | Temp (deg C)       | 4.6     |
| Seal Condition | Intact, Dated And Signed | Temp Blank Present | No      |

### Documentation

COC agrees with sample labels? ☒ Yes or ☐ No  
Chain of Custody (COC) ☒ Yes or ☐ No

### Sample Container

|                                     |   |                                  |   |
|-------------------------------------|---|----------------------------------|---|
| Appropriate for Specified Analysis? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Custody Seal(s)                  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Intact?                             | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Custody Seal(s) Intact?          | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Labeled and Labels Legible          | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Seal(s) Signed / Dated           | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Total No. of Samples Received       | 10  | Total No. of Containers Received | 38  |

### Preservation

|                                      |         | Yes                                 | No                       | N/A                                 |
|--------------------------------------|---------|-------------------------------------|--------------------------|-------------------------------------|
| Metals                               | (pH<2)  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Cyanides                             | (pH>12) | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sulfide                              | (pH>9)  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOC, COD, Phenols                    | (pH<2)  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOX, TKN, NH3, Total Phos            | (pH<2)  | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| VOC, BTEX (VOA Vials Rcvd Preserved) | (pH<2)  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Do VOA vials have zero headspace?    |         | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |

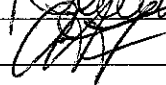
### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling.

Samples Inspected/Checklist Completed By: 

Date:

3/19/08

PM Review and Approval: 

Date:

3/20/08

# **Analytical Report for**

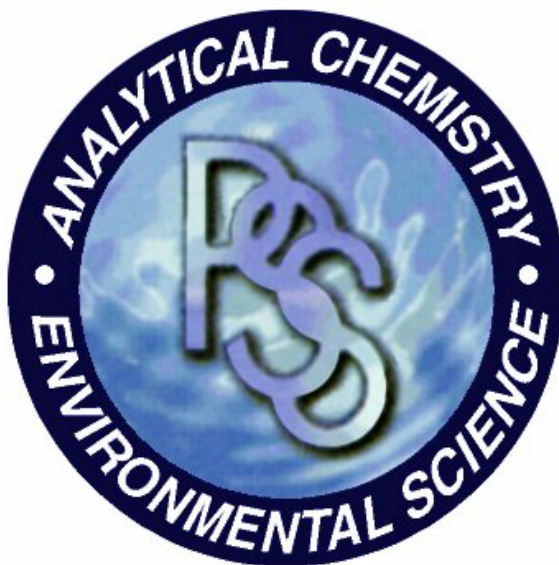
**ECC, Inc.**

**Certificate of Analysis No.: 8031708**

**Project Manager: Chris Becker**

**Project Name : 2251 Sherman Ave**

**Project ID : 9373**



**March 24, 2008**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

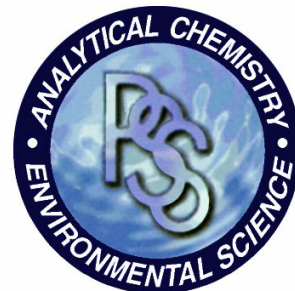
**Phone: (410) 747-8770**

**Fax: (410) 788-8723**



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# PHASE SEPARATION SCIENCE, INC.



March 24, 2008

**Chris Becker**  
**ECC, Inc.**  
43045 John Mosby Highway  
Chantilly, VA 20152

Reference: PSS Work Order No: **8031708**  
Project Name : 2251 Sherman Ave  
Project Location: N/A  
Project ID.: 9373

Dear Chris Becker :

The attached Analytical and QC Summary lists the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **8031708**.

All work reported herein has been performed in accordance with referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on April 21, 2008. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 10 years, after which time it will be disposed without further notice, unless prior arrangements have been made.

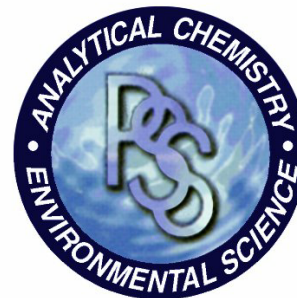
We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

---

**John Richardson**  
Laboratory Director

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031708

**ECC, Inc., Chantilly, VA**

March 24, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B2-0-15</b> | <b>Date/Time Sampled: 03/14/2008 07:50</b>  | <b>PSS Sample ID: 8031708-001</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 83</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | <b>Result</b> | <b>Units</b> | <b>Rep Limit</b> | <b>Flag</b> | <b>Dil</b> | <b>Prepared</b> | <b>Analyzed</b> | <b>Analyst</b> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/kg        | 12               |             | 1          | 03/20/08        | 03/20/08 13:41  | 1040           |

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B2-20</b> | <b>Date/Time Sampled: 03/14/2008 08:05</b>  | <b>PSS Sample ID: 8031708-002</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 81</b>               |

Total Petroleum Hydrocarbons - DRO

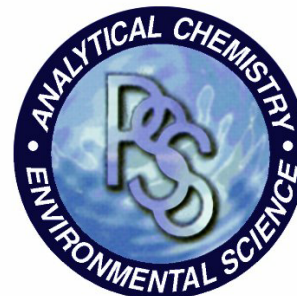
Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | <b>Result</b> | <b>Units</b> | <b>Rep Limit</b> | <b>Flag</b> | <b>Dil</b> | <b>Prepared</b> | <b>Analyzed</b> | <b>Analyst</b> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/kg        | 12               |             | 1          | 03/20/08        | 03/20/08 15:14  | 1040           |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031708

ECC, Inc., Chantilly, VA

March 24, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

Sample ID: 9373-B1-0-10

Date/Time Sampled: 03/14/2008 08:55

PSS Sample ID: 8031708-003

Matrix: SOIL

Date/Time Received: 03/17/2008 13:05

% Solids: 83

Total Metals

Analytical Method: SW846 6020A

Preparation Method: SW846 3050B

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Arsenic  | 5.7    | mg/kg | 0.6       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Barium   | 25     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Cadmium  | ND     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Chromium | 21     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Lead     | 13     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Mercury  | ND     | mg/kg | 0.1       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Selenium | ND     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |
| Silver   | ND     | mg/kg | 2.9       |      | 1   | 03/18/08 | 03/18/08 14:38 | 1034    |

Polychlorinated Biphenyls

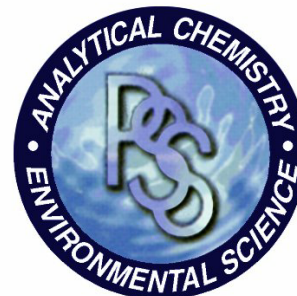
Analytical Method: SW846 8082

Preparation Method: SW846 3550

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| PCB-1016 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1221 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1232 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1242 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1248 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1254 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |
| PCB-1260 | ND     | mg/kg | 0.3       |      | 1   | 03/24/08 | 03/24/08 15:04 | 1029    |

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BALTIMORE, MD 21228  
410-747-8770  
800-932-9047  
FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031708

ECC, Inc., Chantilly, VA

March 24, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B1-0-10</b> | <b>Date/Time Sampled: 03/14/2008 08:55</b>  | <b>PSS Sample ID: 8031708-003</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 83</b>               |

Polyaromatic Hydrocarbons (PAHs)

Analytical Method: SW846 8270C

Preparation Method: SW846 3550

|                         | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Acenaphthene            | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Acenaphthylene          | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Anthracene              | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Benzo(a)anthracene      | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Benzo(a)pyrene          | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Benzo(b)fluoranthene    | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Benzo(g,h,i)perylene    | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Benzo(k)fluoranthene    | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Chrysene                | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Dibenz(a,h)Anthracene   | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Fluoranthene            | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Fluorene                | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Indeno(1,2,3-c,d)Pyrene | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| 2-Methylnaphthalene     | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Naphthalene             | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Phenanthrene            | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |
| Pyrene                  | ND     | ug/kg |           |      | 1   | 03/20/08 | 03/20/08 18:40 | 1014    |

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B1-0-15</b> | <b>Date/Time Sampled: 03/14/2008 09:00</b>  | <b>PSS Sample ID: 8031708-004</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 87</b>               |

Total Petroleum Hydrocarbons - DRO

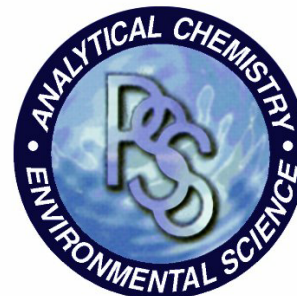
Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND     | mg/kg | 11        |      | 1   | 03/20/08 | 03/20/08 15:33 | 1040    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031708

ECC, Inc., Chantilly, VA

March 24, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B1-20</b> | <b>Date/Time Sampled: 03/14/2008 09:05</b>  | <b>PSS Sample ID: 8031708-005</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 82</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/20/08 | 03/20/08 16:10 | 1040    |

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B4-15</b> | <b>Date/Time Sampled: 03/14/2008 09:40</b>  | <b>PSS Sample ID: 8031708-006</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 84</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/20/08 | 03/20/08 16:29 | 1040    |

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B4-20</b> | <b>Date/Time Sampled: 03/14/2008 09:50</b>  | <b>PSS Sample ID: 8031708-007</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 88</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 11   | 1   | 03/21/08 | 03/21/08 13:45 | 1040    |

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B3-0-15</b> | <b>Date/Time Sampled: 03/14/2008 10:50</b>  | <b>PSS Sample ID: 8031708-008</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 85</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/21/08 | 03/21/08 14:18 | 1040    |

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B3-20</b> | <b>Date/Time Sampled: 03/14/2008 11:00</b>  | <b>PSS Sample ID: 8031708-009</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/17/2008 13:05</b> | <b>% Solids: 81</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/21/08 | 03/21/08 14:18 | 1040    |



# CHAIN OF CUSTODY RECORD

**ECC**  
Environmental Consultants and Contractors, Inc.

8031708

|                                      |  |                            |  |                      |  |             |  |
|--------------------------------------|--|----------------------------|--|----------------------|--|-------------|--|
| 1                                    |  | CLIENT: ECC                |  | ECC Job Number: 9373 |  | PAGE 1 OF 1 |  |
| CONTACT: Chris Becker                |  | PROJECT: 2251 Sherman Ave. |  |                      |  |             |  |
| REPORTS TO: 43045 John Mosby Highway |  |                            |  |                      |  |             |  |
| Chantilly, Virginia 20152            |  |                            |  |                      |  |             |  |
| Tel: 703/327-2900                    |  |                            |  |                      |  |             |  |
| Fax: 703/327-2777                    |  |                            |  |                      |  |             |  |

| LAB NO. | SAMPLE IDENTIFICATION | DATE   | TIME  | MATRIX | No. CONTAINERS | SAMPLE TYPE | Preservatives Used | Analysis Required | TPH-DRO | CLRA | MLH | PCB | PAHs | PCBz | PCBz | REMARKS |
|---------|-----------------------|--------|-------|--------|----------------|-------------|--------------------|-------------------|---------|------|-----|-----|------|------|------|---------|
| 1       | 9373-B2-O-15          | 3/4/08 | 7:50  | Soil   | 1              | C           |                    |                   | X       |      |     |     |      |      |      |         |
| 2       | 9373-B2-ZO            | 3/4/08 | 8:05  | Soil   | 1              | C           |                    |                   | X       |      |     |     |      |      |      |         |
| 3       | 9373-B1-O-10          | 3/4/08 | 8:55  | Soil   | 3              | C           |                    |                   | X       | X    |     |     |      |      |      |         |
| 4       | 9373-B1-O-15          | 3/4/08 | 9:00  | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |
| 5       | 9373-B1-ZO            | 3/4/08 | 9:05  | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |
| 6       | 9373-B4-15            | 3/4/08 | 9:40  | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |
| 7       | 9373-B4-ZO            | 3/4/08 | 9:50  | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |
| 8       | 9373-B3-O-15          | 3/4/08 | 10:50 | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |
| 9       | 9373-B3-ZO            | 3/4/08 | 11:00 | Soil   | 1              | G           |                    |                   | X       |      |     |     |      |      |      |         |

|  |  |  |            |                                  |                                  |                                  |                                  |
|--|--|--|------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 5  |  | Collected/Relinquished By: (1) <i>Super Doctor</i> |            | Date: 03/17/08                   | Time: 11:30                      | Received By: <i>Samanta #222</i> | Received By: <i>Samanta #222</i> |
| Relinquished By: (2) <i>Samanta #222</i> |  | Date: 03/17/08                                     | Time: 1:05 | Received By: <i>Samanta #222</i> | Received By: <i>Samanta #222</i> |                                  |                                  |
| Relinquished By: (3)                     |  | Date:  | Time:      | Received By:                     | Received By:                     |                                  |                                  |
| Relinquished By: (4)                     |  | Date:  | Time:      | Received For Laboratory By:      | Received For Laboratory By:      |                                  |                                  |

|  |  |                               |  |  |  |  |  |
|--|--|-------------------------------|--|--|--|--|--|
| 4  |  | Shipping Carrier: <i>DIAL</i> |  | Shipping Ticket No.: <i>DIAL</i>       |  | Samples Received Cold? (Circle) (YES) NO |  |
| Data Deliverables Required                         |  | Level I Level II Level III    |  | Chain of Custody Seal: (Circle) INTACT |  | Temperature °C: 3.8°C ICEPILS            |  |
| Requested Turnaround Time and Special Instructions |  | 5-Day TAT                     |  | Chain of Custody Seal: (Circle) BROKEN |  | ABSENT                                   |  |
| Receiving Laboratory:                              |  | P.S.S.                        |  | Receiving Laboratory:                  |  |  |  |



## Phase Separation Science, Inc

### Sample Receipt Checklist

|                |                  |               |                        |
|----------------|------------------|---------------|------------------------|
| Wo Number      | 8031708          | Received By   | Rachel Davis           |
| Client Name    | ECC, Inc.        | Date Received | 03/17/2008 01:05:00 PM |
| Project Name   | 2251 Sherman Ave | Delivered By  | Dial Courier           |
| Project Number | 9373             | Tracking No   | Not Applicable         |
|                |                  | Logged In By  | Cathy Thompson         |

#### Shipping Container(s)

|                |                          |                    |         |
|----------------|--------------------------|--------------------|---------|
| No. of Coolers | 1                        | Ice                | Present |
| Custody Seals  | Present                  | Temp (deg C)       | 3.8     |
| Seal Condition | Intact, Dated And Signed | Temp Blank Present | No      |

#### Documentation

COC agrees with sample labels? ☒ Yes or ☐ No  
Chain of Custody (COC) ☒ Yes or ☐ No

#### Sample Container

|                                     |   |                                  |   |
|-------------------------------------|---|----------------------------------|---|
| Appropriate for Specified Analysis? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Custody Seal(s)                  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Intact?                             | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Custody Seal(s) Intact?          | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Labeled and Labels Legible          | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Seal(s) Signed / Dated           | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Total No. of Samples Received       | 9   | Total No. of Containers Received | 11  |

#### Preservation

|                                      |         | Yes                      | No                       | N/A                                 |
|--------------------------------------|---------|--------------------------|--------------------------|-------------------------------------|
| Metals                               | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Cyanides                             | (pH>12) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sulfide                              | (pH>9)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOC, COD, Phenols                    | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOX, TKN, NH3, Total Phos            | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| VOC, BTEX (VOA Vials Rcvd Preserved) | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Do VOA vials have zero headspace?    |         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling.

Samples Inspected/Checklist Completed By: R. Davis

Date: 3/17/08

PM Review and Approval: [Signature]

Date: 3/17/08

# **Analytical Report for**

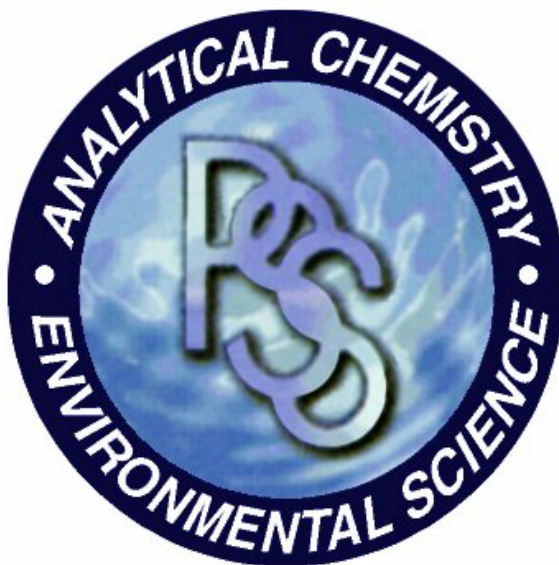
**ECC, Inc.**

**Certificate of Analysis No.: 8031405**

**Project Manager: Chris Becker**

**Project Name : 2251 Sherman Ave**

**Project ID : 9373**



**March 21, 2008**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

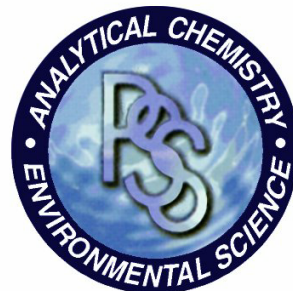
**Phone: (410) 747-8770**

**Fax: (410) 788-8723**



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# PHASE SEPARATION SCIENCE, INC.



March 21, 2008

**Chris Becker**  
**ECC, Inc.**  
43045 John Mosby Highway  
Chantilly, VA 20152

Reference: PSS Work Order No: **8031405**  
Project Name : 2251 Sherman Ave  
Project Location: N/A  
Project ID.: 9373

Dear Chris Becker :

The attached Analytical and QC Summary lists the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **8031405**.

All work reported herein has been performed in accordance with referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on April 18, 2008. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 10 years, after which time it will be disposed without further notice, unless prior arrangements have been made.

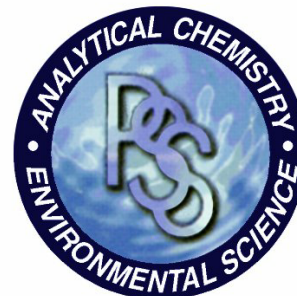
We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

---

**John Richardson**  
Laboratory Director

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

**ECC, Inc., Chantilly, VA**

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B5-0-10**

**Date/Time Sampled: 03/13/2008 11:55**

**PSS Sample ID: 8031405-001**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 88**

Total Metals

Analytical Method: SW846 6020A

Preparation Method: SW846 3050B

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Arsenic  | 0.59   | mg/kg | 0.5       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Barium   | 18     | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Cadmium  | ND     | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Chromium | 6.5    | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Lead     | 5.9    | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Mercury  | ND     | mg/kg | 0.1       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Selenium | ND     | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |
| Silver   | ND     | mg/kg | 2.6       |      | 1   | 03/17/08 | 03/18/08 14:09 | 1034    |

Polychlorinated Biphenyls

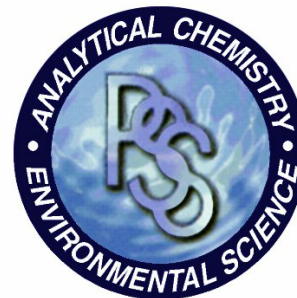
Analytical Method: SW846 8082

Preparation Method: SW846 3550

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| PCB-1016 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1221 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1232 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1242 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1248 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1254 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |
| PCB-1260 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 10:39 | 1029    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

ECC, Inc., Chantilly, VA

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B5-0-10**

**Date/Time Sampled: 03/13/2008 11:55**

**PSS Sample ID: 8031405-001**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 88**

Polyaromatic Hydrocarbons (PAHs)

Analytical Method: SW846 8270C

Preparation Method: SW846 3550

|                         | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Acenaphthene            | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Acenaphthylene          | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Anthracene              | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Benzo(a)anthracene      | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Benzo(a)pyrene          | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Benzo(b)fluoranthene    | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Benzo(g,h,i)perylene    | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Benzo(k)fluoranthene    | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Chrysene                | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Dibenz(a,h)Anthracene   | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Fluoranthene            | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Fluorene                | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Indeno(1,2,3-c,d)Pyrene | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| 2-Methylnaphthalene     | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Naphthalene             | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Phenanthrene            | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |
| Pyrene                  | ND     | ug/kg | 380       |      | 1   | 03/19/08 | 03/19/08 20:13 | 1014    |

**Sample ID: 9373-B5-0-15**

**Date/Time Sampled: 03/13/2008 12:00**

**PSS Sample ID: 8031405-002**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 89**

Total Petroleum Hydrocarbons - DRO

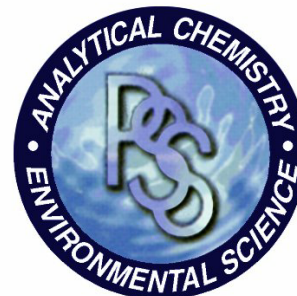
Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND     | mg/kg | 11        |      | 1   | 03/19/08 | 03/19/08 13:03 | 1040    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

**ECC, Inc., Chantilly, VA**

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B5-20</b> | <b>Date/Time Sampled: 03/13/2008 12:05</b>  | <b>PSS Sample ID: 8031405-003</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 84</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | 110   | mg/kg     | 12   | 1   | 03/19/08 | 03/19/08 13:03 | 1040    |

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B8-0-15</b> | <b>Date/Time Sampled: 03/13/2008 12:45</b>  | <b>PSS Sample ID: 8031405-004</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 83</b>               |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/19/08 | 03/19/08 13:22 | 1040    |

|                              |   |                                   |
|------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B8-20</b> | <b>Date/Time Sampled: 03/13/2008 12:50</b>  | <b>PSS Sample ID: 8031405-005</b> |
| <b>Matrix: SOIL</b>          | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 81</b>               |

Total Petroleum Hydrocarbons - DRO

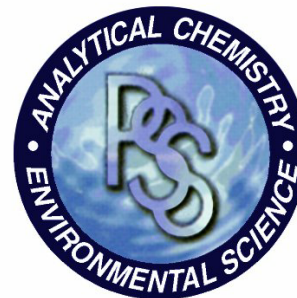
Analytical Method: SW846 8015B

Preparation Method: SW846 3550

| Result                          | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND    | mg/kg     | 12   | 1   | 03/19/08 | 03/19/08 13:22 | 1040    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

**ECC, Inc., Chantilly, VA**

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B7-0-10**

**Date/Time Sampled: 03/13/2008 13:40**

**PSS Sample ID: 8031405-006**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 86**

Total Metals

Analytical Method: SW846 6020A

Preparation Method: SW846 3050B

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Arsenic  | 2.9    | mg/kg | 0.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Barium   | 26     | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Cadmium  | ND     | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Chromium | 11     | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Lead     | 8.9    | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Mercury  | ND     | mg/kg | 0.1       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Selenium | ND     | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |
| Silver   | ND     | mg/kg | 2.5       |      | 1   | 03/17/08 | 03/18/08 14:14 | 1034    |

Polychlorinated Biphenyls

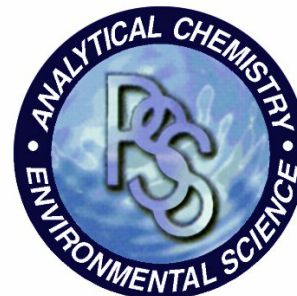
Analytical Method: SW846 8082

Preparation Method: SW846 3550

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| PCB-1016 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1221 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1232 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1242 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1248 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1254 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |
| PCB-1260 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:06 | 1029    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

ECC, Inc., Chantilly, VA

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B7-0-10</b> | <b>Date/Time Sampled: 03/13/2008 13:40</b>  | <b>PSS Sample ID: 8031405-006</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 86</b>               |

Polyaromatic Hydrocarbons (PAHs)

Analytical Method: SW846 8270C

Preparation Method: SW846 3550

|                         | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Acenaphthene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Acenaphthylene          | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Anthracene              | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Benzo(a)anthracene      | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Benzo(a)pyrene          | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Benzo(b)fluoranthene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Benzo(g,h,i)perylene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Benzo(k)fluoranthene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Chrysene                | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Dibenz(a,h)Anthracene   | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Fluoranthene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Fluorene                | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Indeno(1,2,3-c,d)Pyrene | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| 2-Methylnaphthalene     | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Naphthalene             | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Phenanthrene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |
| Pyrene                  | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 20:42 | 1014    |

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B7-0-15</b> | <b>Date/Time Sampled: 03/13/2008 13:45</b>  | <b>PSS Sample ID: 8031405-007</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 88</b>               |

Total Petroleum Hydrocarbons - DRO

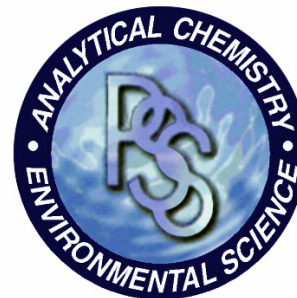
Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND     | mg/kg | 11        |      | 1   | 03/19/08 | 03/19/08 13:41 | 1040    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

**ECC, Inc., Chantilly, VA**

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B7-20**

**Date/Time Sampled: 03/13/2008 13:50**

**PSS Sample ID: 8031405-008**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 84**

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

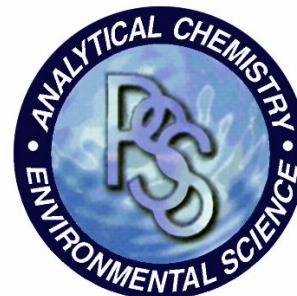
Preparation Method: SW846 3550

|                                 | <u>Result</u> | <u>Units</u> | <u>Rep Limit</u> | <u>Flag</u> | <u>Dil</u> | <u>Prepared</u> | <u>Analyzed</u> | <u>Analyst</u> |
|---------------------------------|---------------|--------------|------------------|-------------|------------|-----------------|-----------------|----------------|
| TPH-DRO (Diesel Range Organics) | ND            | mg/kg        | 12               |             | 1          | 03/19/08        | 03/19/08 13:41  | 1040           |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

ECC, Inc., Chantilly, VA

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

|                                |   |                                   |
|--------------------------------|---|-----------------------------------|
| <b>Sample ID: 9373-B6-0-15</b> | <b>Date/Time Sampled: 03/13/2008 14:15</b>  | <b>PSS Sample ID: 8031405-009</b> |
| <b>Matrix: SOIL</b>            | <b>Date/Time Received: 03/14/2008 10:15</b> | <b>% Solids: 86</b>               |

Total Metals

Analytical Method: SW846 6020A

Preparation Method: SW846 3050B

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Arsenic  | 3.0    | mg/kg | 0.6       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Barium   | 33     | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Cadmium  | ND     | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Chromium | 15     | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Lead     | 8.1    | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Mercury  | ND     | mg/kg | 0.1       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Selenium | ND     | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |
| Silver   | ND     | mg/kg | 2.8       |      | 1   | 03/17/08 | 03/18/08 14:20 | 1034    |

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND     | mg/kg | 11        |      | 1   | 03/19/08 | 03/19/08 14:00 | 1040    |

Polychlorinated Biphenyls

Analytical Method: SW846 8082

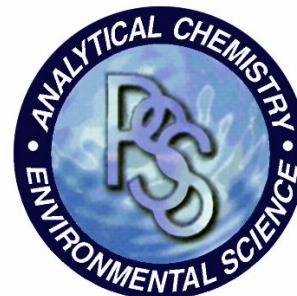
Preparation Method: SW846 3550

|          | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|-----------|------|-----|----------|----------------|---------|
| PCB-1016 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1221 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1232 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1242 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1248 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1254 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |
| PCB-1260 | ND     | mg/kg | 0.3       |      | 1   | 03/18/08 | 03/19/08 12:35 | 1029    |



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

ECC, Inc., Chantilly, VA

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B6-0-15**

**Date/Time Sampled: 03/13/2008 14:15**

**PSS Sample ID: 8031405-009**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 86**

Polyaromatic Hydrocarbons (PAHs)

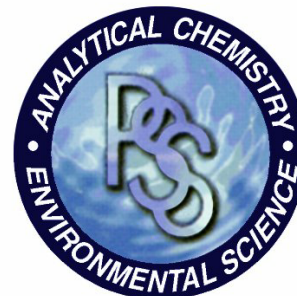
Analytical Method: SW846 8270C

Preparation Method: SW846 3550

|                         | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Acenaphthene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Acenaphthylene          | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Anthracene              | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Benzo(a)anthracene      | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Benzo(a)pyrene          | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Benzo(b)fluoranthene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Benzo(g,h,i)perylene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Benzo(k)fluoranthene    | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Chrysene                | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Dibenz(a,h)Anthracene   | ND     | ug/kg | 190       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Fluoranthene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Fluorene                | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Indeno(1,2,3-c,d)Pyrene | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| 2-Methylnaphthalene     | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Naphthalene             | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Phenanthrene            | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |
| Pyrene                  | ND     | ug/kg | 390       |      | 1   | 03/19/08 | 03/19/08 21:10 | 1014    |

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 8031405

ECC, Inc., Chantilly, VA

March 21, 2008

Project Name: 2251 Sherman Ave

Project ID: 9373

**Sample ID: 9373-B6-0-15**

**Date/Time Sampled: 03/13/2008 14:15**

**PSS Sample ID: 8031405-009**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

Flash Point

Analytical Method: SW846 1020A

|             | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|-------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| Flash Point | > 140  | Deg F | 70        |      | 1   | 03/20/08 | 03/20/08 01:03 | 1016    |

TCLP Metals

Analytical Method: SW846 6020A

Preparation Method: SW846 3010A

|          | Result | Units | TCLP Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----------|--------|-------|------------|------|-----|----------|----------------|---------|
| Arsenic  | ND     | mg/L  | 5.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Barium   | ND     | mg/L  | 100        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Cadmium  | ND     | mg/L  | 1.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Chromium | ND     | mg/L  | 5.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Lead     | ND     | mg/L  | 5.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Mercury  | ND     | mg/L  | 0.200      |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Selenium | ND     | mg/L  | 1.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |
| Silver   | ND     | mg/L  | 5.0        |      | 1   | 03/19/08 | 03/19/08 13:29 | 1034    |

pH in Non-Aqueous Matrixes

Analytical Method: SW846 9045D

|    | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|----|--------|-------|-----------|------|-----|----------|----------------|---------|
| pH | 5.2    | SU    |           |      | 1   | 03/17/08 | 03/17/08 13:00 | 1034    |

**Sample ID: 9373-B6-20**

**Date/Time Sampled: 03/13/2008 14:00**

**PSS Sample ID: 8031405-010**

**Matrix: SOIL**

**Date/Time Received: 03/14/2008 10:15**

**% Solids: 85**

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW846 8015B

Preparation Method: SW846 3550

|                                 | Result | Units | Rep Limit | Flag | Dil | Prepared | Analyzed       | Analyst |
|---------------------------------|--------|-------|-----------|------|-----|----------|----------------|---------|
| TPH-DRO (Diesel Range Organics) | ND     | mg/kg | 12        |      | 1   | 03/19/08 | 03/19/08 14:18 | 1040    |



# CHAIN OF CUSTODY RECORD

Environmental Consultants and Contractors, Inc.

8031405

1

CLIENT: ECC  
 CONTACT: Chris Becker  
 PROJECT: 2251 Shawnee Ave.  
 REPORTS TO: 43045 John Mosby Highway  
 Chantilly, Virginia 20152  
 Tel: 703/327-2900  
 Fax: 703/327-2777

2

| LAB NO. | SAMPLE IDENTIFICATION | DATE    | TIME  | MATRIX |
|---------|-----------------------|---------|-------|--------|
| 1       | 9373-B5-0-10          | 3/13/08 | 11:55 | Soil   |
| 2       | 9373-B5-0-15          | 3/13/08 | 12:00 | Soil   |
| 3       | 9373-B5-20            | 3/13/08 | 12:05 | Soil   |
| 4       | 9373-B8-0-15          | 3/13/08 | 12:45 | Soil   |
| 5       | 9373-B8-20            | 3/13/08 | 12:50 | Soil   |
| 6       | 9373-B7-0-10          | 3/13/08 | 13:40 | Soil   |
| 7       | 9373-B7-0-15          | 3/13/08 | 13:45 | Soil   |
| 8       | 9373-B7-20            | 3/13/08 | 13:50 | Soil   |
| 9       | 9373-P6-0-15          | 3/13/08 | 14:15 | Soil   |
| 10      | 9373-B6-20            | 3/13/08 | 14:00 | Soil   |

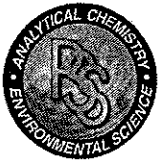
5

Collected/Relinquished By: (1) *Tom Hanner* Date 3/14 Time 9:00  
 Received By: *Tom Hanner*  
 Relinquished By: (2) *Tom Hanner* Date 3/14 Time 10:15  
 Received By: *Tom Hanner*  
 Relinquished By: (3) Date Time  
 Received By:  
 Relinquished By: (4) Date Time  
 Received For Laboratory By:

ECC Job Number: 9373 PAGE 1 OF 1

| SAMPLE TYPE     | No. | CONTAINERS | Preservatives Used | Analysis Required | TPH-DRO | PCRA Metals | PCRA | PCBs | TCDF Metals | Fluorophenols | Corrosivity | Remarks |
|-----------------|-----|------------|--------------------|-------------------|---------|-------------|------|------|-------------|---------------|-------------|---------|
| C= COMP G= GRAB |     |            |                    | 3                 |         |             |      |      |             |               |             |         |
|                 | 3   | C          |                    | X                 |         |             | X    |      |             |               |             |         |
|                 | 1   | C          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 1   | G          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 1   | C          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 1   | G          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 3   | C          |                    | X                 |         |             | X    |      |             |               |             |         |
|                 | 1   | C          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 1   | C          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 1   | G          |                    | X                 |         |             |      |      |             |               |             |         |
|                 | 4   |            |                    | X                 |         |             | X    | X    | X           | X             |             |         |
|                 | 1   | G          |                    | X                 |         |             |      |      |             |               |             |         |

Shipping Carrier: DIAL  
 Shipping Ticket No.:  
 Samples Received Cold? (Circle) YES NO  
 Temperature °C: 4.1°C 10.5°C  
 Data Deliverables Required  
 Level I Level II Level III  
 Requested Turnaround Time and Special Instructions  
 Received Laboratory: P.S.S.  
 Received For Laboratory By:



## Phase Separation Science, Inc

### Sample Receipt Checklist

Wo Number 8031405  
Client Name ECC, Inc.  
Project Name 2251 Sherman Ave  
Project Number 9373

Received By Rachel Davis  
Date Received 03/14/2008 10:15:00 AM  
Delivered By Dial Courier  
Tracking No Not Applicable  
Logged In By Rachel Davis

#### Shipping Container(s)

|                |                          |                    |         |
|----------------|--------------------------|--------------------|---------|
| No. of Coolers | 1                        | Ice                | Present |
| Custody Seals  | Present                  | Temp (deg C)       | 4.1     |
| Seal Condition | Intact, Dated And Signed | Temp Blank Present | No      |

#### Documentation

COC agrees with sample labels? ☒ Yes or ☐ No  
Chain of Custody (COC) ☒ Yes or ☐ No

#### Sample Container

|                                     |   |                                  |   |
|-------------------------------------|---|----------------------------------|---|
| Appropriate for Specified Analysis? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Custody Seal(s)                  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Intact?                             | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Custody Seal(s) Intact?          | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Labeled and Labels Legible          | <input checked="" type="checkbox"/> <input type="checkbox"/>        | Seal(s) Signed / Dated           | <input type="checkbox"/> <input checked="" type="checkbox"/>        |
| Total No. of Samples Received       | 10  | Total No. of Containers Received | 17  |

#### Preservation

|                                      |         | Yes                      | No                       | N/A                                 |
|--------------------------------------|---------|--------------------------|--------------------------|-------------------------------------|
| Metals                               | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Cyanides                             | (pH>12) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sulfide                              | (pH>9)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOC, COD, Phenols                    | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| TOX, TKN, NH3, Total Phos            | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| VOC, BTEX (VOA Vials Rcvd Preserved) | (pH<2)  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Do VOA vials have zero headspace?    |         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling.

Samples Inspected/Checklist Completed By: R. Green

Date: 3/14/08

PM Review and Approval: [Signature]

Date: 3/14/08